

**Classification and Interpretation of marine shell  
artifacts from Western Mexico**

by

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## **Abstract**

The aim of the thesis is to examine the function and symbolism of worked shell artifacts from Western Mexico. This cultural area incorporates the modern states of Jalisco, Nayarit, Colima and Michoacán. The corpus of the material - more than 300 pieces - comes from ethnographic departments of museums in Mexico, Europe and the U.S.A., and from some private collections. Most of these pieces are without any details of provenance, context and date.

Raw materials and techniques of manufacture are examined. The corpus of worked shell items is then presented, divided into groups and subgroups on the basis of formal criteria. The distribution and chronology of each group are presented and, where possible, the function of the artifact and the symbolism of the designs are discussed. This discussion draws upon various sources of information from West Mexico and elsewhere, including the ethnography of the modern Cora and Huichol Indians, early Spanish chronicle sources, excavation reports, and comparisons with pottery and stone figurines and with other archaeological materials. The aims of the discussion are to assess what the shell artifacts are intended to represent, why and when they were made, and what they meant to the people who made them.

The final chapter deals with the questions of style in a broader sense. The groups and subgroups of the previous sections are recombined (on the basis of shared attributes) into four major Style Groups and six more loosely defined "traditions". The Style Groups are roughly contemporary (late Preclassic and Classic periods) but each one is centred on a particular area within the Occidente.



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## **Chapter one**

### **Introduction**

## **1. The Area**

**1.1. Definition.** The boundaries of the cultural area called Occidente, or Western Mexico (Fig. 1), are difficult to define and still not clear in the literature. For the purpose of this research, I have incorporated the modern geographical states of Nayarit, Jalisco, Colima and Michoacán. It covers a region bordering the Pacific coast and extending towards the interior, with a northern boundary defined by the Rio Acaponeta and a southern one by the Rio Balsas. These regions do not form a single geographical and ecological unit but are made up of a diversity of micro-environments (for further information, see Schondube, 1980: 114 & 1986/ Meighan & al, 1970: 21/ Williams, 1992). I have not included in this area the states of Guerrero to the south, which does not seem to be closely related to the Occidente (Meighan, 1974: 1254) and of Sinaloa to the north, on the boundary between cultures of the desert southwest and those of Mesoamerica (ibid, 1971: 754).

Broadly speaking, these four areas consist primarily of two fundamental zones: the highland region, with elevations averaging 1.500 metres, characterised by river valleys and lakes, but few plains and basins, which sustains a diversified vegetation, and a relatively narrow coastal plain of tropical lowlands. On the one hand, such ecological variability has been partly responsible for the development over time of distinctive cultural traditions (Schondube, 1980: 123). On the other hand, a developed river system has functioned as a unifying element, and has facilitated contacts, not only between the coastal plains and the inland niches, e.g. the rivers Ameca, Armeria and Coahuayana, but also to neighbouring areas to the east: the Rio Grande de Santiago, via Lake Chapala and the Rio Lerma, was a natural route towards the basin of Mexico.

When mentioning the area concerned in the context of this work, I have deliberately chosen to refer to the "Occidente" or to "Western Mexico" indiscriminately. By making this choice, I wish to keep the terminology used by the Mexican archaeologists when they first defined this area in Mesoamerica.

**1.2. Cultural Characteristics** . A problem arises when trying to demarcate the cultural territory of the Occidente, based on modern geographical boundaries, and not on cultural ones. It is therefore difficult to separate, both physically and culturally, the area within these boundaries from that of its neighbouring states: the Los Altos



area, for instance, can hardly be detached from Zacatecas, in the same way as northern Nayarit and coastal Sinaloa and the north and south shores of Lake Chapala can hardly be dissociated (Schondube, 1986: 4).

Consequently, as Schondube rightly suggests, the Occidente should be divided into cultural sub-areas in order to facilitate our understanding. Examples are provided, for instance, by the Autlán-Tuxcacuesco area (Kelly, 1949), which was defined for interpreting the relationships, during the Classic period, of some parts of southern Jalisco with the cultures from Colima, and also by the Los Altos (Williams, 1974) and the Lake Chapala areas. This is the reason why, for the purpose of this research, Michoacán - including Chupícuaro, on the Michoacán-Guanajuato border (Chadwick, 1971: 660) - has been included within the geographical boundaries of the Occidente, with the extended Chapala basin toward the west.

Apart from the evidence the people of Western Mexico left behind in their funerary art - like objects made of pottery, shell or metal - and from the Tarascan culture of Michoacán during the late Postclassic period, little is known of the identity, languages, social and religious organisation of most of the local cultures which inhabited these areas from the Formative Period.

Shaft-tombs are a unique feature of the Occidente, unparalleled in other Mesoamerican areas. They are often located in cemeteries, and occur mainly in the upland zones, within a U-shaped area extending from south-central Nayarit through central Jalisco to Colima (Meighan & al, 1970: 22). These structures consist of a vertical entrance shaft, either rectangular or circular in shape, and can measure up to 16 m in depth, e.g. El Arenal (see Corona Nuñez, 1955: Fig. 1). At the bottom of the shaft, a narrow tunnel, 1 to 3 m long, leads to one of the vaulted chambers, which might be round, oval or square. A stone slab at the entrance of the tunnel prevented the fill, made up of rubble and hard-packed dirt, from penetrating into the chambers.

The human remains are usually found in the centre of those chambers, or occasionally piled up in the corners, which could suggests the reuse of the tomb for subsequent interments. They were accompanied by a diversity of mortuary offerings, consisting of ceramic objects, e.g. anthropomorphic and zoomorphic vessels, and non-ceramic ones, made up of bone, obsidian, jade and shell.

Objects of perishable materials, such as cloths and feathers, wood and basketry, in addition to food and liquids, undoubtedly were also placed in the tomb chambers, but none of those have survived. A cotton fabric, with small copper beads and tiny shells sown into the material, has been reported from Tzintzuntzan, Michoacán (Weitlaner Johnson, 1971: Fig. II).

Chronologically, those tombs and their mortuary paraphernalia range from approximately 200 BC, or even earlier (El Opeño, San Sebastian), to AD 600 (Schondube, 1980: 173). Those dates are based either on a few radiocarbon dates on shell or on charcoal, or on stylistic associations.

In general, it can be said that the people who made these tombs exemplified a way of life which was typically Mesoamerican in its essential aspects, like funerary customs. The area was also characterised by a high degree of political fragmentation, undoubtedly related to the diversity of environments and to a considerable linguistic variety (Brand, 1971).

## 2. The Raw Material

**2.1. Definition.** Shells are invertebrates from the group of animals belonging to the phylum *Mollusca*, which is divided into several categories, including marine molluscs, freshwater molluscs and terrestrial molluscs, or land snails. Mainly marine species have been used for the manufacture of worked shell artifacts, with the exception of few fresh water ones (Andrews, 1969: 32/ Matos Moctezuma, 1988: 115/ Polaco, 1982). Land species, always unworked, can however occasionally be found in caches (Andrews, 1969: 34).

Marine molluscs have been divided into seven classes (Keen, 1971: 14-19), from which two classes only have been used for the manufacture of artifacts: the Gastropods (*Gastropoda*), or univalves, consisting of a single valve, and the Pelecypods (*Pelecypoda*), or bivalves, consisting of a pair of valves.

All molluscs are based on the same constituents. They are made of a solid, outer covering which is a mean of support and protection, and of the animal itself (the soft body). The mantle, as the animal grows and develops, slowly extracts lime from the water and adds it, layer by layer, to the growing shell. The mantle forms the surface

ornament and the coloration. Gastropods (Fig. 2), characterised by having one external shell, are made of a conical tube spirally wound around a central axis, the columella. The coiled whorls form the spire and the closed, pointed head is the apex. The larger coil is called the body whorl, for in it the body of the animal lies. The spout-like prolongation on the body whorl is the umbilicus, or siphonal canal. The shell's mouth is called the aperture, surrounded by the inner and outer lips. When the body is drawn into the shell, the aperture is closed by a lid, the aperticulum. A hairy protein and non-calcareous material, the periostracum, always covers the outer shell when it is alive, but is sometimes worn away (Tebble: 1976: 3).

Pelecypods (Fig. 3) are uncoiled shells composed of two "saucer-like" valves, joined along the dorsal margin by a ligament and sometimes locked hinge-teeth at the back, and held together by muscles. Their outline broadens at the anterior end, and narrows at the posterior end. A swelling, the umbo, is seen on the surface of each valve well forward on the dorsal margin. Lines of growth, concentric and parallel, are seen on the outside surface of the shell, which is covered by the periostracum (ibid: 305). In some shells, e.g. *Pinctada mazatlanica*, the inner layer may be composed of a lustrous, nacreous material unique to some molluscs, known as mother-of pearl.

Molluscs are scavengers, therefore agents of sanitation. The structure of their outer covering, i.e. the shell, is made up of two components, calcium carbonate (calcite or aragonite) and of a small amount of organic protein. Both organic and inorganic fractions contain carbon.

There are two natural faunal provinces from which all northwest Mesoamerican archaeomolluscan shells are obtained, the Panamic, or Panamanian Marine Faunal Province (P.M.F.P.) and the Caribbean, or Caribbean Marine Faunal Province (C.M.F.P.). The Pacific shoreline of northern Mesoamerica lies entirely within a single natural molluscan faunal province, the Panamic. It runs from the Gulf of California to Cabo Blanco in northwestern Peru (Feldman, 1974: 225). The Caribbean faunal province runs from the north of the Gulf of Mexico to Panama. Feldman (ibid) warns however that not all molluscan species in each faunal province are restricted to that province and that a few species can be found in both provinces, such as the *Chione undatella*, from the Californian and the Panamic provinces. A further difficulty arises from the fact that a particular species is sometimes known under different names in the different

provinces, such as the *Strombus gracilor* in the Panamic and the *Strombus pugilis* in the Caribbean. Those marine molluscan species generally live in one or several restricted ecological niches, defined in terms of ocean currents, water temperatures and habitat depth range.

**2.2. Functions.** In archaeological terms, shells can provide three types of evidence: nutrition, trade and cultural. They provide significant insights into patterns of cultural activity and serve as indicators of socioeconomic relations of the past (Hammett & al, 1989: 125). They have been used by the pre-Conquest inhabitants of the Occidente and of other areas in Mesoamerica for a variety of purposes, which embrace a utilitarian and a symbolic function, or sometimes both.

### **2.2.a. Utilitarian Functions**

**2.2.a.a.** The flesh of almost all molluscs is edible, and consequently they have been exploited as food for their nutritional value (proteins and fats, minerals) all the year round since the early Formative, e.g. in Matanchen, Yuc. (Mountjoy & al, 1972). There is evidence that the vast bulk of the molluscs were gathered locally as food in sites like Amapa (Meighan, 1976), where most unmodified shells found represent food remains, and in the Morett site, where Meighan (1972: 81) believes that molluscs were a supplement to the food resources, though not a main part of the diet. Some varieties of bivalves, like the *Chama frondosa* (oysters) and the *Anadara multicostata* (clams), might have been transported alive to nearby inland sites, while others, once opened, might have been boiled and salted before being traded (Beltrán, 1988: 68). Most molluscs probably had more than one utilitarian function at a time and were used first for food consumption.

**2.2.a.b.** Shells were used as tools and other types of instruments.

i) They were made into burins (Playa del Tesoro/ El Infiernillo, Suarez, 1977: Fig. 94 a/ Jaina, Velasquez, 1988: 107 ), celts (coastal Yucatan, Eaton, 1974), scrapers (Playa del Tesoro/ Jaina, Velasquez, 1988: 107), fish-hooks (Playa del Tesoro/ Feldman, 1972: 90) and containers; the latter could be made, sometimes with little or no alteration, from univalves (Di Peso, 1974: 512) or bivalves (Andrews, 1969: 55). Sometimes the shell itself functioned as a receptacle for an offering , e.g. the greenstone beads found inside a bivalve in offering 41 in the

Templo Mayor (Matos Moctezuma, 1988: Fig. 104) and the jade beads deposited inside a *Spondylus* shell at Tikal (Moholy-Nagy, 1985: 155). Few utilitarian pieces have been found in the Occidente.

ii) Shells were also used for the manufacture of trumpets (Figs. 8-27), spindle-whorls (Fig. 235) and finger-loops (Figs. 237-245).

2.2.a.c. The raw material was reshaped and made into ornaments, and probably used within a ceremonial and religious context (Figs. 28-32 & Chs. 4, 5, 6).

2.2.a.d. Some univalves were used for the manufacture of dyes, for cloths and feathers, by utilising the mucous liquid containing a colouring matter of some species, like *Purpura patula pansa*, *Thais biserialis* and *Murex recurvirostris*. These shells secrete a milky fluid which, on exposure to air, turns to purple or purplish-red. Evidence of this industry has been found in Playa del Tesoro (Beltrán, 1988: 69). Important places of collection included the coast from Ostula to Pomaro in Michoacán and the southern Oaxaca area from Puerto Angel to Tehuantepec (Gerhard, 1964: 179). This technique was still used last century by the people of the Coalcomán region of Michoacán (ibid: 183) and nowadays in the Mixteca, in Oaxaca, and in Guerrero (Suarez, 1989: 32).

2.2.a.e. Shells acted as money. This function has been reported by Kirchhoff (1956: 36-7) among the Tarascans and by Diego de Landa among the Maya (Tozzer, 1941: 96). In Postclassic Lowland Maya culture, little red shells, probably *Spondylus*, together with cacao beans, served as a medium of exchange (ibid).

2.2.a.f. They were utilised in architecture. Small pieces of shell, e.g. oysters, ground and mixed up with sand or lime, were used as building material, like in Tajín (Suarez, 1989: 33) and in Comalcalco. Several authors, including Landa, indicate that ancient Maya and other peoples burned shell to produce lime (Hubbs & al, 1964: 180).

## 2.2.b. Symbolic Functions

In Mexican iconography shells were associated with water and with rain, with agriculture and with fertility. They were also related to

pregnancy and birth, to human fecundity and, for the Maya, to the underworld (Velazquez, 1988: 30). The conch shell was the emblem of some gods, e.g. *Tecciztecatl*, god of the moon, who was also linked with fertility and growth. The image of the sea snail could symbolise both the moon and the female sexual organs (Fearer Safer & al, 1982: 155). In addition, sections of certain shells had particular characteristics that gave them an additional meaning and became the attribute of some deities, like the cross section of the univalve (Fig. 247) and the columella (Fig. 250).

Because of their symbolic connotations, shells were related to ceremonies dedicated to a specific deity and to temples (Suarez, 1987: 2-3) and used as grave furniture in burial contexts, e.g. in Western Mexico shaft-tombs. This last function will be dealt with during the course of this research.

**2.3. Manufacture.** Several stages precede the moment when the finished manufactured product reaches its final point of distribution: the acquisition, or collection of the raw material, its transportation to the place of manufacture, or workshop, the manufacture of the artifact and its distribution.

**2.3.a. Collection of the raw material.** One of the advantages of shells as a working material rests upon the availability of most species at all seasons along the coastlines, where they represent a well localised and "immobile" prey whose behaviour is fairly predictable.

The collection of shells involves first a process of selection of the raw material, e.g. the size of the animal. It is interesting to point out that only some species were collected, as is shown by the relatively narrow range of species mentioned in archaeological reports. Most of them were probably meant for a double usage: as food and as raw material for the production of goods. This process of selection is further reflected by the fact that juvenile species (e.g. univalves averaging a length of 3.- to 4.- cm when small) were seldom collected; none of the species used for the manufacture of trumpets, for instance, have been found in their juvenile form. This could be explained by the fact that divers were aware of the protection of certain species, that young specimens were difficult to see and to localise, and that they could not be used for food. This selection of the raw material might also have been due to the fact that the outer covering of some species made it more difficult to work.

The selection of the raw material probably depended on the one hand on its availability and accessibility in the area of collection of the shells, and on the other hand on the level of demand for it, e.g. their colour or their durability (the strongest pieces for manufacture, like *Strombus* ). This probably explains the presence of imperfections on the surface of some pieces, which were selected in spite of the natural holes made by the predators on the living animal, and other types of scratches and scars. Within the same family of marine molluscs, several taxa were collected, probably indiscriminately, depending on the availability at the source of supply, but all that was accessible was necessarily collected, traded or exchanged.

All molluscs, however, were not always available to the inhabitants of the coast uniformly throughout the year. Some could more readily be caught in the dry season, others were more abundant in the wetter part of the year, such as *Patella mexicana* , which was harvested during the dry months. There is however little information on northwest Mesoamerican molluscs seasonality, largely because of the lack of data as to what species are seasonal in occurrence at each locality (Feldman, 1974: 229).

Molluscs are distributed in three different ecological niches along the seashore: the intertidal zone, the offshore zone and the deep waters. Some species live virtually everywhere, others demand rather specific environmental conditions and have therefore a more restricted distribution. Different species were collected from these ecological niches, like low salinity lagoons and mangrove environments, intertidal sand beaches and sand flats up to 10 m, and intertidal and shallow rocky shores. Most of these ecological niches were easily accessible to the prehispanic divers (ibid: 225). In low depths, the material could be collected by hand without any particular skill or tools, but in depths of 10 m or more skilled divers had to venture with a specialised tool kit to obtain the live molluscs, since they are, in their native habitat, firmly attached to substrata requiring major efforts to dislodge them (Kolb, 1987: 88). Groups of such divers played an important role on the Pacific coast, for instance in the Kingdom of Colima, which paid an annual tribute of 1600 *Spondylus* valves to Motecuhzoma, as recorded in the "Libros de Tributos" (Boekelman, 1935: 262-4). In Tetitla, a mural illustrates a diver in the process of collecting bivalves which he is placing in a net hung around his neck (Miller, 1973: Fig. 277).

It is doubtful however that the collection was done on the seashore, once the animal was dead. Shells broken from the substrata by

storms, for instance, would be deposited on the beaches, as is indicated by traces of worm borings. The outer structure of dead shells found on the beaches consist of a thick white calcareous material, e.g. the *Strombus* species, which cannot be removed from the surface of the shell and makes them unsuitable for manufacture.

The data available from coastal sites in the Occidente supports the fact that large quantities of molluscs were collected locally, and that the food was removed from the shell and probably consumed locally before the shipment of the raw material to inland areas. The removal of the living organism is a simple operation for bivalves. This process is more elaborate for gastropods, and consist of two different methods:

- a) a hole is made underneath the spire of the univalve (Fig. 272);
- b) the shell is boiled in water; in both instances, the muscles attaching the living organism to the spire are detached, and the animal inside easily removed.

Both methods are still used nowadays by the fishermen in San Pedro, Belize. These holes are sometimes difficult to detect, because the exterior of the shell was often bored by parasitic organisms, whose holes in rotted specimens are sometimes difficult or impossible to distinguish from intentional breakage or drilling. But the fact that these breakages are almost always located on the same part of the univalve, i.e. under the spire, supports the view that they were done intentionally.

**2.3.b. Place of manufacture.** Once the material was ready for manufacture, it was directed towards the place of production, or workshop, either locally or to an inland site, sometimes located at a considerable distance from the collection point. This process was probably done by transporting the shell in its original form, i.e. the whole univalve or bivalve, or by breaking it into pieces. Unfortunately we have no evidence referring to the carriage of shells, but I believe that the the first alternative was used in spite of the fragility of some species.

The problem arises when trying to locate the place of manufacture of the finished product, i.e. whether it was the result of trade, or made locally. The basis for the notion of manufacturing centres is however difficult to explain. In archaeological contexts, evidence for workshops has been defined by the following characteristics in a localised area: a) the raw resources, e.g. the presence of unmodified whole shells and of shell "blanks", or cores ; b) several production



stages amidst the discarded debris, some finished products and some broken specimens; c) the wastage due to material not used after manufacture and the debris discarded, both difficult to prove; d) the tools used (Suarez, 1986: 121).

Evidence for shell working areas date back to the middle Formative in almost every house floor of Tierras Largas and San José Mogote, Oaxaca (Flannery, 1976: 39). There is little and incomplete evidence for workshops in coastal or inland sites in the Occidente. In Playa del Tesoro, for instance, material from a shell workshop, e.g. unfinished and broken pieces, have been found in a burial, and allow the reconstruction of the different phases of the manufacturing process of bracelets (Beltrán, pers. comm.). In Autlán and Tuxcacuesco-Zapotitlán, two cores have been found, one of them cut from a *Glycymeris* shell, where the core of the shell has been removed to provide the arm aperture of a bracelet. Kelly (1949: 129) believes that these occurrences suggest local manufacture, and evidence for a workshop area. In Amapa, although worked shell artifacts are few in number and in variety, three "bead-making kits" have been found in association with burials. One such kit includes, among other artifacts, unworked fragments, disc and square beads with notched edges, in association with a sandstone drill, flake scrapers and a sandstone abrader, which could have been used for the manufacture of shell bracelets, and might relate to the status of the person buried (Meighan, 1976: 123).

Evidence for workshops has also been located in inland sites belonging to the Trincheras Culture (Villalpando, unpub: 15) and in Ejutla, Oaxaca (Feinman & al, 1991). Shell bracelet manufacture has been recognised in La Playa, Sonora (Woodward, 1936: 119), where shell cores were found in association with hammer stones and sharp-edged flakes, probably utilised for cutting out the shells. In Casas Grandes, the amount of shells found indicates that the artifacts were not meant for local consumption, but that the shell working became an important industry meant for exports. Caches of shell were found in pits located in rooms scattered throughout the site, with a great variety of molluscan species in varying stages of manufacture, as well as shell-working tools (Di Peso, 1974: 402).

**2.3.c. Manufacture of the artifact.** Shell is a fairly hard material, relatively easy for working and reshaping, and has the advantage of producing little wastage. It is also brittle and quite breakable - *Strombus* and *Cassis* species are the strongest for manufacture. Colour goes in most instances, and iridescence is lost

with time.

The methods used for the manufacture of shell artifacts are limited in number; they are quite uniform all over Mesoamerica and do not seem to be diagnostic of any specific time period. Only general techniques will be mentioned at this stage, the more specific ones will be referred to with each group of artifacts. The first step usually carried out in the manufacture of some shells is the removal of the periostracum. Fishermen nowadays put the shell in boiling water, together with caustic soda; after boiling, the piece is rinsed with fresh water and then the periostracum is scraped away and cleaned with a brush. The surface is then smoothed by grinding and polished, sometimes for the purpose of decoration. Then the raw material was probably softened by soaking it in fresh water.

Broadly speaking, there are three stages in the process of manufacturing.

- 1 - The modification, or reshaping, of the raw material, which involves two techniques:
  - a) first the processes of sawing, gouging or hammering by direct percussion, which allow the modification or the breakage of the shell into pieces, probably with the use of a sharp stone tool or a hammer;
  - b) then the grinding of the piece into the required shape, by rubbing it against a hard surface, with the use of a sandstone or of other types of abrasive tools; sand can also be a good grinding agent. The most levelled parts of the outer lip of gastropods, for instance, were abraded in order to get a horizontal surface. This is virtually the only means of shaping the contour of the object and of creating a three-dimensional effect. The structure of the shell determines the technique of manufacture (Suarez, 1981: 43).
- 2 - The drilling of one or more holes, or perforations, through the material, with a pointed implement, which can be lithic, a bit of wood or bone, or by grinding with sand. The function of these holes was purely utilitarian, i.e. for the suspension of the artifact. These holes should not be confused with natural ones, e.g. traces left by sponges or predators, when the animal was still alive, and with those made for the purpose of decoration, e.g. eyes and pierced earlobes. It is possible, however, that natural holes were used for the manufacture of the artifact, and their edges ground to the required shape .

- 3 - The finishing and decorating, which involves two different stages, performed on one, or both surfaces of the piece:
- a) the smoothing and the polishing of the material, only done in some instances;
  - b) the decoration of the artifact by means of incised lines (of variable thickness), of excised, or cut through decoration (by drilling), perforating the surface of the shell, of inlays or of painting. Painting with animal or vegetable dyes was sometimes used for the decoration of the outside surface of the finished product (Figs. 20, 26), but few examples have survived. Since the pigment lacked permanent sticking qualities, it is only under the most favourable circumstances that evidence of it is preserved (Haury, 1945: 156). In most specimens, traces of paint are very difficult to find (C. Cartwright, pers. comm.). Sometimes more than one technique of decoration may be applied to the same piece, e.g. incised lines and cut through decoration.

A single shell can produce several artifacts when its structure is suitable for the manufacture of different pieces. All the raw material supplied by a big univalve, for instance, can be utilised, including the siphonal canal (Figs. 237-245), the columella (Fig. 250), the dorsum (Fig. 255) and the outer lip (Fig. 50). In addition, the wastage can be used for the production of small pieces, Size "a". (Figs. 139, 208).

The instruments used for manufacture are provided by archaeological evidence: e.g. stone instruments like quartz flakes (Zeitlin, 1978: 191), chert knives, burins, drills and perforators (Flannery, 1976: 39/ Feinman, 1991: 74). Basalt and limestone blocks for grinding, nodules for hammering and pointed pieces of shale are further examples (Francis, 1982: 713). Among the perishable materials, wood, bone and fibre strings might also have been used. In Ejutla, Oaxaca, cut marks made by string or rope were found on large pieces of shell (Feinman, 1991: 74).

Unfortunately little experimental work has been done in this field, apart from that done by Rosenthal (1977), Francis (1982) and Suarez (pers. comm.).

**2.3.d. Distribution.** To dwellers on the coast, shells must have been of much economic value, and their portability made them an ideal medium of exchange. We are faced with two alternatives.

- 1 - The finished product was used in the place of manufacture. This can only be demonstrated when traces of manufacture are found locally. At La Pintada, Tomatlán, Jal., for instance, it appears that late Formative people were making their own shell jewellery. Pieces in the process of completion have been found together with at least one stone drill apparently for perforating shell (Mountjoy, pers. comm.).
- 2 - It was distributed to other centres. But it is difficult to prove how the finished product was distributed to inland areas and to identify trade routes for shells. We lack a coherent set of information in this field for the Occidente. Shell trade routes must have followed the same pattern of distribution as those followed by other commodities and were probably dependent on a distribution network of coastal sites towards the interior and on exchange systems with other parts of Mesoamerica. The present state of our knowledge provides us only with sporadic information concerning trade routes within and outside the Occidente and to date no models for the dispersion of goods are available for this area, compared to other parts of Mesoamerica.

### 3. Previous Research

Little work has been done in this field in Mesoamerica, particularly in the Occidente. The material has often been underestimated as a source of information for reconstructing the archaeological past and has sometimes not been mentioned in early archaeological reports. In the last decades, however, there has been a general awareness that shells can be as diagnostic and informative as other materials.

Different people have used different approaches, related to the objectives of their researches, i.e. the provenance of the species, or the function of the artifact. Most attempts at studying and classifying worked shell artifacts are based on individual sites and, apart from the work done by Feldman for the Occidente (referred to later) and Andrews for the Maya Lowlands (1969), hardly any investigation has been done for a whole area. In the Occidente, as in other areas of Mesoamerica, references to shells in most archaeological reports (e.g. Kelly, 1947 & 1949/ Lister, 1949/ Meighan, 1976/ Porter Weaver, 1956) usually consist of a list of artifacts, classified according to their function based on present

day criteria, e.g. pendants, pectorals, bracelets, etc.

L. Feldman has investigated the distribution of species in West Mexican sites and into their provenance, whether of Pacific or of Caribbean origin. He has divided the northwest coastline of Mesoamerica into eight geographically defined "Cultural Molluscan Faunal Provinces", or CFP: the Nayaritan Province, the Ahuacatlán Province, the Purificación Province, the Coliman Province, the Balsas Province, the Chapalan Province, the Michoacán Province and the Chichimecan Province (Feldman, 1974: 226). Their determinants, according to the author, are not the natural environment where the living animal may survive, but patterns of human usage and trade. Each province is characterised by a group of species and an assemblage of fauna that occur together in the same site and in the same period only within that area, distinctive from the neighbouring ones. He has also provided a list of Western Mexican coastal and inland sites, nowadays incomplete, where unworked and worked shell material has been located. He divides these sites into two broad categories: the "primary sites", where the shells were obtained directly from the sea, and where they were generally a by-product of food collection, and the "secondary sites", where shells must have been imported from littoral peoples, and where they served a particular function (ibid, 1976: 164). Feldman (ibid) has also suggested the most likely specific locality for the provenance of the species, i.e. a list of all the species identified in some of the ecological niches included in geographical areas mentioned above .

In spite of the valuable information provided by Feldman's data, it is nowadays outdated, and has unfortunately not been revised. I believe that his views have two major disadvantages: he relies on a limited range of archaeological information, and his assumptions are only based on the type of species used in each site. He does not provide any specific origin localities for the species, information which would be of prime interest for tracing the origins of trade routes. It is dangerous to make statements on trade routes on the basis of a incomplete and scarce data only, and he does not take any stylistic or cultural variations into consideration. He seems to be more concerned about the identification of species and their geographical distribution than about the use made of the shell.

For Central Mexico, the work by Polaco on the Templo Mayor (1982) and on the murals of Cacaxtla (1986) also puts emphasis on the identification of species.

Studies based on the function of the artifact include the research done by L. Suarez (1977, 1981 & 1989) who offers a comprehensive account of the shell material found during excavations of the burials in various sites located in the Rio Balsas basin of Guerrero. This is the first extensive research concerning worked shell artifacts in Mesoamerica. The author outlines the various aspects referring to the study of shells, from the acquisition of the raw material to the distribution of the finished product, and deals in depth with the analysis and classification of the material, based upon the function of the artifact, with special emphasis on the techniques of manufacture and decoration. She also provides a useful and complete list of all the biological species identified in the sites, together with the faunal provinces they belong to. Her typology stands as a good indicator for future classifications of worked shell artifacts and has been followed, with some modifications, by E. M. Olguin (1983) and by A. Velazquez Castro (1988) in their classification and interpretation of the worked shell material from Cerro del Huistle, Jalisco, and Jaina, Campeche, the latter with specific references to the symbolic interpretation of the material. The work by Di Peso in Casas Grandes, Chihuahua (1974), in which he provides an extensive description of the material, also follows a functional approach for the classification of the artifacts.

The implications of shells in trade, with special references to Teotihuacán, have been dealt with by C. Kolb (1987), who provides detailed information on the material found in urban residences and on representations of molluscs in art. Other authors who have provided a contribution towards the interpretation of shell material have been omitted in this section because their work was not directly related to this research and because the area concerned does not fall into the the boundaries of the Occidente (e.g. Moholy-Nagy, 1963 & 1985/ Haury, 1945 & 1976/ Aveleyra & al, 1956).

#### **4. The Research**

**4.1. Nature of the Sample.** This research deals only with marine shell artifacts from the Occidente. The terminology "shell artifacts" refers to all pieces made with a shell or with part of a shell (gastropods and bivalves) which have gone through a process of modification in order to fulfil one or several specific functions (see sections 2.2.a.b.(ii) and 2.2.a.c., mentioned above). The corpus of the material - 357 pieces - has been located in the ethnographic

departments of museums in Mexico, Europe and the U.S.A., and in some private collections in Mexico and Europe. Some of these pieces have been acquired from controlled excavations, but the bulk of the material comes from gift or purchase during the course of the last fifty years. Unfortunately the origin of the latter proceeds from looting, and consequently these pieces are without any details of provenance, context and dates. One must sometimes question the authenticity of some artifacts: any material which is stylistically doubtful, i.e. whose shape or design do not fit into any stylistic Mesoamerican pattern, has not been taken into consideration.

This corpus cannot be regarded as a complete or definitive inventory of all existing shell artifacts from the Occidente, because some material was not accessible at the time of this research, or has been impossible to locate, e.g. in private collections. For reasons beyond his control, the author has been unable to trace the location of some of the material mentioned in site reports, e.g. San Marcos, Jal. (Long, 1967: 522) and Las Cebollas, Nay. (Furst, 1966/ only four shell trumpets have been located in the Museo de Arqueología del Occidente de Mexico, Guadalajara). It is however extensive and varied enough to offer a representative and detailed coverage of all shell artifacts in the Occidente.

**4.2. Aims of this Research.** This research takes three variables into account :

- a) the spatial variable, i.e. the provenance of the raw material and the relationship of the finished product with other artifacts, within their archaeological context;
- b) the cultural variables, i.e. the definition and the interpretation of the object within the culture which produced it;
- c) the chronology and the time scale.

The analysis aims at reconstructing the human behaviour behind the corpus of artifacts and at differentiating the various cultural characteristics of the shell artifacts from the Occidente, i.e. the interpretation of the artifact within a cultural context. In other words, it is an attempt to assess to some extent what the pieces were intended to represent, why they were made, and what they meant for the people who made them.

The first step is the classification of the material into groups. This provides a basic tool for the interpretation, and helps in achieving the following objectives.

- 1 - The provenance of the raw material and of the artifact, i.e. the likely area from which each specimen came, when its provenance has not been provided. This would allow us to establish the geographical distribution of certain types.
- 2 - The interpretation of the use of the artifact - its functional interpretation - within the social, economic and religious sphere. This function can be at the same time utilitarian and symbolic or non-utilitarian and symbolic. The symbolic meaning of the artifact and its religious significance can sometimes be connected to the iconography. Each object individually was part of a ritual related to social or religious practices. It is important therefore to try and identify, whenever possible, the social or religious/ritual context within which the artifact was used.
- 3 - The identification of stylistic characteristics, which define cultural areas and regional groupings within Western Mexico, and provide a chronological framework.
- 4 - The identification of exchange systems and trade routes, and the cultural relationships between the Occidente and other areas.

The ultimate objective of this research is to try and contribute to a better knowledge and understanding of the Occidente and of the ideology of its people.

**4.3. Methods.** These objectives will be "achieved" with the help of several sources of information, from the Occidente and, when necessary, from other areas of Mesoamerica. The following tools have been used.

- 1 - The archaeological reports, which are useful for:
  - a) comparing unprovenanced material to that from controlled excavations from the Occidente and from other cultural areas of Mesoamerica;
  - b) examining the association of shell artifacts with various parts of the body of the deceased and with other types of artifacts in burials, ceremonial contexts or domestic areas/house floors. This information can help in the interpretation of function. The selection of examples outside the Occidente is not complete and is referred to as comparative material only when necessary.
- 2 - Pottery representations of shells and pottery figurines. Various body ornaments like bracelets, pectorals, armpieces, headpieces, noserings and earrings are illustrated on male and female figurines; these elements serve as a guideline to the



function of the material.

- 3 - Historical records have helped in the interpretation of the usage of shell material within a religious and a secular context, and provided useful illustrations.
- 4 - Representations of shells on murals, like those of Teotihuacán and Cacaxtla. These illustrations, together with those from the codices, refer only to areas outside the Occidente.
- 5 - Ethnohistorical and ethnographic evidence, preferably within the area of the Occidente. The judicious use of ethnographic examples from cultures such as the Huichol and Cora (Indians from the northwestern part of the Occidente probably related culturally and linguistically to those who produced the shaft-tomb art and who have preserved part of their Prehispanic traditions) can help to elucidate some of the various beliefs which might have been expressed by the ancient West Mexicans in their funerary art (Gallagher, 1983: 36). The use of ethnographic analogies to unravel West Mexican iconography has however its limitations (Weigand, 1985: 145, 150 / Hers, 1982: 41) and is only reliable when it can be matched with archaeological and historical sources. Symbols, in all cultures, carry a wide variety of meanings, and one must guard against the temptation of assigning a single interpretation to an ancient artifact on the basis of contemporary myth. Unfortunately, no historical continuity can be demonstrated between what is buried in the ground and the people now living in the same areas.

**4.4. Problems and Limitations.** A number of problems have been encountered during the course of this research. Reference should first be made to the susceptibility to decay and deterioration of the material. The poor preservation and often fragmentary condition of some specimens has sometimes been a problem for the symbolic and stylistic interpretation of the material, i.e. when elements of decoration have not survived, and for the identification of species. Details upon which biologists depend for many of their identification, e.g. the sutures of the spire or the hinge teeth, can be lost with time. In addition, the colour of the shells, which is in the superficial layers, may change after prolonged periods in the ground, due to the action of the acids of the soil on the lime salts of the shell. Consequently, errors are bound to occur.

The investigation has been greatly hampered by the lack of precision in most archaeological reports, and by the absence of historical

sources in the Occidente. Shell artifacts found in documented archaeological contexts are rare compared to the bulk of material found in museums and private collections, which is largely without context.

Some sites have been impossible to locate, i.e. those provided by some private collectors and museums (Cerro de Locotero, Tepehuanco and Zuruamato in Michoacán, and Tumba de Guallarita in Colima).

Finally, a word should be said about the problems of dating shells with radiocarbon dating and the Acceleration Mass Spectrometry (AMS). The usefulness and reliability of these methods on marine shells have been questioned, since shell artifacts found in direct association with each other in the same tomb, e.g. San Sebastian have yielded dates which are several centuries apart (Berger & al, 1966). When dating shell artifacts, two sets of variables should be taken into consideration: the shell as a living organism as opposed to the shell turned into an artifact.

1. Radiocarbon dating does not reveal the date when an organism was buried, but rather the moment of its death, when it ceased to ingest radioactive carbon-14. In addition, the complexity of different marine conditions does affect the radiocarbon content of the species (for further information, see Aitken, 1990: 64, 86-8, 95).
2. Once the living organism has been turned into a commodity for exchange, it can go through several processes before its final deposition in the tomb. Broken artifacts and finished products, for instance, may be reused and reshaped (Di Peso, 1974: 461/ Haury, 1976: 313, Fig. 15.17.aa). Heirlooms may have possessed an unknown age at the time of their last use, and have gone through several processes of decoration. Another problem is the reuse of shaft-tombs, twice or even more, often over several generations or even centuries. To conclude, one should be aware of the dates provided by shells used as raw material, e.g. for building construction, and the time period the organism been dead before being used.

## **Chapter two**

### **Classification**

**of**

### **Shell Artifacts**

## THE NATURE AND LIMITATIONS OF THE CLASSIFICATION

Classification consists of sorting out a particular sample of object into groups, or "types", which are defined and given names. These types are then used for description, analysis and interpretation. A classification should be flexible and adaptable, in order to allow the insertion of any additional heading(s) and of any further component(s) at any later stage of the research.

The purpose of this particular classification is the systematic organisation of the diversified and heterogeneous shell material from the Occidente, in order to achieve the required goals mentioned in Chapter I (No. 4.2.). It should also provide a useful tool for archaeologists and the basis for future classifications of shell artifacts in other cultural areas.

Classifications can be based, for instance, on a functional or cultural approach, on manufacturing techniques, on taxonomy or on stylistic elements (dealt with in Ch. 8). Most of these methods had to be rejected because of the lack of information provided by the bulk of the material.

- a) The function of these artifacts is often unknown. There is no archaeological or written evidence which allows the present day researcher to ascertain the function of some types of artifacts (Fig. 155).
- b) The cultural background of the Occidente is still little known.
- c) The information provided by shell manufacturing techniques is not complete enough to provide the basis for a classification.
- d) A classification based on biological taxonomy would be incomplete, because it has been impossible to identify the biological species of the Reshaped Pieces.

These limitations have therefore dictated another choice. The main criterion which has been selected for this classification is the shape of the artifact. In other words morphology, the outline, or contour of the artifact, is the main criterion for classifying a particular object into a specific group.

The following classification of shell artifacts in the Occidente is divided into two main groups, on the basis of whether the artifact

has or has not retained its original biological form: the Automorphic Pieces (Group I), and the Reshaped Pieces (Group II) . Each group in turn is classified into subgroups:

Group I is divided into Univalves and Bivalves,

Group II is divided into Anthropomorphic and Zoomorphic Figurines and Non-figurative Representations.

Each subgroup is then subdivided into one or several types. These types might in turn include a certain number of subtypes, which, when necessary, will incorporate variants.

Unfortunately, due to the heterogeneous aspect of the material, i.e. the great variety of shapes, different criteria for classification had to be selected for different levels of hierarchy. The criteria for defining Groups and Subgroups have already been discussed. At the next level, the criteria selected for defining each Type, Subtype and Variant are based on the following attributes, according to the requirements of the classification:

- a. the absence - or presence - of decoration (1.1.A./B., 1.2.A./B., 2.3.A.1. to 2.3.G.2.);
- b. the size of the artifact (1.1.A.1./2., 2.3.A.1.a./b., 2.3.A.2.a./b., 2.3.C.1.a./b., 2.3.C.2.a./b.);
- c. the type of motif illustrated in the decoration, i.e. anthropomorphic, zoomorphic or non-figurative representations (1.1.B.1.a./b./c., 1.1.B.2.a./b., 2.3.F.2.a./b./c.);
- d. whether the artifact is two or three-dimensional (2.1.A./B., 2.2.A.1./2. to 2.2.L1./2.);
- e. the shape of the artifact ( 2.1.A.1./2./2. , 2.1.B.1./2. , 2.2.A .to 2.2.L., 2.2.A.1.a./b., 2.2.A.2.a./b., 2.2.F.2.a./b., 2.2.H.a./b., 2.3.A. to 2.3.G., 2.3.E.1.a.-h., 2.3.E.2.a.-c., 2.3.G.1.a.-c., 2.3.G.2.a.-c.);
- f. the position of the figurine, e.g. frontal view or side view (2.1.A.1.a./b.);
- g. the change in the structure of the shell (1.1.B.1./2.).

The shape of the artifacts is invariably determined by one or several of these criteria, with the exception of a and c. Finally, stylistic elements have been introduced, when necessary, to define certain variants.

Once the formal classification has been set up, an attempt is made to assign a function to each category of artifacts, drawing upon analogies from other areas of Mesoamerica if these are helpful. In many cases, function can only be guessed at, and I have tried to avoid giving a false impression of precision. In particular, I have

opted not to use the term "pectoral" and "pendant", since the two categories cannot be distinguished by the form of the artifact alone.

The biological identification of the species (taxonomy) has been done with the help of Caroline Cartwright, Department of Scientific Research, British Museum, and follows Keen's terminology (1971). It has only been provided for Automorphic Pieces. For the reasons mentioned above, it could not be provided for the Reshaped Pieces. Only the information concerning the part of the shell used for the manufacture of the Reshaped Pieces will be suggested, under the heading of "Shell Structure". In several instances, the shape of the piece (e.g. Fig. 203) is not sufficiently diagnostic and any suggestion would therefore be misleading.

Reference to Lourdes Suarez's Classification (1977) will be made under each heading, when available.

It should be finally pointed out that the data in this chapter are described in a catalogue format.

# SUMMARY OF THE CLASSIFICATION

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## KEY FOR NUMBERING

- 1.1.A.1.a.** : the first number refers to the Group (2 Groups)
- 1.1.A.1.a.** : the second number refers to the Subgroup (5 Subgroups)
- 1.1.A.1.a.** : the capital letter refers to the Type (25 Types)
- 1.1.A.1.a.** : the third number refers to the Subtype (37 Subtypes)
- 1.1.A.1.a.** : the lower case letter refers to the Variant

## CLASSIFICATION AND DESCRIPTION

### 1. AUTOMORPHIC PIECES

A shell artifact can be defined as "automorphic" when it maintains the original shape of the biological species it was made from. The specimens included in this group are made either of the single valve of a univalve, or gastropod, or of one of the valves of a bivalve, or pelecypod. In the latter category, one valve of the shell is being used for the manufacture of a single artifact. Automorphic artifacts are therefore divided into two subgroups: the pieces made from a univalve, or gastropod, and those made from a bivalve, or pelecypod.

#### 1.1. Univalves

This subgroup includes all the artifacts made out of the entire valve of a univalve. In all instances, the specimen has gone through a process of modification, i.e. when the structure, or the surface, of the shell has been altered.

Two kinds of modifications can be taken into consideration:

1. Modifications which do not alter the initial shape the shell. These include circular man-made perforations through the surface of the artifact and will be referred to as "holes". They are made, with few exceptions, for functional reasons, i.e. for suspension. All the specimens included in Group 1 (1.1.A.1.a.) fall under this category.
2. Modifications during which the original shape of the raw material has been maintained, but its structure has been slightly altered through the process of manufacture. These types of modifications for univalves include the following: the removal of the apex, of the lips, of the siphonal canal or of the columella and the cutting of one or several circles, or of a slit, through the dorsum (see Fig. 2). All the specimen included in Group 1 (1.1.A.1.b. to 1.1.b.2.b.) fall under this category. However, one or several types of modifications can be made at the same time on the same specimen, such as the removal of the apex and of the lip in variants 1.1.A.2.b., 1.1.A.2.c. and 1.1.A.2.d. All these modifications have been made for functional reasons, e.g. the removal of the apex for turning the univalve into a trumpet. In addition, some modifications are carried out only for the purpose of decoration, with no

functional reasons involved. The geometric patterns cut through the surface of the shell (Fig. 29) and the slightly abraded nodules of some univalves (Figs. 15, 18) fall under this category.

This subgroup is in turn divided into two types: the artifacts with no decoration, and the decorated ones.

**1.1.A. NO DECORATION.** The non-decorated gastropods can be classified into two subtypes, in accordance with the size of the pieces: the artifacts belonging to "Size a", whose length is less than 8.-cm, and those belonging to "Size b", whose length is more than 8.-cm. The length is measured from the tip of the apex to the end of the siphonal canal.

**1.1.A.1. "Size a".** This subtype is divided into four variants and includes all small univalves, with or without holes for suspension. In most instances, their shape has been modified through manufacture. Those which have retained their shape will be included within this classification because of their frequent occurrences in archaeological contexts.

a. Univalves which have retained their original shape. All these pieces have either one or two holes for suspension along the lip, or one next to the apex. The holes are drilled conically, or irregularly pierced. Pieces such as the one in Fig. 4 (Kelly, 1949: Fig. 87 i) are included under this variant. This particular specimen has a hole perforated through the apex.

FUNCTION : component of ornament

GENUS : *Oliva* sp.

PROVENANCE : Tuxcacuesco (La Mezcalera, Burial 26) Date: AD 0-600 (Schondube,

COMPARISONS: Occidente : recurrent in several sites 1980:128)

O. areas : recurrent in several sites in Mesoamerica

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Note

1. Dates in brackets and underlined: suggested dates based on other occurrences.

2. Provenance and dates in brackets: suggested provenance and dates based on stylistic characteristics, Ch. 8.

3. "recurrent in several sites": when this group of artifacts is not thought to be diagnostic of any cultural area, no further information is provided on other occurrences in individual sites, either in the Occidente or in other areas of Mesoamerica.

4. Areas and sites in italic: list of museums where they are deposited (see Appendix 2).

5. Figures in brackets under the heading "Comparisons": refer to the number of specimens located in a museum (see Appendix 2).

6. "O. areas" = other areas.

L. Suarez: "Automorphic Pendants", Groups 2, 3 and 4, and "Automorphic Pectorals, no decoration" (1977: 32, 52).

- b. The pieces whose entire spire, or the tip of the spire, has been removed, by sawing it at or near the junction of the lip and the body (Fig. 5 - Olguin, 1983: Fig. 2 m). In this particular example, with no holes, the columella of the gastropod has also been removed, in order to allow stringing through the apex. Examples of small univalves without columella are quite rare. Another piece (*Oliva spicata*) has been reported from El Infiernillo (Suarez, 1977: 33).

FUNCTION : tinkler (see definition, Ch. 3: 119)

GENUS : *Oliva spicata* (Olguin)

PROVENANCE : Cerro del Huistle (burial) Date: AD 0-300

COMPARISONS : Occidente : recurrent in several sites

O. areas : recurrent in several sites in Mesoamerica

A few specimens with columella from El Infiernillo have holes for suspension along the lip of the univalve; it is thought that they might have been representations of trumpets (Suarez, 1977: 33).

L. Suarez: "Automorphic Pendants", Groups 5 to 9 (ibid: 32).

- c. The pieces with a truncated edge (Fig. 6 - Kelly, 1947: Fig. 69 d). In these specimens, either the whole spire has been removed, or the univalve has been cut vertically across the middle of the body whorl. One hole for suspension has been cut through the material next to the apex.

FUNCTION : tinkler

GENUS : *Oliva* species (Kelly)

PROVENANCE : Apatzingán Date: AD 300-1500 (Schondube, 1980:

COMPARISONS : Occidente : recurrent in several sites 128)

O. areas : recurrent in several sites in Mesoamerica

L. Suarez: "Automorphic Pendants", Groups 10 and 12 (1977:33)

- d. The pieces with truncated edges and a horizontal perforation cut through the surface near the apex (Fig. 7 - Long, 1966: Fig. 107). This type of perforation might have been used for the inlay of another material, such as jade (Kidder & al, 1951: Fig. 68 b: Postclassic).

FUNCTION : tinkler

GENUS : *Agaronia testacea* Lamark (Long)

PROVENANCE : San Sebastian, Tomb 1 Date: 400 BC - AD 100

COMPARISONS : Occidente : recurrent in several sites

O. areas : recurrent in several sites in Mesoamerica

All the specimens included in this subtype might have been used for stringing, either through their apex or through the hole, as a

component of a body ornament, such as a necklace or a bracelet.

**1.1.A.2. "Size b".** Only large gastropods which have gone through a process of modification through manufacture will be taken into consideration in this subtype. The periostracum is always removed, with the exception of the specimen in Fig. 8. It is difficult to say whether the broken hole visible on the dorsum has been made intentionally, or is due to natural breakage. The apex has been removed. One broken hole for suspension has been perforated along the lip.

FUNCTION : trumpet

GENUS : *Strombus galeatus* Swainson, 1823

PROVENANCE : Colima Date: [Classic]

COMPARISONS : Occidente: San Sebastian: AD 140-400 (Long, 1966: Fig. 116),  
Cuitzeo: Classic (Macias Goytia, unpub.)  
O. areas : no information

Other occurrences of modified gastropods with the periostracum are rare in the Occidente.

Five main types of modifications can be taken into account. However, more than one type of modification might have been used on the same piece. All the following examples have one or several holes for suspension, cut along the lip of the univalve. The same type of modifications will be encountered in the manufacture of the decorated pieces (1.1.B)

- a. The apex removed, by cutting the end of the spire vertically (Fig. 9). One hole has been cut through the surface near the lip, close to the nodule. Most of the pieces included in this subtype have had their apexes removed, and have one or several holes for suspension.

FUNCTION : trumpet

GENUS : *Turbinella angulatus* Solander, 1786

PROVENANCE : Jalisco Date: unknown

COMPARISONS : Occidente : recurrent in several sites  
O. areas : recurrent in several sites in Mesoamerica

- b. The outer lip cut all along the edge (Fig. 10 - Long, 1966: Fig. 112). The apex of this piece has also been removed, and one hole has been cut through the surface near the outside edge. The surface retains traces of yellow-brown coating.

FUNCTION : trumpet ?

GENUS : *Turbinella angulatus* Solander, 1786

PROVENANCE : San Sebastian, Tomb 1 Date: 400 BC - AD 100

COMPARISONS : Occidente : San Sebastian (Long, 1966: Fig. 111)  
O. areas : none

The outer lip of the univalve was worked to a greater or lesser degree, and removed, in most specimens; then the edge was smoothed by grinding.

- c. A circular hole, with a diameter of 2.40 cm, cut through the surface (Fig. 11 a & b). This specimen has gone through three further modifications: the removal of the apex, of the lips and of the columella. One hole has been cut through near the outside edge, next to the spire.

FUNCTION : non functional ceremonial piece  
GENUS : *Strombus gigas* Linné, 1758  
PROVENANCE : Jalisco Date: [Classic]  
COMPARISONS : Occidente : Tres Cerritos, Cuitzeo: Classic (Fig. 12- Macias Goytia, unpub.)  
O. areas : Piedras Negras: late Classic (W. Coe, 1959: Fig. 52)  
Lubaantún: AD 730-860 (Joyce, 1926: Pl. 24, Fig. 4).

The purpose of this circular hole, or holes, was probably for inlaying another material (e.g. Fig. 12, with a green circular stone inserted in the circle), or for the modification of the sound. These holes should not be confused with the holes for suspension, which are smaller in size.

- d. Thick incised parallel lines have been cut vertically along the siphonal canal (Fig. 13 - Piña Chan, 1982: Fig. 27 d). The apex has also been removed. This specimen, however, is badly damaged, and no further processes of modification, or holes, are visible.

FUNCTION : trumpet and rasp  
GENUS : *Strombus* species  
PROVENANCE : Tingambato, Tomb 1 Date: AD 450-950  
COMPARISONS : Occidente : none  
O. areas : Casas Grandes: AD 1205-1300 (Di Peso, 1974: 520): several *Strombus galeatus* have been found in room fills, either with a series of small steps, or notches, along the altered lip edge, or with incised notches along the dorsum.

Shell trumpets with parallel incised lines along the outer lip have been illustrated in the pottery figurines from Colima (Fig. 269). These instruments have had a double use: as a trumpet and as a rasp.

- e. The body whorl has been removed, leaving the whole columella visible (Fig. 14). The apex has not been modified. Two holes have been cut through the only portion of the dorsum left, near the spire. Such modified gastropods seem however to be invariably of a smaller size than those belonging to the previous categories.

FUNCTION : non functional ceremonial piece  
GENUS : *Pleuropoca* species

PROVENANCE : Occidente Date: [Classic]  
COMPARISONS : Occidente : Huandacareo , Mich: Classic (Platform 1, Burial  
44/ Macias Goytia, unpub.); *unknown provenance* (x23)  
O. areas : none

The function of the pieces included in this last type remains unknown. The holes were probably used for stringing.

**1.1.B. WITH DECORATION.** All the specimens included in this type belong to "Size b" (more than 8.- cm long). The criterion defining the subtypes is based on a single type of modification of the univalve, which defines its function as a trumpet: the removal of the apex. However, removing the apex does not necessarily imply the use of the piece as a trumpet. In some pieces (Fig. 23), this modification does not allow the air to go through the apex. Consequently, it has been impossible for the author to check if the specimens displayed in museum cases have been used as musical instruments. Decorated gastropods will be divided into two subtypes: subtype "apex removed" and subtype "apex not removed".

**1.1.B.1. Subtype "apex removed".** It can be divided into three different variants, determined by the type of representations portrayed on the surface of the univalve: anthropomorphic, zoomorphic and non-figurative. In some instances, however, two types of representations can be used on the same specimen; consequently, the main motif of decoration (anthropomorphic, zoomorphic or non-figurative) dictates the variant.

**1.1.B.1.a. Anthropomorphic Representations.** This variant includes representations of humans and of deities, sometimes difficult to differentiate. Two subdivisions are defined by stylistic characteristics.

**DECORATED NODULES.** In Fig. 15 (published by Gallagher, 1983: Fig. 87), the frontal view of a human head has been carved over three of the nodules of the univalve. Incised lines illustrate the trapezoidal nose, the mouth, the eyebrows and the horizontal headdress. Small circular depressions mark the eyes. The quadrangular design under the nodules seems to illustrate an abstract body. Between each nodule, parallel longitudinal strips, made of incised lines, show different geometric patterns and cover the dorsum. Above the siphonal canal, a zigzag incised line is visible, with circular depressions in the middle (museum photograph: no further information could be obtained).

FUNCTION : trumpet



**GENUS** : *Strombus gigas* Linné, 1758  
**PROVENANCE** : Colima **Date:** [200 BC - AD 900]  
**COMPARISONS** : Occidente: none  
O. areas : Monte Albán: no dates available (Metropolitan Museum of Art, New York - No. 1979.206.934)

Similar human heads are illustrated in the pottery from Colima: a standing figurine with two human heads hanging from a strap on both sides of the waist (Eisleb, 1971: Fig. 1) and vessels with four or nine heads surrounding the main body of the vase (Kan & al, 1970: Figs. 127, 128).

**INCISED DECORATION.** Occurrences of incised decoration with anthropomorphic representations are found in the following two pieces.

- In Fig. 16, a *Tlaloc* representation, made out of thin lines, covers the body whorl of the univalve. His characteristic "goggle-eyes" and fanged mouth are clearly outlined. A two-tier headdress is made up of two horizontal lines bordering a series of circles, topped by double semi-circles (specimen displayed in museum case).

**FUNCTION** : trumpet

GENUS : *Strombus* species

**PROVENANCE :** Occidente

Date: unknown

COMPARISONS : Occidente : none

O. areas : none

- In Fig. 17 (published in "Precolumbian Art of Mexico and Central America", 1974: Fig. 294), the design is composed of a frontal view of an anthropomorphic figure with arms outstretched. He is wearing earspools, headgear and belt. The figure is bordered by a square panel, made up of a continuous series of interfaced T-shaped geometric designs. A trace of turquoise-coloured, or green, stucco remains on the shell, a technique which flourished in Teotihuacán and other areas of Mesoamerica during the Classic Period and later. A single perforation has been drilled near the lip. This trumpet was found while excavating for a school house foundation in 1966, in the area of Puruándiro, northern Michoacán (Irwin & al, 1974).

FUNCTION : trumpet

**GENUS** : *Fasciolaria princeps* Sowerby, 1825

**PROVENANCE** : Zuruamato, Mich.

Date: AD 900-1200 (ibid)

COMPARISONS: Occidente : Las Cebollas, Tomb 1: early Classic (Furst, 1966: Fig. 41)

O. areas : Teotihuacán, Guerrero, Oaxaca, Valley of Mexico (Aztec),  
Maya area (dates unknown) all painted with different techniques.

**1.1.B.1.b. Zoomorphic Representations.** Three subdivisions can be taken into consideration, defined by stylistic characteristics.

**DECORATED NODULES.** In Fig. 18, the frontal view of an animal head, resembling that of a monkey, has been carved over four of the nodules of the univalve. The contour of the head, the four curved lines on the right hand side of each head and the geometric pattern on the dorsum are made up of incised lines. Oval depressions indicate the eyes and the mouths. One double ring under each nodule, with a concave circle in the middle, illustrates the body of the animals. Concave circles have been carved around the siphonal canal. Only one hole could be located, cut through the lip, next to the spire (specimen displayed in museum case).

FUNCTION : trumpet

GENUS : *Strombus gigas* Linné, 1758

PROVENANCE : Occidente, possibly Michoacán

Date: unknown

COMPARISONS: Occidente : none

O. areas : none

**INCISED DECORATION.** In Fig. 19, the only element of decoration consists of an animal carved on the inner lip of the gastropod, next to the siphonal canal (decorative elements on this part of the shell are very rare: the only other example which has been located, of unknown provenance, illustrates the Aztec glyph 1 *Miquiztli* / Musées Royaux d'Art et d'Histoire, No. A.AM.3465). The decoration has been made with thin lines, and looks like the dorsal view of a lizard. The head is triangular, the tail is elongated, and only one of the back legs is visible. The body of the animal is broken, and might have consisted of an excised circle: the edge of part of the circumference of a circle is clearly visible at the back of the head. Two holes have been drilled through the surface of the lip, at both extremities.

FUNCTION : trumpet

GENUS : *Strombus gigas* Linné, 1758

PROVENANCE : Jalisco

Date: [400 BC - AD 900]

COMPARISONS : Occidente : Las Cebollas, Tomb 1: frogs representations: early Classic (Furst, 1966: Fig. 41 b)

O. areas : El Infiernillo: AD 600-1200 (Suarez, 1977: PL. 75)

**PAINTED DECORATION.** In Fig. 20, a dark orange slip covers the whole surface of the gastropod. Nine double parallel zigzag lines had originally been painted in white along the body whorl ; five of those are still visible today, most of them incomplete. Each pair terminates in a triangle, with two small circles inside. According to the museum record sheet, a green pattern, painted between each of the double lines, has disappeared after the restoration of the object, due to the consolidation of the slip with a soluble varnish. A geometric pattern of the same white colour surrounds the spire of the shell. The parallel lines seem to represent snakes, with

triangular heads and two painted eyes, all facing towards the geometric pattern (specimen displayed in museum case).

FUNCTION : trumpet

GENUS : *Strombus galeatus* Swainson, 1823

PROVENANCE : Jalisco

Date: [400 BC - AD 900]

COMPARISONS: Occidente: Chupícuaro (Fig. 21): dates unknown. Two painted strips cover the body whorl, from the outer to the inner lip. The design is made of several coiled serpents with a triangular head. The body of each animal is covered with a different pattern.

O. areas : none

**1.1.B.1.c. Non-figurative Representations.** Two subdivisions can be taken into consideration, defined by stylistic characteristics.

**INCISED DECORATION.** Occurrences of incised decoration with non-figurative, or geometric designs are found in the following pieces.

- In Fig. 22, the whole design on the surface of the univalve is made up of thin lines. Two circles have been incised around the nodules, on the spire and on the body whorl of the univalve. Those on the dorsum are topped by a double oval line. The siphonal canal is decorated with four different types of geometric patterns, perpendicular to the edge. This specimen has no visible hole for suspension; part of the lip has been removed and ground off, but badly polished, and could possibly have included one or two holes (museum photograph).

FUNCTION : trumpet

GENUS : *Fasciolaria princeps* Sowerby, 1825

PROVENANCE : Nayarit

Date: [Classic]

COMPARISONS: Occidente: *El Otero* (x2): AD 500-800 (Noguera, 1944: Fig. 13)

Las Cebollas, Tomb 1: early Classic (Furst, 1966: Fig. 45);

Lake Chapala (*ibid*: Fig. 44 b), Colima & Michoacán , dates unknown; *specimens with unknown provenance*

O. areas : El Infiernillo: AD 600-1200 (Suarez, 1977: Pls. 76, 93)

Casas Grandes: AD 1150-1300 (Di Peso, 1974: Fig. 627.6 Types IB)

Kaminaljuyu: middle Classic (Kidder & al, 1946: Figs. 162 a-b);

Teotihuacán, Mitla; Maya area: dates unknown

- The specimen in Fig. 23 (a & b) is decorated with an incised strip, about 1.50 cm wide, running along the dorsum of the univalve, from the lip to the siphonal canal, on the opposite side. The design consists of a geometric pattern, made up of a series of small rectangles bordering three parallel, diagonal lines. Two circles have been cut through within this design at the top of the dorsum. The same pattern might have been repeated around the spire, but is too eroded to be visible. Although the tip of the apex has been cut vertically to the spire, this modification would not let any air go through the aperture. A further modification consists of the removal

of the columella, as in Fig. 11 b. and could not have been used as a trumpet. It is unique for having eight circular holes cut through different parts of the shell (Fig. 23 b), which probably had different usages: two along the lip (diameter: 0.90 cm), with sign of wear on the edge, probably for hanging; two along the siphonal canal (same size); one (diameter: 0.50 cm) at the end of the siphonal canal, which could have been used for hanging; two (diameter: 0.35 cm) on the dorsum, mentioned above; one (diameter: 0.20 cm) at the top of the spire. An irregular hole (3.60 x 1.90 cm) underneath the spire could have been made for the removal of the animal.

FUNCTION : non functional ceremonial piece

GENUS : *Charonia variegata* Lamark, 1816

PROVENANCE : Churumuco, Mich.

Date: unknown

COMPARISONS: Occidente : none

O. areas : El Infiernillo: AD 600-1200 (Suarez, 1977: Pls. 76, 93); Veracruz (Huastec?), Mezcala, Gue., all with a geometric pattern covering the whole surface of the shell.

- The design on the dorsum of the specimen in Fig. 24 consists of four incised lozenges. The two largest ones are joined by a straight line, which intersect at right angles another T-shaped line. Another undefined design, U-shaped, can be seen in one corner. This specimen has four holes, cut through in sets of two at both extremities of the lip.

FUNCTION : trumpet

GENUS : *Strombus gigas* Linné, 1758

PROVENANCE : Jalisco

Date: unknown

COMPARISONS: Occidente : none

O. areas : none

- The main design on the specimen in Fig. 25 consists of a border line made up of incised lines, all along the lip of the univalve. It incorporates six half circles, with a short line going through each radius. Three parallel lines frame the design and run along the direction of the lip, up to the back of the dorsum. Four parallel lines run along the dorsum, next to the siphonal canal. A broken and elongated perforation on the dorsum terminates in a circle cut through the material, where a disc might have been inserted, as in Fig. 11 a. Two other circles are visible: one, half broken, at the top of the dorsum, another one at the back of the univalve. There might have been a fourth circle on the opposite side of the perforation. Four holes have been cut through the lip along the parallel lines, and a fifth one next to the spire.

FUNCTION : non functional ceremonial piece

GENUS : *Strombus gigas* Linné, 1758

PROVENANCE : Ixtlán del Río

Date: early Postclassic (Marti, 1968: 74)

COMPARISONS: Ocidente : none  
O. areas : none

**PAINTED DECORATION.** The specimen in Fig. 26 has been painted all over its surface. The design consists of a main central round-shaped motif with eight "growths" coming out of its circumference, ending in triangles. The main motif and some of the "growths" are decorated with circles. The rest of the composition is made up of triangular patterns, either on their own, joined through the vertex, or facing each other at their bases. The decoration was made by applying a very thin layer of plaster on the surface of the shell. Before the layer was totally dry, the design was marked off, and the layer cut out within the design area. Then the hollow spaces were filled in with reddish-brown pigment, the surface remaining smooth - this method of decoration, called "paint cloisonné", has been used in Mesoamerica for the decoration of pottery. In the few instances where the decoration has disappeared, the natural surface of the shell can be seen. One hole has been cut through the dorsum, near the siphonal canal.

FUNCTION : trumpet

GENUS : *Strombus galeatus* Swainson, 1823

PROVENANCE : Jalisco

Date: unknown

COMPARISONS: Ocidente : Chapala area: Fig. 27 (geometric design made of perpendicular lines; paint cloisonné, black, orange and white Museo Regional, Guadalajara, N. FS8 02830): dates unknown Nayarit (x2/ von Winning & al, 1968: Fig. 195) and Sotheby Catalogue, 16th. May 1989, New York: Fig. 208): unknown provenance

O. areas : Teotihuacán: decorated in fresco with two hieroglyphs representing a *cycle* and the number 12 and 9 (Séjourné, 1957: Fig. 51); Central Mexico: paint cloisonné (American Museum of Natural History, New York)

L. Suarez: "Trumpets". It includes all the specimens, with and without decoration (1977: 63).

**1.1.B.2. Subtype "apex not removed".** Two variants are included under this heading: anthropomorphic and non-figurative representations. The same criterion as for 1.1.B.1. determines their differences.

**1.1.B.2.a. Anthropomorphic Representations.** There are no subdivisions under this heading. Low relief and incised decoration has been used for the design over the surface of the univalve in Fig. 28. An abstract human figure is shown on the dorsum. The face resembles that of *Tlaloc*, with two goggle eyes, each with a circular depression in the middle, and three fangs coming out of the

mouth. The headdress is illustrated by a double line following the whole contour of the head, down to the ears. The body is made up of five parallel lines, slightly curved, and is surrounded on both sides by symbolic motifs. A fringe, made up of scrolls, follows the edge of the dorsum and surrounds both sides of the head. Two further sets of parallel fringes surround the spire, and consist of semi-circles and squares. Two holes have been drilled at an angle on both sides of the edge of the dorsum, next to the lip. The point of the apex is slightly broken (specimen displayed in museum case).

FUNCTION : non functional ceremonial piece

GENUS : *Fasciolaria princeps* Sowerby, 1825

PROVENANCE : [Michoacán]

Date: [AD 450 -900]

COMPARISONS: Occidente : none

O. areas : none

**1.1.B.2.b. Non-figurative Representations.** Two subdivisions are defined by stylistic characteristics.

**INCISED-EXCISED DECORATION.** In Fig. 29 (Diaz, 1987: Fig. 6), the design, made up of excised and incised decoration, covers the whole surface of the univalve. It consists of several parallel strips illustrating a scroll, or fangs coming out of a mouth, and of geometric patterns, within which triangular, rectangular and circular designs have been cut through. All the nodules are surrounded by two incised lines. Only one small hole is visible, cut through the surface at the top of the siphonal canal. The piece is badly damaged and partly broken.

FUNCTION : non functional ceremonial piece

GENUS : *Pleuropoca princeps* Sowerby, 1825

PROVENANCE : Michoacán, possibly Apatzingán

Date: [AD 450-900]

COMPARISONS: Occidente : none

O. areas : none

**PAINTED DECORATION.** In Fig. 30, a white slip covers the entire surface of the univalve. This in turn has been painted all over with a pink coat. Both the slip and the pink paint have in places come off, leaving the surface of the univalve visible. The only elements of decoration consist of at least three circles painted over the dorsum and of a line following the suture of the spire, all painted in turquoise. This specimen has been illustrated by Noguera (1944: Fig. 13), who refers to the painting as being in fresco (specimen displayed in museum case).

FUNCTION : non functional ceremonial piece

GENUS : *Tonna* species

PROVENANCE : El Otero

Date: AD 500-800 (Schondube, 1979: 41)

COMPARISONS: Occident : none

O. areas : none

L. Suarez: "Automorphic pectorals", group with decoration (1977: 53).

## 1.2. Bivalves

This subgroup includes all the artifacts made out of one valve of a pelecypod, whose natural shape (and colour) has been utilised with slight modification. All the specimens included under this heading have also gone through one, or several, processes of modification, such as the piercing of the single or double hole, the removal of the umbo or of both auricles, and the cutting of one circle through the valve. This subgroup is in turn divided into two types: undecorated and decorated artifacts.

**1.2.A. NO DECORATION.** This type includes all the non-decorated pieces. They all have one or two holes for suspension, cut through the umbo (Fig. 31).

FUNCTION : Component of ornament

GENUS : *Cardita* species

PROVENANCE : Playa del Tesoro Date: AD 400-600 (Beltrán, pers. comm.)

COMPARISONS : Occidente : recurrent in several sites

O. areas : recurrent in several sites in Mesoamerica

L. Suarez: "Automorphic Pendants: Pelecypods" (1977: 31).

**1.2.B. WITH DECORATION.** Included in this type are all the decorated pieces whose shape has been altered but still retains some of the features of the original valve.

All are anthropomorphic representations (Fig. 32). The shape of the valve has been modified so as to resemble the shape of a human head. The umbo and the two auricles of the valve have been retained, and used for portraying human features. Two circular depressions mark the eyes; one depression is wider than the other. The headdress consists of a pattern showing two rows of squares, made up with incised lines. Two incised lines outline the nose. One hole has been cut through the back of the umbo.

FUNCTION : Component of ornament

GENUS : *Pecten* sp.

PROVENANCE : Jalisco Date: [200 BC - AD 900]

COMPARISONS : Occidente : none

O. areas : Huatabambo, Son: dates unknown;

Chiapa de Corzo: 450 BC-AD 950: paired bivalves with incised frog design (Lee, 1969: Fig. 130 a & b)

This example is unique in the Occidente, where decorated bivalves do not seem to have been manufactured.

## **2. RESHAPED PIECES**

An artifact can be defined as "reshaped" when the shape, or the structure, of the shell has been altered, often beyond recognition. One valve - of gastropod or of bivalve - is being used for the manufacture of several artifacts. In most instances, the biological species is very difficult to identify, not only because the process of manufacture has removed most of the diagnostic evidence, but also because of the rate of decay. Consequently, the only information which will be provided under each heading will be the part of the structure of the shell. "Reshaped pieces" are divided into three subgroups: anthropomorphic figurines, zoomorphic figurines, and non-figurative representations.

### **2.1. Anthropomorphic Figurines**

This subgroup includes all the pieces whose outline relates to the human form. God representations are also included under this heading, bearing in mind that human and divine forms are sometimes difficult to differentiate. The subgroup is divided into two types: two-dimensional and three-dimensional figurines. Each type is in turn divided into two or three subtypes: whole figurines, heads, and dual representations.

**2.1.A. TWO-DIMENSIONAL FIGURINES.** Included in this type are all the pieces with a flat or curved surface having two dimensions only and not specially designed to give any illusion of depth. The maximum thickness of the whole surface should be uniform all over and not exceed 0.60 cm. This type is in turn divided into three subtypes: whole figurines, heads and dual representations.

L. Suarez: "Decorated pectorals" (1977: 56).

**2.1.A.1. Whole Figurines** . All the figurines are standing and seem to be male. Two variants might be taken into consideration: frontal views and side views.

**2.1.A.1.a. Frontal view**. This variant includes both naturalistic and



stylistic representations.

Among the naturalistic representations are three subdivisions, defined by stylistic characteristics.

- I. Figurines with two longitudinal slits, cut through the material, between the arms and the body; one circle has sometimes been cut through at each extremity of the slit (Figs. 33, 34).

FUNCTION : component of ornament

SHELL STRUCTURE : modified valve of bivalve

PROVENANCE : [north Jalisco/ south Nayarit] Date: [400 BC - AD 900]

COMPARISONS : Occidente : Colima (Furst, 1978: Fig. 64); Jalisco (x2)

O. areas : none

- II. Figurines with two circular gaps, cut through the material between the arms and the body. The hands are resting on the hips (Fig. 35).

FUNCTION : component of ornament

SHELL STRUCTURE : modified valve of bivalve

PROVENANCE : [north Jalisco /south Nayarit] Date: [400 BC - AD 900]

COMPARISONS : Occidente : Cuitzeo : Classic; Jalisco

O. areas : none

- III. Figurines with an incised line, between the arms and the body. In some specimens (Fig. 36), a circular depression has been carved under the armpits (Kelly, 1947: Pl. 17 e).

FUNCTION : component of ornament

SHELL STRUCTURE : modified valve of bivalve

PROVENANCE : Apatzingán Date: AD 450-650(Delicias Phase)

COMPARISONS : Occidente : Apatzingán (x4): mid-Classic; Cuitzeo (x2 and Fig. 38, from Huandacareo: the teeth are visible.): Classic Colima (Bakarat Gallery, No. PF 737)

O. areas : none

Two similar anthropomorphic figurines made out of pyrite and originally inlaid (Fig. 37) have been found in Apatzingán (Kelly, 1947: Pl. 17 c & d). They were found in a child burial (No. 29), around the neck of the deceased. Kelly (ibid: 178) believes that they belong to the Delicias phase (mid. Classic). A similar specimen was found in Michoacán, with circular eyes inlaid with shell (Museo del Estado, Morelia, Mich. No. 311).

The figurine in Fig. 39 offers totally different stylistic characteristics. The coffee-bean eyes, carved in the round, resemble those of the pottery figurines from Chupícuaro and from Nayarit (Chinesco style). The same treatment and shape are applied to the mouth. Both the rectangular-shaped headdress and the necklace are elaborate and carved with incised lines. Both arms are folded and the right hand is resting on the chest. The whole surface is dark, and

might have been burnt. There are two holes, at the height of the elbows, cut through the material, from the front to the back.

FUNCTION : component of ornament  
SHELL STRUCTURE : modified valve of bivalve  
PROVENANCE : Apatzingán  
COMPARISONS : Occidente : Apatzingán  
O. areas : none

Date: [AD 450 -900]

Among the stylised representations are several subdivisions, with specific attributes and defined by stylistic characteristics.

i. Figurines with knees pointing outward. Some specimens have a triangular face. Circular holes indicate the eyes and the mouth. The arms are pointing upward and the hands and the feet, decorated with incised lines, face outward (Fig. 40).

FUNCTION : component of ornament  
SHELL STRUCTURE : modified valve of bivalve

PROVENANCE : Colima/Jalisco

Date: [400 BC - AD 900]

COMPARISONS : Occidente : Fig. 41 (Guadalupe Mound/ Breton, 1903: Fig. 5);  
*unknown provenance (x4)*

O. areas : none

In some specimens, the human figurine becomes more abstract (Figs. 42, 43, unknown provenance, from the Occidente).

ii. Figurines with straight legs (Fig. 44). This specimen has a square-shaped head and seems to be wearing a headdress, outlined by a thin incised line all along the edge of the head, coming down to the ears. Two circular depressions indicate the eyes. The bent right arm resting on the chest is indicated by incisions. The feet are facing outward. A circular hole has been cut through the mouth.

FUNCTION : component of ornament  
SHELL STRUCTURE : modified valve of bivalve

PROVENANCE : Apatzingán Date: [AD 450 -900]

COMPARISONS : Occidente: San Gregorio: thirty one identical specimens; their circular eyes and mouth are inlaid with turquoise; the V-shaped arms are outlined with incised lines; holes have been cut through on both sides of the head (Fig. 45): no dates.

O. areas : none

Some specimens have no decoration at all, and only the abstract outline of the body is visible (Fig. 46). Two circular holes have been cut through the upper part of the figurine. This figure could be interpreted as having two heads and one body, or one body, and might represent a fish.

FUNCTION : component of ornament  
SHELL STRUCTURE : modified valve of bivalve

PROVENANCE : Jalisco

Date: [AD 450 -900]

COMPARISONS : Occidente : none

- iii. Elongated rectangular-shaped figurines (Fig. 47). Incised lines indicate the nose and mouth, the folded arms, the elaborate headdress and the triangular loincloth. A skull is resting on the chest, hanging from what seems to be a necklace. This specimen seems to be wearing protections for the knees, and could be a ball player. There is a hook at the top of the head and a conically drilled hole between the feet.

FUNCTION : component of ornament

SHELL STRUCTURE : outer lip of gastropod

PROVENANCE : [north Jalisco/ south Nayarit] Date: [400 BC - AD 900]

COMPARISONS : Occidente : Fig. 48

O. areas : none

- iv. Abstract figurines with an oval-shaped body (Fig. 49). The only element of decoration consist of incised lines outlining the neck and the hips. Three small circular depressions illustrate the eyes and the mouth. Two connecting holes have been drilled conically on both sides of the head.

FUNCTION : component of ornament

SHELL STRUCTURE : modified valve of bivalve

PROVENANCE : Jalisco Date: [200 BC - AD 900]

COMPARISONS : Occidente : *Jalisco* (several identical specimens)

O. areas : Central Mexico (?): it depicts a man with a feathered headdress holding an object in his hand; a scroll is coming out of his mouth (Mallory, 1980: Fig. 26)

- v. Figurines with a non-figurative body (Fig. 50). This specimen has a square-shaped head, an elongated three-dimensional nose and an oval-shaped mouth. Small circular depressions indicate the eyes and the ears. The rectangular-shaped body is made up of several horizontal thick incised lines, and bordered by a thin one, with a circular depression on each corner. The piece looks like a "raspador" and has no holes.

FUNCTION : component of ornament/ "raspador"

SHELL STRUCTURE : outer lip of gastropod

PROVENANCE : Apatzingán Date: unknown

COMPARISONS : Occidente : none

O. areas : none

Similar representations of human face "raspadores" can be found in pottery figurines from Colima (Fig. 51).

Other occurrences of figurines, with different stylistic characteristics: Cerro del Huistle (Olguin, 1983: Fig. 14).

- 2.1.A.1.b. Side view. This variant includes only naturalistic

representations. Only a few specimens have been located, which makes it difficult to work out any stylistic characteristics. In addition, the surface of some specimens is too damaged to answer to any specific pattern of style.

- I. Figurines showing a frontal view of the body and a profile view of the face (Fig. 52). The large lozenge-shaped eye has been inlaid with a white stone, with a concave hole in the middle. The nose is sharp and long, the triangular-shaped mouth was probably inlaid with another material. The necklace, the triangular loincloth and the fingers are described with incised lines.

FUNCTION : component of ornament

SHELL STRUCTURE : modified valve of *Patellidae*

PROVENANCE : Huandacareo, Mich. (Tomb 2, Burial 63) Date: [AD 450-900]

COMPARISONS : Occidente : none  
O. areas : none

- II. Figurines showing a profile view of the body and the face, such as the ones in Figs. 53 and 54, representing flute players. Although their surface is too eroded to show much sign of decoration, certain features are still visible. Concave depressions indicate the eyes, inlaid with a brown stone. A hole has been cut through the ears. Two incised lines indicate the loincloth around the hips (Fig. 53). The legs are slightly bent, and the musicians seem to be in a walking position. Two connecting holes have been drilled at the back.

FUNCTION : component of ornament

SHELL STRUCTURE : modified valve of *Patellidae*

PROVENANCE : Huandacareo, Mich. (Tomb 3, Burial 62) Date: [AD 450-900]

COMPARISONS : Occidente : Huandacareo, Mich: Classic  
O. areas : none

A reclining figurine (Fig. 55), with the body facing to the left, shows totally different stylistic characteristics. The body is in a horizontal position and seems to be swimming. The decoration, made with incised lines, is elaborate. The figurine is depicted showing his teeth and is wearing a headdress, ending up in a spiral at the back of his head, and a skirt. Two holes have been cut through, at the back of the figurine.

FUNCTION : component of ornament

SHELL STRUCTURE : modified valve of bivalve

PROVENANCE : Jalisco

Date: unknown

COMPARISONS : Occidente : none

O. areas : Jaina (Fig. 56): no dates

**2.1.A.2. Heads.** There is one variant only: frontal view. These are convex pieces, slightly triangular in shape, and all depict the features of a human head. The two holes are located on both sides of the headdress.

In Fig. 57, the coffee-bean eyes and the mouth are treated in the same way as those in Fig. 39. The headband is rectangular in shape. The nose, as in the following figurine, is long and square-shaped.

FUNCTION : component of ornament  
SHELL STRUCTURE : modified valve of bivalve  
PROVENANCE : Apatzingán Date: [AD 450-900]  
COMPARISONS : Occidente : none  
                  O. areas : Guerrero, Central Mexico, Mississippi Valley

The specimen in Fig. 58, from Apatzingán, has similar stylistic characteristics: the nose again is square-shaped, but the eyes are made out of two circular depressions. The mouth and the headdress, all along the upper part of the head, are indicated with thick incised lines. Two circular depressions can be seen under the suspension holes.

**2.1.A.3. Dual Representations.** There is one variant only: frontal view. The main emphasis is put on the treatment of the head rather than the body. These figurines are usually abstract representations.

I. Triangular faces (Fig. 59), similar to the one in Fig. 40. The eyes and mouth are made out of three circular depressions. A unique two-horned headdress covers both heads, reminiscent of the horned shaman clay figurines from Jalisco. The hole is cut through the top of the headdress.

FUNCTION : component of ornament  
SHELL STRUCTURE : modified valve of bivalve/ dorsum or outer lip of gastropod  
PROVENANCE : [Colima/ Jalisco] Date: [400 BC - AD 900]  
COMPARISONS : Occidente : none  
                  O. areas : none

II. Square-shaped faces (Fig. 60) with elaborate headdresses and two concave circular eyes. The outline of two bodies is indicated in a very schematic way. One hole has been cut through between the legs.

FUNCTION : component of ornament  
SHELL STRUCTURE : modified valve of bivalve/ dorsum or outer lip of gastropod  
PROVENANCE : [Colima/ Jalisco] Date: [400 BC - AD 900]  
COMPARISONS : Occidente : none  
                  O. areas : none

**2.1.B. THREE-DIMENSIONAL FIGURINES.** All the pieces included in this type are shaped three-dimensionally and intend to give an illusion of depth. This type of figurines is in turn divided into two subtypes: whole figurines and heads.

**2.1.B.1. Whole Figurines.** All the figurines are standing and seem to be male representations. These include both naturalistic and abstract illustrations.

Among the naturalistic representations are two subdivisions: figurines with straight arms and the figurines with folding arms.

I. Figurines with straight arms, divided into the two following varieties.

i. Figurines with two longitudinal slits, cut through the material, between the arms and the body, sometimes with one circle cut through under the armpits (Fig. 61). The round face, with full cheeks and round eyes, is characteristic of the Colima hollow pottery figurines (von Winning, 1974: 31).

FUNCTION : component of ornament

SHELL STRUCTURE : modified valve of bivalve

PROVENANCE : Colima

Date: [200 BC - AD 900]

COMPARISONS : Occidente : none  
O. areas : none

In some specimens, the arms have been cut free from the body (Figs. 62).

FUNCTION : component of ornament

SHELL STRUCTURE : outer lip of gastropod

PROVENANCE : Los Ortices

Date: [200 BC - AD 900]

COMPARISONS : Occidente : Zacoalco (Figs. 63 & 64/ von Winning, 1971: Fig. 1a & d)  
O. areas : none

II. Figurines with an incised line between the arms and the body. In some specimens, a circle has been carved under the armpits (Fig. 65). The arms are always longitudinal to the body.

FUNCTION : component of ornament

SHELL STRUCTURE : outer lip of gastropod

PROVENANCE : Colima

Date: [200 BC - AD 900]

COMPARISONS : Occidente : Chupícuaro (Porter Weaver, 1956: Fig. 25), with different stylistic characteristics: early Formative  
O. areas : none

I. Figurines with folding arms. Three varieties can be identified.

i. Figurines with the hands resting on the stomach. The forearms

and the arms are positioned at a right angle. The specimen in Fig. 66 is slightly concave. Only the upper part is decorated. The headdress is flat, pointing upward towards the middle. Circular depressions indicate the eyes and the ears. The mouth is elongated, with two circular depressions on each side. The upper part of the forearms is decorated with armbands, made of two rows of incised squares. Incised lines indicate the fingers.

FUNCTION : component of ornament

SHELL STRUCTURE : outer lip of gastropod

PROVENANCE : [north Jalisco/ south Nayarit] Date: [400 BC - AD 900]

COMPARISONS : Occidente : Zacoalco: AD 300-700 (Fig. 67/ von Winning,  
O. areas : none 1971: Fig. 1 c)

The specimen in Fig. 68 offers different stylistic characteristics. The head is shaped like an oval, the square-shaped nose and the thick lips are carved in the round. Incised lines also indicate the fingers. One hole has been drilled conically in the middle of the forehead, from front to back.

FUNCTION : component of ornament

SHELL STRUCTURE : outer lip of gastropod

PROVENANCE : [Michoacán]

Date: [AD 450-900]

COMPARISONS : Occidente : none  
O. areas : none

- II. Figurines with the forearms crossed over the chest. The only elements of decoration in Fig. 69 consists of the incised lines indicating the contour of the chin, the fingers and the toes. The hands are resting on the elbows. Two large circular depressions indicate the eyes.

FUNCTION : component of ornament

SHELL STRUCTURE : outer lip of gastropod

PROVENANCE : Jalisco

Date: [400 BC - AD 900]

COMPARISONS : Occidente : none  
O. areas : none

In the figurine in Fig. 70, only the left arm is resting on the chest. The eyes are inlaid with turquoise mosaics. The noseplug consists of another turquoise inlay, and a jadeite one can be seen across the brow. The headdress could be the profile view of a lizard, may be a crocodile or an iguana. There are various circular depressions: two below the armpits, two over the knees, two underneath each feet and ten at the back. There are no holes for suspension. The bottom of the figure is rectangular-shaped and broken towards the middle, and might have been once affixed to a shaft. Stylistically, this specimen is characteristic of the

Tarascans: the edges are cut at right angles, like in the stone sculptures (Williams, 1992:10, Style E).

FUNCTION : attached to shaft  
SHELL STRUCTURE : outer lip of gastropod  
PROVENANCE : Michoacán, probably Tarascan area Date: Postclassic  
COMPARISONS : Occidente : none  
O. areas : none

III. Figurines with folding arms, holding a flute in their hands. The specimens in Figs. 71 and 72 are playing a flute or a whistle. The first figurine has an oval-shaped head and a skirt, similar to that in Fig. 54. The other one is wearing a pointed headdress and a skirt made of three parallel waistbands and of a pattern consisting of incised squares.

FUNCTION : component of ornament  
SHELL STRUCTURE : outer lip of gastropod  
PROVENANCE : Colima Date: [200 BC - AD 900]  
COMPARISONS : Occidente : Zacoalco (Fig. 73/ von Winning, 1971: Fig. 1 b)  
O. areas : none

A flute player from Colima, with different stylistic characteristics, has been illustrated by Furst (1978: Fig. 62). It is made of *Spondylus*.

Among the more abstract representations, the following subdivisions can be taken into consideration.

I. Figurines with triangular heads (Fig. 74), similar to those in Fig. 40. Circular depressions indicate the eyes and the mouth. The lozenge-shaped body is decorated with four incised lines. The knees are pointing outward. The two holes are conically drilled from side to side of the neck of the figurine.

FUNCTION : component of ornament  
SHELL STRUCTURE : modified valve of bivalve/ outer lip or dorsum of gastropod  
PROVENANCE : Jalisco Date: [400 BC - AD 900]  
COMPARISONS : Occidente : Jalisco  
O. areas : none

II. Figurines carved in the round. A unique specimen depicts a figurine with folded arms and short straight legs (Fig. 75). The headdress is made up of two rows of incised squares, such as in Fig. 39. Two connecting holes have been drilled horizontally through the back of the figurine.

FUNCTION : component of ornament  
SHELL STRUCTURE : columella of gastropod  
PROVENANCE : Jalisco Date: unknown  
COMPARISONS : Occidente : none  
O. areas : none



- III. Figurines with no decoration (Fig. 76). The head is elongated and only the outline of the piece suggests the human shape, like in Fig. 49. The legs are straight and separated. Two connecting holes have been drilled conically on both sides of the head.

FUNCTION : component of ornament

SHELL STRUCTURE : modified valve of bivalve

PROVENANCE : Jalisco

Date: [400 BC - AD 900]

COMPARISONS : Occidente : Jalisco (several identical specimens and Figs. 257  
O. areas : none 2 5 8)

2.1.B.2. Heads. Few specimens have been located, all with different stylistic characteristics.

- I. Oval heads, such as the specimen in Fig. 77, made out of mother of pearl. Two large circular depressions indicate the eyes; two smaller ones can be seen under the nose. The ears are pierced through, as in Figs. 61 and 62. Thin incised lines indicate the mouth and the eyebrows. The headdress is made out of two feather-like ornaments, on each side of the head. Two connecting holes have been drilled horizontally through the back of the head.

FUNCTION : component of ornament

SHELL STRUCTURE : modified valve of bivalve

PROVENANCE : Juanacuatlán, Jal. (Schondube, pers. comm.) Date: AD 600-900

COMPARISONS : Occidente : *unknown provenance* (with different stylistic charac.)  
O. areas : none

- II. Skulls (Fig. 78). Incised lines indicate the mouth and the teeth, with the same stylistic characteristics as those from the Valley of Mexico in Postclassic times. The eyes are indicated by two circular depressions.

FUNCTION : component of ornament

SHELL STRUCTURE : outer lip of gastropod (cut vertically or abraded)

PROVENANCE : Occidente

Date: Postclassic

COMPARISONS : Occidente : none

O. areas : Texcoco: Postclassic (Lothrop, 1957: Fig. 60);  
Valley of Mexico

Stylised variations of skulls can also be found in Western Mexico, with no incised lines (Fig. 79).

- III. An effigy head (Fig. 80), found on the leftside waist of a burial (Kelly, 1947: Pl. 17 a). The neck has been perforated on both sides and might have been once affixed to a shaft, like the figurine in Fig. 70. The eyes, ears and mouth are respectively circular and oval depressions. A circular headdress covers the head; a groove, probably inlaid with another material before, has been cut all

along the top of the head. A perforation emerges at rear, behind the headband.

FUNCTION : attached to a shaft

SHELL STRUCTURE : outer lip of gastropod

PROVENANCE : Apatzingán

Date: AD 450-650(Delicias phase)

COMPARISONS : Occidente : none

O. areas : none

The different techniques for treating the suspension holes are dealt with in Ch. 5 (p. 191). An analysis of the features of these figurines is provided in Appendix I.

## 2.2. Zoomorphic Figurines

This subgroup includes all the pieces whose outline relates to the form of an animal. It is divided into eleven different types, in accordance with the classes of animals represented. Each type, when necessary, is in turn divided into two subtypes: two-dimensional and three-dimensional figurines. The variants which follow are conditioned by the three following criteria: head representations, whole figurines, or dual representations.

L. Suarez: "Zoomorphic pendants", Group 45 (1977: 43).

2.2.A. BIRDS. This type is divided into two subtypes.

2.2.A.1. Two-dimensional Figurines, with two variants: whole figurines and heads.

2.2.A.1.a. Whole Figurines. It includes profile views of figurines with a flat, uneven surface (Fig. 81). the round eyes are inlaid with pyrite; incised lines illustrate the wings and the legs; the bodies are facing front, while the heads of each animal are turned towards the right and towards the left respectively. Each specimen has two conically drilled holes, from the front to the back: one at the top of the head, the other cut through the legs.

FUNCTION : component of ornament

SHELL STRUCTURE : dorsum of gastropod

PROVENANCE : Cerro de Locotero, Mich.

Date: unknown

COMPARISONS : Occidente : none

O. areas : none

More abstract illustrations of birds can also be found, of different sizes, with a flat surface, no decoration, a frontal view of the body and a left view of the head (Fig. 82).The circular eye, with a small

**San Miguel Allende, Gua., all with different stylistic characteristics**

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PROVENANCE : Zacoalco Date: AD 300-700  
 COMPARISONS : Occidente : Zacoalco (x2)  
                   O. areas : none

The surface of some pieces is too damaged to trace any decoration (Fig. 87). The same treatment of the holes as in Fig. 79 has been applied.

FUNCTION : component of ornament  
 SHELL STRUCTURE : non-identified origin  
 PROVENANCE : San Antonio, Jal. Date: unknown  
 COMPARISONS : Occidente : Apatzingán: Postclassic (Kelly, 1947: Fig. 69 t)  
                   O. areas : none

Other three-dimensional specimens are more difficult to identify: they could represent the top view of pigeons or "centzontle". The specimen in Fig. 88 has thick incised lines depicting the feathers and two conical perforations at the back.

FUNCTION : component of ornament  
 SHELL STRUCTURE : non-identified origin  
 PROVENANCE : Jalisco Date: unknown  
 COMPARISONS : Occidente : Jalisco  
                   O. areas : Tlatilco: Formative (Lorenzo, 1965: Fig. 85)  
   Guerrero, Zacatecas/Durango, Central Mexico

In some instances, the heads seem to be the main element of the figurines and reach a disproportionate size (Fig. 89).

FUNCTION : component of ornament  
 SHELL STRUCTURE : non-identified origin  
 PROVENANCE : Playa del Tesoro Date: AD 400-600 (Beltrán, pers. comm.)  
 COMPARISONS : Occidente : Playa del Tesoro (several identical specimens),  
   San Sebastian: 400 BC-AD 0 (Long, 1966: Fig. 97);  
                   O. areas : none

Three types of abstract bird representations, two and three-dimensional, have been found at El Otero. They were part of a necklace and were associated with skeletons. One of these necklaces illustrates sixteen small figurines, probably representing ducks, associated with green stone beads and a rock crystal pendant (Noguera, 1944: Fig. 20). Other specimens have been found at San Sebastian. The decoration consists of grooving and incisions, with double drilled eyes, indicating the eye and the pupil. The holes are biconically drilled, probably for stringing (Long, 1966: Fig. 97).

**2.2.A.2.b. Heads.** Fifteen specimens have been located, quite uniform in size, with round-shaped heads. The eyes, surrounded by an incised circle, are represented by two small drilled dots. The size of

the curved beak is bigger than that of the head. These pieces have been carved from some portion of the shell which was somewhat the shape of the finished product, the hollow at the back being a natural concavity. Two holes have been conically drilled, on both sides of the head (Fig. 90). These specimens could be identified as parrots or eagles.

FUNCTION : component of ornament  
 SHELL STRUCTURE : umbo of bivalve  
 PROVENANCE : Jalisco Date: unknown  
 COMPARISONS : Occidente : Jalisco (x15)  
                   O. areas : Tampico/Las Flores: early Postclassic ( x44 / found around the neck of a skeleton in Burial 16, alternating with plain shell and jade beads (Ekholm, 1944: Fig. 51 h); Guerrero (x2)

**2.2.B. FISH.** This type is divided into two subtypes. It has been difficult to identify the species.

**2.2.B.1. Two-dimensional Figurines:** whole figurines, profile view. The specimen in Fig. 91 is a naturalistic representation of an unidentified fish, with incised lines along the body, and a circle around the circular depression showing the eye. No holes have been drilled.

FUNCTION : "mosaic" (see Ch. 7: 231)  
 SHELL STRUCTURE : outer lip of gastropod  
 PROVENANCE : Jalisco Date: unknown  
 COMPARISONS : Occidente : none  
                   O. areas : none

**2.2.B.2. Three-dimensional Figurines:** whole figurines. They include naturalistic and abstract representations of fish.

Two stylistic subdivisions can be recognised among the naturalistic representations.

I. Figurines carved in the round (Fig. 92), showing the profile view of the animal. The fins are protruding from the body. The mouth, the head and the tail are indicated by incised lines. Two holes have been cut through the fins along the lower part of the body.

FUNCTION : component of ornament  
 SHELL STRUCTURE : outer lip of gastropod  
 PROVENANCE : Colima (?) Date: unknown  
 COMPARISONS : Occidente : none  
                   O. areas : Templo Mayor: late Postclassic (Matos Moctezuma, 1988: Fig. 113); Maya

II. Flat and concave figurines (Fig. 93), showing a top view of the

animal. Thick incised lines illustrate the front and the back fins, the ears and the mouth. Two concave circles depict the eyes. One hole has been conically drilled through the front paws.

FUNCTION : component of ornament  
SHELL STRUCTURE : outer lip of gastropod  
PROVENANCE : Michoacán or Colima Date: unknown  
COMPARISONS : Occidente : Colima (x2)  
O. areas : none

The specimen in Fig. 94 is more stylistically represented. The fins and the head are illustrated with incised lines. Two concave circles indicate the eyes. One hole has been conically drilled, next to the head, from the top part of the body to the bottom one.

FUNCTION : component of ornament  
SHELL STRUCTURE : outer lip of gastropod  
PROVENANCE : Jalisco Date: unknown  
COMPARISONS : Occidente : none  
O. areas : Fig. 95 (Mexico)

**2.2.C. SCORPIONS.** This type is divided into two subtypes, each one variant each. The claws of the animal and the tail, usually pointing upward (Figs. 96, 97, 98), or to the right (Fig. 99) make the identity of these figurines as scorpions.

**2.2.C.1. Two-dimensional Figurines:** whole figurines, top view. Six identical small and abstract scorpion representations (Fig. 96) have been identified. They are slightly concave, probably part of a necklace. Parallel incised lines run all along the body, widthwise. The claws and the head are also incised. Two holes have been cut through the eyes.

FUNCTION : component of ornament  
SHELL STRUCTURE : modified valve of bivalve  
PROVENANCE : Michoacán Date: unknown  
COMPARISONS : Occidente : Michoacán (x5)  
O. areas : none

**2.2.C.2. Three-dimensional Figurines:** whole figurines. These figurines are all slightly concave (Fig. 97). Parallel thick incised lines run all along the body, widthwise. The claws are carved in the round.

FUNCTION : component of ornament  
SHELL STRUCTURE : modified valve of bivalve/ outer lip of gastropod  
PROVENANCE : Jalisco Date: unknown  
COMPARISONS : Occidente : none  
O. areas : Tonatico, Basin of Mexico, Jaina (?)

Some specimens are also illustrated with a plain body, like the one

in Fig. 98, from Jalisco. Most of these pieces have the same type of conical connecting holes at the back, at the height of the head. In some instances, however, a single hole is located between the two front paws of the animal (Figs. 99, 100, from Jalisco).

**2.2.D. CRABS.** There is one type only: two-dimensional figurines, top view.

The legs and the claws of the specimen in Fig. 101 are naturalistically represented. The surface is too damaged to show any sign of decoration. Two holes have been drilled through the eyes of the animal.

FUNCTION : component of ornament  
SHELL STRUCTURE : modified valve of bivalve  
PROVENANCE : Mexico, probably Colima Date: unknown  
COMPARISONS : Occidente : none  
                  O. areas : none

**2.2.E. FROGS.** This is divided into two subtypes, with one variant each, including naturalistic and abstract representations.

**2.2.E.1. Two-dimensional Figurines:** whole figurines, top view.

Among the naturalistic representations are two subdivisions. All these pieces have a convex surface.

1. The figurines with incised lines. The two samples in Fig. 102 have goggle eyes, with a circular depression in the middle. Thick incised lines indicate the back legs. Two holes have been drilled through the front legs.

FUNCTION : component of ornament  
SHELL STRUCTURE : modified valve of bivalve (made of mother of pearl)  
PROVENANCE : Jalisco Date: unknown  
COMPARISONS : Occidente : *Jalisco* (x13)  
                  O. areas : Templo Mayor, late Postclassic (Matos Moctezuma, 1988: Pl. XVII)

In Fig. 103, thin incised lines outline the back legs, the contour of the head, the mouth (in three specimens only) and the front feet of the animal (in one specimen these are illustrated with dentate edges). Two circular depressions define the eyes. Two holes have been drilled, on both sides of the body.

FUNCTION : component of ornament  
SHELL STRUCTURE : umbo of bivalve  
PROVENANCE : Churumuco, Mich. Date: unknown  
COMPARISONS : Occidente : San Sebastian: 400 BC-AD 100 (Long, 1966: Fig.

91); *Churumuco* , Mich. ( x4)

O. areas : Casas Grandes: AD 1260-1340 (Di Peso, 1974: Fig. 53.6, Type 11); Chiapa de Corzo: late Formative (Lee, 1969: Fig. 130 a), with different stylistic characteristics; Gulf Coast

- II. The figurines with conical depressions. Fifteen conical drilled circles have been cut into the body (Fig. 104). The features of the head, together with the neck, are indicated by incised lines. The legs have been cut into the material. Three holes have been drilled through the material, one located in the mouth, the other two next to the tail.

FUNCTION : component of ornament

SHELL STRUCTURE : umbo of bivalve

PROVENANCE : Jalisco

Date: unknown

COMPARISONS : Occidente : Jalisco  
O. areas : none

Abstract representations of frogs include two stylistic subdivisions. All have a flat surface.

- I. Figurines with the contour of the body outlined (Fig. 105). This particular piece has a triangular-shaped face. Three sets of incised lines meet in the centre of the body. Two circles have been drilled through the back legs of the animal, and two holes through the eyes.

FUNCTION : component of ornament

SHELL STRUCTURE : outer lip of gastropod

PROVENANCE : Jalisco

Date: unknown

COMPARISONS : Occidente : Playa del Tesoro: AD 400-600  
O. areas : Arizona (Holmes, 1880: Pl. VXXVII)

- II. Figurines carved within a square-shaped pattern (Fig. 106). The features of the legs and the feet are indicated with incised lines. Two holes have been cut through within a circular depression in the middle-body.

FUNCTION : component of ornament

SHELL STRUCTURE : outer lip of gastropod

PROVENANCE : Playa del Tesoro, Col. Date: AD 400-600 (Beltrán, pers. comm.)

COMPARISONS : Occidente : Guadalupe Mound (Breton, 1903: Fig. 5.11)  
Apatzingán: AD 450-650 (Kelly, 1947: Pl. 11 b)  
Michoacán

O. areas : El Infiernillo: AD 600-1200 (Suarez, 1977: Pl. 39 c)

### 2.2.E.2. Three-dimensional Figurines: whole figurines.

Most of these are naturalistically represented. The specimen in Fig. 107 has goggle eyes in high relief and two conically drilled holes, longitudinal from mouth to tail.



Other occurrences, with different stylistic characteristics: San Sebastian (Long, 1966: Figs. 91, 98-9), Guadalupe Mound (Breton, 1903: Fig. 5.11).

**2.2.F.1. Two-dimensional Figurines, with one variant only:** whole figurines, profile view. Two stylistically different types of pisotes have been identified. The specimen in Fig. 108 illustrates an animal with a pointed nose and a circular concave eye. The teeth are visible, and were probably inlaid with another material. Incised lines show the claws and the ear. The figure is concave and its surface eroded and damaged. There is one hole conically drilled, showing sign of wear on one side.

The specimen in Fig. 109 has a pointed nose and a tail pointing upward. Its front and back paws are visible, together with the ears and one circular, concave eye. Although the surface of the body is damaged, it does not seem to have been decorated. Two holes are visible, cut conically through the material.

**2.2.F.2. Three-dimensional Figurines.** divided into two variants: whole figurines, and dual representations.

I. Crescentic pieces with a flat body, most of them slightly concave (Fig. 110). Only the head and sometimes the paws are naturalistically represented. The elongated body, separated from

the head by a thick incised line, has no decoration. All these pieces show the same features: a long-nosed animal, with the paws over the snout, treated in high relief. Incised lines show the claws. In most instances, two concave circles illustrate the eyes. The ears are treated in high relief, with a thick incised line in the middle. The same treatment is used for the back legs. In all the specimens found, the location of the conically drilled holes seem to follow the same pattern: the holes are drilled widthwise, at the height of the front legs, from one side of the body to the other. These holes may in turn communicate with another set of holes under the body.

FUNCTION : component of ornament

SHELL STRUCTURE : outer lip of gastropod

PROVENANCE : Colima Date: unknown

COMPARISONS : Occidente : Zacoalco (Fig. 111/von Winning, 1971: Fig. 2 b & c); *Los Ortices* ; *Colima* (plus 1 specimen from the Bakarat Gallery, No. PF 653: bone?), Fig. 112 (Jalisco), *Jalisco*  
Q. areas : unknown

- II. Crescentic pieces with a cylindrical body, most of them concave-shaped. The same characteristics as for the previous specimens appear for the treatment of the snout, the eyes, the paws and the claws (Fig. 113). The ears, however, are not shown, and the legs are illustrated with incised lines. This figure has two sets of holes, both widthwise: one set underneath the eyes, the other one behind the front legs. Both sets communicate with another hole, drilled conically under the body.

FUNCTION : component of ornament

SHELL STRUCTURE : outer lip of gastropod

PROVENANCE : Colima Date: unknown

COMPARISONS : Occidente : Fig. 114 (Jalisco), *Colima* (x2)  
Q. areas : none

- III. Specimens with naturalistic bodies, such as the two pieces in Figs. 115, 116. All these specimens have the body carved in the round, with an upright tail and projecting ears. They have usually one or two sets of holes, drilled widthwise at the height of the front legs.

FUNCTION : component of ornament

SHELL STRUCTURE : columella of gastropod

PROVENANCE : Cerro de Locotero, Mich. Date: [Classic]

COMPARISONS : Occidente : Zacoalco (von Winning, 1971: Fig. 3 c)  
Tuxcacuesco: AD 150-750 (Kelly, 1949: Fig. 88 I)  
Apatzingán: AD 450-650 (Kelly, 1947: Fig. 69 s)  
*unknown provenance* (x2)

Q. areas : none

**2.2.F.2.b. Dual Representations.** Only one specimen has been located (Fig. 117). The body is cylindrical, and the features of the head, together with the paws covering the snout, have been indicated by incised lines on both sides of the piece. Five parallel incised lines separate the two half bodies. There is one hole drilled vertically through the mouth of each head, plus a set of holes communicating through the back of the figure.

FUNCTION : component of ornament  
 SHELL STRUCTURE : outer lip of gastropod  
 PROVENANCE : Mexico Date: unknown  
 COMPARISONS : Occidente : none  
                   O. areas : none

**2.2.G. BATS.** There is one type only: the two-dimensional figurines (whole figurines, top view). Only one specimen illustrating a bat has been located (Fig. 118). The space between the body, the wings and the legs has been cut out of the material. A thin line, with small concave circular holes at regular intervals, probably originally inlaid with another material, has been incised along the legs and the arms, and all around the edge. A series of five parallel thick incised lines decorate the short tail. The eyes and the middle of the ears are shown with two circular and concave depressions. Two small holes, conically drilled, have been cut through the upper part of the arms.

FUNCTION : component of ornament  
 SHELL STRUCTURE : modified valve of *Spondylus*  
 PROVENANCE : Cerro de Locotero, Mich. Date: [400 BC - AD 900]  
 COMPARISONS : Occidente : none  
                   O. areas : none

**2.2.H. DOGS.** Dogs, which might also be felines, are classified under one subtype only: the three-dimensional figurines. These are subdivided into two variants: whole figurines and heads.

**2.2.H.a. Whole Figurines.** Few examples have been identified, like the crescentic representation in Fig. 119. The long ears, the crest and the forepaws have been carved in high relief. The male sex organs are shown in low relief. It contains side to side perforations and a longitudinal one from tail to neck.

FUNCTION : component of ornament  
 SHELL STRUCTURE : outer lip of gastropod  
 PROVENANCE : Zacoalco (von Winning, 1971: Fig. 2 a) Date: AD 300-700  
 COMPARISONS : Occidente : Tuxcacuesco: AD 150-750 (Kelly, 1949: Fig. 88 k)  
                   O. areas : none

Another crescentic figurine, with an open mouth, and an eroded surface, has also been identified as a dog (Fig. 120). It contains side to side perforations, next to the head, connecting with a third hole underneath the body.

FUNCTION : component of ornament  
 SHELL STRUCTURE : outer lip of gastropod  
 PROVENANCE : Jalisco Date: unknown  
 OTHER : Occidente : none  
           Q. areas : none

**2.2.H.b. Heads.** Several representations of heads, like the specimen in Fig. 121, have been identified. This particular specimen has two circular depressions marking the eyes; a pair of incised lines has been carved between the eyes. Two sets of holes have been drilled, one longitudinal along the head, from the top to the mouth, the other at the back of the figurine, both connecting.

FUNCTION : component of ornament  
 SHELL STRUCTURE : columella of gastropod  
 PROVENANCE : Jalisco Date: unknown  
 COMPARISONS : Occidente : Zacoalco: 4-8th. c. AD (von Winning, 1971: Fig. 3 d & 2 other specimens); Fig. 122 (Apatzingán); *Jalisco, unknown provenance*  
                   Q. areas : Central Mexico, more naturalistic, depicting an animal with a long snout, an open mouth with teeth and pointing ears

**2.2.I. SNAKES.** All are two-dimensional representations (whole figurine, top view).

The specimen in Fig. 123 has been highly stylised. The whole surface is thin and flat, slightly concave, and follows a curvilinear pattern, the same as the motifs described in Figs. 20, 167, 168. An incised line follows the edges of the body and defines the triangular face, with two circular concave eyes, probably inlaid with another material. Part of the tail is missing, and the suspension hole, cut through the mouth, is broken.

FUNCTION : component of ornament  
 SHELL STRUCTURE : outer lip of *Pleuropoca*  
 PROVENANCE : Jalisco Date: [400 BC - AD 900]  
 COMPARISONS : Occidente : none  
                   Q. areas : none

A stylised snake with a human head, made of *Spondylus*, has been illustrated by Furst (1978: Fig. 65). Provenance: Colima.

**2.2.J. LIZARDS.** Lizards are divided into two subtypes, with one variant each.

**2.2.J.1. Two-dimensional Figurines:** whole figurines. All illustrate

top views of the animal. In Fig. 124, the features of the body have been outlined with incised lines. Two concave depressions illustrate the eyes. There are two sets of connecting holes at the back of the figure.

FUNCTION : component of ornament

SHELL STRUCTURE : outer lip of gastropod

PROVENANCE : Colima

Date: [400 BC - AD 900]

COMPARISONS: Occidente : Fig. 125 : AD 450-650 (Apatzingán/ Kelly, 1947:Fig. 71)

O. areas : Guerrero, unknown

**2.2.J.2. Three-dimensional Figurines**, with one variant: whole figurines. Two stylistic subdivisions can be taken into consideration.

I. Reptiles with a flat, elongated and concave body, and a naturalistic triangular-shaped head. In the specimen in Fig. 126, two concave circular depressions represent the eyes. The front and back legs are carved in high relief, and each paw is defined by two incised lines. The same treatment applies to the ears, defined by one incised line. The tail is broken. The surface near the tail has kept its pink lacquer, the rest of the body is badly damaged. The hole is drilled from side to side.

FUNCTION : component of ornament

SHELL STRUCTURE : outer lip of gastropod

PROVENANCE : Michoacán or Colima

Date: unknown

COMPARISONS : Occidente : Zacoalco

O. areas : Culiacán, stylised specimen: AD 1300-1500  
(Kelly, 1945a: Fig. 72 f)

II. Reptiles with a cylindrical, slightly concave, body and a naturalistic triangular-shaped face. In this specimen (Fig. 127), the two circular concave eyes are surrounded by an incised line. The same treatment as in Fig. 126 for the legs and for the paws. The hole for suspension is drilled from side to side, at the height of the front legs.

FUNCTION : component of ornament

SHELL STRUCTURE : outer lip of gastropod

PROVENANCE : unknown

Date: unknown

COMPARISONS : Occidente : Jalisco , Colima (x2)

O. areas : unknown provenance

In some instances, two parallel lines have been incised all along the body (Fig. 128). Such occurrences are common in Western Mexico, and the animals can be identified as iguanas (Baus, pers. comm.). The parallel lines could well illustrate the row of spines along the back of the animal.

**FUNCTION** : component of ornament  
**SHELL STRUCTURE** : outer lip of gastropod  
**PROVENANCE** : Jalisco Date: unknown  
**COMPARISONS** : Occidente : Fig. 129 (Zacoalco/ von Winning, 1971: Fig. 3a)  
                     Jalisco (x2)  
                     O. areas : none

A similar specimen (Fig. 130) made of stone has been located (Museo Regional, Guadalajara. No. A 1673.2814). Two parallel incised lines, like in Fig. 128, start between the eyes of the animal and run until the tail, which is decorated with a human head wearing a headdress. The treatment of the head of the animal is similar to that in Fig. 127. The piece is concave, and three circles, probably used for inserting inlays, have been cut through the middle of the body. An abstract reptilian form (non-identified), made from *Spondylus*, has been illustrated by Furst (1978: Fig. 67). Provenance: Colima.

**2.2.L. NON-IDENTIFIED ANIMALS.** In some instances, it has been difficult to identify the animal. Two subtypes can be classified under this heading.

incised lines emphasise the features of the animal. Two holes have been cut through the material. They might portray a fish or a lizard.

FUNCTION : component of ornament

SHELL STRUCTURE : outer lip of juvenile gastropod

PROVENANCE : Jalisco

Date: unknown

COMPARISONS : Occidente : *Jalisco* (x3)

O. areas : none

Five identical shaped animal heads, from Jalisco, have been located in the Museo Nacional de Guadalajara (Fig. 134). Their eyes are indicated by circular depressions, surrounded by an incised line. A double incised line runs along the back of their heads. One hole has been drilled from side to side of the mouth. Two similar pieces have been found in Zacoalco (von Winning, 1971: Fig. 3 a).

Profile views include the following two specimens:

i. Fig. 135 is a non-identified animal figurine. The surface is very damaged. The grooves in the mouth and between the ears, the incised lines of the paws and the concave circular eye are still visible. Only a small hole, drilled vertically, between the neck and the front leg is apparent.

FUNCTION : component of ornament

SHELL STRUCTURE : outer lip of gastropod

PROVENANCE : El Otero, Mich. Date: AD 500-800 (Schondube, 1979: 41)

COMPARISONS : Occidente : none

O. areas : none

ii. Fig. 136 portrays a standing animal, with a prominent snout and a tail, which could represent a monkey. The whole surface is eroded. Two holes have been drilled at the height of each front leg. This figurine could be a representation of the Wind God *Ehecatl* .

FUNCTION : component of ornament

SHELL STRUCTURE : outer lip of gastropod

PROVENANCE : Colima (?)

Date: unknown

COMPARISONS : Occidente : none

O. areas : none

**2.2.L.2. Three- dimensional Figurines.** The specimen in Fig. 137 has a face resembling that of a human with a non-identified body. The nose is carved in high relief, two circular depressions show the eyes. Incised lines illustrate the mouth and the front and back paws. A hole has been drilled from side to side of the body.

FUNCTION : component of ornament

SHELL STRUCTURE : columella of gastropod

PROVENANCE : Jalisco

Date: unknown

COMPARISONS : Occidente : none  
O. areas : none

Other small figurines, stylistically represented, are difficult to identify, such as the one in Fig. 138, with a pointed snout. One hole has been drilled from side to side of the snout.

FUNCTION : component of ornament  
SHELL STRUCTURE : modified valve of bivalve  
PROVENANCE : Jalisco Date: unknown  
COMPARISONS : Occidente : El Otero (Noguera, 1944); Jalisco  
O. areas : none

### 2.3. Non-figurative Representations

This subgroup includes all the pieces with a variety of shapes whose outline relates neither to the human nor to the animal form. It is divided into seven different types, in accordance with the kind of shape represented. Each type is in turn divided into two subtypes: non-decorated and decorated pieces. The variants which follow are based on the size of the pieces, and on their variations in shape. The decorated pieces may in turn include an anthropomorphic, a zoomorphic or a non-figurative representation.

**2.3.A. DISCS.** This type includes all circular pieces, either flat or concave. In most instances, these pieces are thin. All the pieces included in "Size a" under this type are those whose diameters vary between 0.20 and 2.50 cm. Included in "Size b" are those measuring more than 2.50 cm in diameter. Their thickness generally does not exceed 0.20 cm, although there are a few exceptions, such as in Fig. 141.

#### 2.3.A.1. No Decoration.

**2.3.A.1.a. "Size a".** These pieces may have one, two (Fig. 139) or three holes, either at the centre or of the piece or next to the circumference, depending probably on the way they were used.

FUNCTION : part of a set  
SHELL STRUCTURE : non-identified origin  
PROVENANCE : Jalisco Date: unknown  
COMPARISONS : Occidente : recurrent in several sites  
O. areas : recurrent in several sites in Mesoamerica

L. Suarez: "Discoidal beads" and Groups 36, 37 (1977: 27, 41).

Also included in this variant are those pieces whose shape derives from a disc, such as the specimens which have a slit cut through the radius, and no holes for suspension (Fig. 140).



FUNCTION : unknown  
 SHELL STRUCTURE : non-identified origin  
 PROVENANCE : Playa del Tesoro Date: AD 400-600 (Beltrán, pers. comm.)  
 COMPARISONS : Occidente : none  
                   O. areas : none

**2.3.A.1.b. "Size b".** It includes circular-shaped pieces such as the ones in Fig. 141, where the sutures of the bivalve are still visible on one side. The contour of the disc has been roughly ground off. One hole has been cut conically through the centre of the disc.

FUNCTION : component of ornament  
 SHELL STRUCTURE : modified valve of bivalve  
 PROVENANCE : Jalisco Date: unknown  
 COMPARISONS : Occidente : recurrent in several sites  
                   O. areas : recurrent in several sites in Mesoamerica

Also included in this variant are the circular pieces with a circle, varying from 1.50 to 4.90 cm in diameter, cut through the centre of the disc. One or two holes have been cut through the material on each side of the circle (Fig. 142). All these specimens have a nacre surface.

FUNCTION : chest ornament: *ohohualli*  
 SHELL STRUCTURE : modified valve of bivalve  
 PROVENANCE : Jalisco Date: unknown  
 COMPARISONS : Occidente : *Jalisco* (x4)  
                   O. areas : Casas Grandes: AD 1200-1340 (Di Peso, 1974: Fig. 534.6.14 )  
                                   El Infiernillo: AD 600-1200 (Suarez, 1977: Pl. 37 b)  
                                   Teotihuacán, Tetitla/ Yahualala (Séjourné, 1966: Fig. 45)  
                                   Guerrero, Basin of Mexico

L. Suarez: Group 40 (1977: 41).

### **2.3.A.2. With Decoration.**

**2.3.A.2.a. "Size a".** Within this variant, two techniques of decoration have been used: incised and excised decoration.

The specimens with incised decoration include two subdivisions.

I. Wheel-shaped pieces. A thin line has been carved all around the centrally perforated hole, and small and thick ones around the edge, perpendicular to it (Fig. 143).

FUNCTION : component of ornament  
 SHELL STRUCTURE : non-identified origin  
 PROVENANCE : Nayarit Date: unknown  
 COMPARISONS : Occidente : *Tepehuanco* , Mich. (x3)  
                   O. areas : El Infiernillo: AD 600-1200 (Suarez, 1977: Pl. 34)

L. Suarez: Group 31 (1977: 39).

- II. Discs with a loop. One or several thin lines have been carved all around the centrally perforated circle, and in some instances around the centrally perforated loop (Fig. 144).

FUNCTION : component of ornament  
SHELL STRUCTURE : non-identified origin  
PROVENANCE : Jalisco Date: unknown  
COMPARISONS : Occidente : Jalisco (x2)  
O. areas : none

The incised lines were probably inlaid with another material before, as is shown in the disc in Fig. 145, which was inlaid with small and rectangular-shaped pieces of pyrite. Only six of those pieces are still visible. The disc has a nacre surface. A circle has been cut through the centre of the disc, and one hole for suspension has been cut through the material next to the edge.

FUNCTION : chest ornament: *ohohualli*  
SHELL STRUCTURE : modified valve of bivalve  
PROVENANCE : El Otero Date: AD 500-800  
COMPARISONS : Occidente : none  
O. areas : none

The specimens with cut out decoration, such as the one in Fig. 146. A circle has been cut through the middle, and a series of irregular notches have been carved around the circumference.

FUNCTION : component of ornament  
SHELL STRUCTURE : modified valve of bivalve  
PROVENANCE : Playa del Tesoro Date: AD 400-600 (Beltrán, pers. comm.)  
COMPARISONS : Occidente : Cerro de Huistle: AD 300-500 (Olguin, 1983: Fig. 21 e)  
O. areas : none

**2.3.A.2.b. "Size b".** Within this variant, the same techniques of decoration as for "Size a" have been used. More than one type of decoration may be used in the same piece.

Specimens with incised decoration include discs with a design engraved on one side (Fig. 147). This specimen is broken through the middle, and shows half of the profile view of a standing human figure, who is holding a curved staff in one of his hands, and seems to be wearing a headdress. One of his legs is visible. A circle has been cut through the centre of the disc. One hole has been cut through next to the edge of the circumference, and there was probably a second one on the opposite edge.

FUNCTION : component of ornament  
SHELL STRUCTURE : modified valve of *Pectinidae* (Suarez)  
PROVENANCE : Cuitzeo Date: unknown  
COMPARISONS : Occidente : Michoacán  
O. areas : none

Specimens with cut out decoration include the following stylistic subdivisions.

- I. Concave discs. In Fig. 148, the contour of the profile view of a standing human figure, facing to the right, has been cut through the centre of the disc. The edge of the circumference is decorated with profile views of bird heads. Each eye is indicated with a concave depression. A thin incised line goes through the beak of the birds and the legs of the figure. Two holes have been cut through the top edge of the circumference.

FUNCTION : component of ornament

SHELL STRUCTURE : modified valve of bivalve

PROVENANCE : Jalisco

Date: [200 BC - AD 900]

COMPARISONS : Occidente: Jalisco

O. areas : none

In Fig. 149, the same treatment of bird representations can be seen. The piece is broken on both sides, and along the inner edge of the circumference. Similar bird heads are illustrated in Figs. 62, 148, 160, 242.

FUNCTION : unknown

SHELL STRUCTURE : outer lip of gastropod

PROVENANCE : Apatzingán

Date: unknown

COMPARISONS : Occidente : none

O. areas : none

In Fig. 150, each disc has two rows of geometric patterns cut through the material (14 around the circumference, 8 inside). One hole has been cut through the centre.

FUNCTION : component of ornament

SHELL STRUCTURE : modified valve of bivalve

PROVENANCE : San Gregorio, Mich.

Date: unknown

COMPARISONS : Occidente : none

O. areas : none

- II. Flat discs. It includes pieces with a geometric design, made up of five squares, cut through the material, such as those in Fig. 151. Six rectangles surround the outside edge. A small hole has been drilled through the centre of the disc.

FUNCTION : component of ornament

SHELL STRUCTURE : outer lip of gastropod

PROVENANCE : Jalisco

Date: unknown

COMPARISONS : Occidente: none

O. areas : El Infiernillo: AD 600-1200 (Suarez, 1977: Pl. 40)

Sartaneja, Belize: Postclassic (Boxt, 1988: Fig. 3)

Las Nazas, Gue.

L. Suarez: Group 49 (1977: 45).

In Fig. 152, nine circles have been cut through the edge of the circumference, and two extra ones at the top.

FUNCTION : component of ornament  
SHELL STRUCTURE : outer lip of gastropod  
PROVENANCE : Jalisco Date: unknown  
COMPARISONS : Occidente : Jalisco (1 almost identical specimen illustrated by Mallory, 1980: Fig. 24, top right)  
O. areas : none

III. Specimens with dentate edges. It includes those pieces where a series of small notches have been carved around the circumference. The piece in Fig. 153 has a nacre surface; a circle has been cut through the centre of the disc, such as in Fig. 142. Four holes have been cut through the surface: three surround the inside edge, the fourth one is located next to the outside edge.

FUNCTION : chest ornament: *ohohualli*  
SHELL STRUCTURE : modified valve of bivalve  
PROVENANCE : Jalisco Date: unknown  
COMPARISONS : Occidente : Jalisco (1 almost identical specimen illustrated by Mallory (1980: Fig. 25)  
O. areas : Casas Grandes: AD 1200-1340 (Di Peso, 1974: Fig. 534), Uaxactún: AD 250-600 (Ricketson & al, 1937: Fig. 132 ); unknown

In Fig. 154, circular depressions have been carved in alternating notches. A circle has been cut through the centre of the disc.

FUNCTION : component of ornament  
SHELL STRUCTURE : outer lip of gastropod  
PROVENANCE : Jalisco Date: unknown  
COMPARISONS : Occidente: Cerro de Huistle: AD 0-300 (Olguín, 1983: Fig. 13)  
O. areas : Teotihuacán, Tetitla/ Yahualala (Séjourné, 1966: Fig. 45)

Also included under this category are those pieces whose shape derives from a disc.

I. Concave discs with a radial slit (Fig. 155). The contour of the disc has been made out of several notches. There are two incised lines along the radius and a small circular depression on one edge of the circumference. A small hole has been cut next to the circumference, and a circle through the centre of the disc.

FUNCTION : unknown  
SHELL STRUCTURE : outer lip/dorsum of gastropod  
PROVENANCE : unknown Date: unknown  
COMPARISONS : Occidente : Colima  
O. areas : none

II. Figurines with dentate edges. In Fig. 156, the curved body of an

animal, with a triangular face and a long snout, has been represented within the shape of the disc. The inside and outside parts of the circumference have been decorated with notches. Incised lines follow the contour of the body and of the face. There is a hole for suspension next to the head.

FUNCTION : component of ornament

SHELL STRUCTURE : modified valve of bivalve

PROVENANCE : Jalisco

Date: [400 BC - AD 900]

COMPARISONS : Occidente : none

O. areas : Texcoco; no provenance

- iii. Half discs, or derived from them. These pieces can be divided into two sections (Fig. 157): the main element, with an illustration of an animal head (possibly a snake) on each side, and the lower one, which consists of of a disc with a circle cut through. Its nacre surface has been decorated with thin incised lines, and shows a repetitive design. Two small holes have been cut through the surface, next to the top edge.

FUNCTION : component of ornament

SHELL STRUCTURE : modified valve of bivalve

PROVENANCE : Jalisco

Date: unknown

COMPARISONS : Occidente : San Sebastian: 400 BC-AD 100 (Long, 1966: Fig. 102); *Jalisco* (x2)

O. areas : none

Abstract representations of what could be a bird with opened wings, either with incised lines or with no decoration. They usually have either dentate edges (Fig. 158), or plain ones (Fig. 159). One conically drilled hole has been cut through the loop.

FUNCTION : component of ornament

SHELL STRUCTURE : non-identified origin

PROVENANCE : Playa del Tesoro

Date: AD 400-600 (Beltrán, pers. comm.)

COMPARISONS : Occidente : Playa del Tesoro

O. areas : none

- iv. Drop-shaped ornaments, concave, in the shape of a pear. The piece in Fig. 160 is decorated with profile views of bird heads (see Fig. 148)

FUNCTION : chest/ear ornament

SHELL STRUCTURE : modified valve of bivalve

PROVENANCE : Colima

Date: [200 BC - AD 900]

COMPARISONS : Occidente : none

O. areas : Templo Mayor: Postclassic

- v. J-shaped ornaments (Fig. 161), one of *Quetzalcoatl* symbols, used as an ear ornament. Thin incised lines have been engraved over the damaged surface. One hole has been cut through the

right-hand side of the top edge.

FUNCTION : earring: *nacoztli*

SHELL STRUCTURE : non-identified origin

PROVENANCE : Jalisco

Date: unknown

COMPARISONS : Occidente : none

O. areas : Monte Albán: AD 300-900 (Caso, 1969: Fig. 252)

Chiapa de Corzo: 125 BC-AD 450 (Lee, 1969: Fig. 141)

Chiconautla, Sin.; Templo Mayor

**2.3.B. CRESCENT-SHAPED.** This type includes all biconcave pieces, i.e. those having concave faces on both sides. Only one piece belongs to "Size a"; all the others belong to "Size b". They all derive from the shape of a crescent.

#### **2.3.B.1. No Decoration.**

**2.3.B.1.a. "Size a."** Four holes (visible) have been cut through the material (Fig. 162): one next to each upper edge, two (broken) near the edge of the circumference. The piece is badly damaged (Kelly, 1947: Fig. 69 u).

FUNCTION : sewn to material

SHELL STRUCTURE : non-identified origin

PROVENANCE : Apatzingán

Date: AD 250-650 (Delicias phase)

COMPARISONS : Occidente : none

O. areas : none

**2.3.B.1.b. "Size b."** Two holes have been cut through the middle, on the wider edge (Fig. 163).

FUNCTION : nose ornament

SHELL STRUCTURE : outer lip of gastropod

PROVENANCE : Jalisco

Date: unknown

COMPARISONS : Occidente : none

O. areas : none

#### **2.3.B.2. With decoration.**

Within this variant, two techniques of decoration have been used: incised and cut out. However, both techniques may be used in the same piece.

I. Specimens with incised decoration. The specimen in Fig. 164 a is concave. A double dualistic zoomorphic representation has been carved with thin lines over its outer concave surface. It comprises two unidentified animals with double triangular heads, one at each end of the animal's body: one head at each extremity, the other two in the middle, facing each other. Circular depressions indicate the eyes. Lines indicating the legs and the paws are still visible,

although the surface is very damaged. One hole has been cut through each upper edge, and two on the narrower concave edge, connecting with two more holes at the back (Fig. 164 b).

FUNCTION : chest ornament

SHELL STRUCTURE : outer lip of gastropod.

PROVENANCE : Jalisco

Date: [400 BC - AD 900]

COMPARISONS : Occidente : none

O. areas : Fig. 165 (anthropomorphic representation/ Mexico)

In Fig. 166, the design, similar to that in Fig. 198, consists of two sets of three parallel lines surrounding a stylised representation of a human face, inserted within two incised circles. The eyes are illustrated with circular depressions, the mouth with a rectangular one. Two holes have been drilled conically each upper edge, from front to back, and one under the mouth.

FUNCTION : chest ornament

SHELL STRUCTURE : outer lip of gastropod.

PROVENANCE : Jalisco

Date: unknown

COMPARISONS : Occidente : none

O. areas : none

- ii. Specimens with cut out decoration . The specimen in Fig. 167 is concave and shows a double face snake with a zigzag body. Several triangles (eleven on the narrower concave side, twelve on the wider one) have been cut out, in order to show the contour of the body. A thin incised line, interrupted by a small circular depression at each edge of the zigzag line, follows the middle of the body. Circular depressions indicate the eyes. One small hole has been cut through one upper edge (the other one is broken).

FUNCTION : chest ornament

SHELL STRUCTURE : outer lip of gastropod

PROVENANCE : Cerro de Locotero, Mich.

Date: [400 BC - AD 900]

COMPARISONS : Occidente : Fig. 168 (Jalisco)

O. areas : unknown provenance (double face zoomorphic)

**2.3.C. RINGS.** This type includes all pieces made out of a complete circle. They have no hole for suspension, unless mentioned in the text.

#### **2.3.C.1. No Decoration.**

**2.3.C.1.a. "Size a".** Two subdivisions can be taken into consideration: the specimens whose thickness varies between 0.20 and 0.50 cm, and those whose thickness is more than 0.50 cm.

- i. These specimens can have either a flat or a round section (Fig.

169).

FUNCTION : finger ring

SHELL STRUCTURE : non-identified origin

PROVENANCE : Michoacán Date: [late Formative/ Classic]

COMPARISONS : Occidente: Tingambato, Mich: AD 400-950 (Piña Chan, 1982: Fig. 26 ), San Sebastian: 400 BC-AD 100 (Long, 1966: Fig. 78)

O. areas : El Infiernillo: AD 600-1200 (Suarez, 1977: Pl. 72 a-b), Tampico/ Las Flores: early Postclassic (Ekholm, 1944: Fig. 52)

L. Suarez: "Circular rings", Nos. 1 and 2 (1977: 51).

The specimens which have a slit cut through the edge of the circumference are classified under this heading, such as the one in Fig. 170, with a round outside edge and a straight inside edge.

FUNCTION : nose ornament/earring

SHELL STRUCTURE : outer edge of bivalve (Long, 1966: 215)

PROVENANCE : Jalisco Date: [late Formative/ Classic]

COMPARISONS : Occidente : San Sebastian: 400 BC-AD 100 (ibid: Figs. 103-4) Cerro de Huistle: AD 500-650 (Olguin, 1983: Fig. 21 a)

*Jalisco*

O. areas : Chiapa de Corzo: 125 BC- AD 0 (Lee, 1969: Fig. 141)

- ii. In this subdivision are included the straight short cylinders with narrow parallel and concave edges, thin rims on both sides and a wide central perforation (Fig. 171).

FUNCTION : earplug

SHELL STRUCTURE : siphonal canal of gastropod

PROVENANCE : Jalisco Date: unknown

COMPARISONS : Occidente : *Juanacatlán* , Jal; *Michoacán* (x2); *unknown provenance*

O. areas : El Infiernillo: AD 600-1200 (Suarez, 1977: Pl. 86 a-b) recurrent in several sites in Mesoamerica

L. Suarez: "Earplugs" (1977: 59).

Also classified under this heading are the specimens with a central perforation drilled conically in the middle of the circumference, from top to bottom (Fig. 172).

FUNCTION : earplug

SHELL STRUCTURE : siphonal canal of gastropod

PROVENANCE : Jalisco Date: unknown

COMPARISONS : Occidente : Zacoalco (von Winning, 1971: Fig. 3 e) *unknown provenance*

O. areas : several specimens with unknown provenance

The pieces whose shape derives from this group include the "pipe-shaped" ornaments (Fig. 173), with slightly parallel, thin and straight edges. This specimen, together with other examples from the Occidente, has no central hole.

FUNCTION : earplug/ lip plug



SHELL STRUCTURE : upper part of columella of univalve

PROVENANCE : Jalisco

Date: [Classic]

COMPARISONS : Occidente : *unknown provenance* ; similar specimens made in metal and clay (Museo Regional. Guadalajara)  
O. areas : Altar de Sacrificios: Classic (Willey, 1972: Fig. 197 a-b), Uaxactún: AD 250-600 (Rickerson & al, 1937: Fig. 132 c/ Kidder, 1947: Fig. 56); Teotihuacán

**2.3.C.1.b. "Size b".** Three subdivisions can be taken into account under this heading.

I. Rings with a round section and no umbo. This variety includes all those pieces made out of a wide ring whose edges are circular inside and outside the circumference (Figs. 174, 218).

FUNCTION : bracelet

SHELL STRUCTURE : modified valve of bivalve

PROVENANCE : Churumuco, Mich.

Date: [late Formative/ Classic]

COMPARISONS: Occidente: Cerro de Huistle: AD 0-300 (Olguin, 1983: Fig 20 b)  
Amapa: AD 486-1508 (Meighan, 1976: Pl. 110)  
Morett site: 75 BC-5th. c. AD (Meighan, 1972: Pl. 70 a-f); Jalisco , Colima , Michoacán , *unknown provenance*  
O. areas : Casas Grandes: AD 1200-1340 (Di Peso, 1974: Fig. 596.6, Type IDI/ "bracelets"); several occurrences in Mesoamerica

II. Rings with truncated edges and no umbo. It includes all those pieces with or without holes (Fig. 175).

FUNCTION : bracelet

SHELL STRUCTURE : modified valve of bivalve

PROVENANCE : Jalisco

Date: [late Formative/ Classic]

COMPARISONS: Occidente: Cerro de Huistle: AD 0-300 (Olguin, 1983: Fig. 20 a)  
Tuxcacuesco: AD 1200-1500 (Kelly, 1949: Fig. 87 c)  
Apatzingán: late Postclassic (Kelly, 1947: Fig. 69 a)  
Guadalupe Mound, Etzatlán, Playa del Tesoro, Cuitzeo  
Jalisco , Colima , Nayarit , Michoacán, *unknown provenance*

O. areas : Casas Grandes: AD 1200-1340 (Di Peso, 1974: Fig. 596.6, Type II/ "armlets"); El Infiernillo: AD 600-1200 (Suarez, 1977: Pls. 48-9); several occurrences in Mesoamerica

L. Suarez: "Bracelets and armbands without umbo" (1977: 47).

Some of those pieces have an oval shape, and have been called "horse-collar ornaments" in the literature. They can be found with one or two holes (Fig. 176), or with no holes at all.

FUNCTION : chest ornament

SHELL STRUCTURE : modified valve of bivalve

PROVENANCE : Michoacán

Date: unknown

COMPARISONS : Occidente : Tuxcacuesco: AD 200-950 (Kelly, 1949: Fig. 87 d); Jalisco, Michoacán  
O. areas : Kaminaljuyu: middle Classic (Kidder & al, 1946: Fig.

- III. Rings with truncated edges and umbo. This variety includes all the pieces with truncated edges, in which the umbo (Fig. 177) or half of the umbo of the bivalve is visible.

FUNCTION : bracelet

SHELL STRUCTURE: modified valve of bivalve.

PROVENANCE : Jalisco

Date: unknown

COMPARISONS : Occidente : Cerro de Huistle (Olguin, 1983: Fig. 19 a-b : half the umbo), Tuxcacuesco (Kelly, 1949: Fig. 87 b)  
Playa del Tesoro: AD 400-600; *Nayarit*  
O. areas : Culiacán: AD 1300-1500 (Kelly, 1945a: Fig. 72 a)  
Casas Grandes: AD 1200-1340 (Di Peso, 1974: Fig. 596.6, Type Ic/ "armlets"),  
El Infiernillo: AD 600-1200 (Suarez, 1977: Pls. 56-8)

L. Suarez: "Armbands with umbo" (1977: 48).

### 2.3.C.2. With Decoration.

- 2.3.C.2.a. "Size a". Three subdivisions can be taken into consideration.

- I. Rings whose main component is a circle. Their thickness varies between 0.20 and 0.50 cm. These pieces usually illustrate zoomorphic representations. The specimen in Fig. 178 represents a non-identified bird, with an elongated beak; two circular depressions form the eyes; incised lines show the body and the wings of the animal. The upper circle is broken on one side.

FUNCTION : component of ornament

SHELL STRUCTURE : modified valve of bivalve/ gastropod

PROVENANCE : Jalisco

Date: unknown

COMPARISONS : Occidente: none

O. areas : El Infiernillo: AD 600-1200 (Suarez, 1977: Pl. 39)

L. Suarez: "Zoomorphic pendants", Group 45 g (1977: 44).

- II. Rings with a main element of decoration cut vertical to the ring. The specimen in Fig. 179 shows the upper part of a human head. Two circles have been cut through the material. The outside part of these circles is outlined by circular dentate edges. The emphasis on the round eyes, surrounded by two incised circles, might suggest a representation of *Quetzalcoatl*.

FUNCTION : finger ring

SHELL STRUCTURE : spire of gastropod

PROVENANCE : Jalisco

Date: unknown

COMPARISONS : Occidente : Fig. 180 [Colima]

O. areas : Tampico/Las Flores: early Postclassic (Ekholm,

L. Suarez: "Rings with anthropomorphic edges" (1977: 51).

III. Rings with a thickness of more than 0.50 cm. This includes the short cylinders with parallel and concave edges, similar to the specimen in Fig. 172. A wide and central perforation has been drilled conically on both sides of the cylinder. One of the rims has been decorated with a series of circular depressions (Fig. 181). The number of these circular depressions can vary according to the specimen.

FUNCTION : earplug

SHELL STRUCTURE : tip of spire of gastropod

PROVENANCE : Jalisco

Date: unknown

COMPARISONS : Occidente : Playa del Tesoro (x2): AD400-600  
Cuitzeo; Jalisco

O. areas : Chupicuaro (x3) : 300BC-AD100 (Porter Weaver,  
1956: Fig. 25 h-k)

2.3.C.2.b. "Size b". Three subdivisions can be taken into consideration.

I. The rings retaining the original umbo of the bivalve, with narrow round or truncated edges. The umbo have been converted into anthropomorphic and zoomorphic representations.

a. Anthropomorphic umbo. They can be divided into two categories, defined by stylistic characteristics.

a.a'. Triangular faces (Fig. 182). Incised lines outline the contour of the face and the headdress; the nose is elongated and three-dimensional; circular depressions illustrate the eyes, the mouth, and the ears. This specimen has truncated edges and is broken on both sides of the ring.

FUNCTION : bracelet

SHELL STRUCTURE : modified valve of bivalve.

PROVENANCE : Jalisco

Date: [400 BC - AD 900]

COMPARISONS : Occidente : none

O. areas : Guasave, Sin. (Ekholm, 1942: Fig. 21 q)

a.a''. Rectangular faces (Fig. 183). The rectangular-shaped headdress, the elongated nose and the circular eyes are treated in high relief. A circular depression has been carved in each eye. This specimen has truncated edges.

FUNCTION : bracelet

SHELL STRUCTURE : modified valve of bivalve

PROVENANCE : Apatzingán

Date: [AD 450-900]

COMPARISONS : Occidente : Apatzingán , Nayarit  
Q. areas : El Infiernillo: AD 600-1200 (Suarez, 1977: Pls. 66-8)  
L. Suarez: "Armbands with anthropomorphic umbo" (1977: 49).

b. Zoomorphic umbo. Most of these specimens seem to represent birds, although none has been identified. They all have truncated edges. They can be divided into three categories, defined by stylistic characteristics.

b.b'. Eyes in high relief (Fig. 184). The only decoration consists of two circular eyes, treated in high relief. The top of the head is square-shaped.

FUNCTION : bracelet

SHELL STRUCTURE : modified valve of bivalve

PROVENANCE : Colima

Date: unknown

COMPARISONS : Occidente : none

Q. areas : El Infiernillo: AD 600-1200 (Suarez, 1977: Pl. 60)

L. Suarez: "Armbands with three-dimensional eyes" (1977: 48).

b.b''. Eyes cut through (Fig. 185). Two big circles have been cut through the eyes at an angle. The nose is elongated and treated in three-dimension. Incised lines outline the contour of the rectangular-shaped face.

FUNCTION : bracelet

SHELL STRUCTURE : modified valve of bivalve

PROVENANCE : Apatzingán

Date: [AD 450-900]

COMPARISONS : Occidente : San Gregorio , Mich; *unknown provenance*

Q. areas : El Infiernillo: AD 600-1300 (Suarez, 1977: Pls. 61-5)

b.b'''. Eyes in low relief (Fig. 185). Circular depressions illustrate the eyes. The pointed nose has a slit on the back side, with a hole cut through in the middle.

FUNCTION : bracelet

SHELL STRUCTURE : modified valve of bivalve

PROVENANCE : Michoacán

Date: unknown

COMPARISONS : Occidente : Cojumatlán: AD 110-1300 (Lister, 1949: Fig. 35a)

Tuxcacuesco (Kelly, 1949: Fig. 87 a)

*unknown provenance*

Q. areas : *unknown provenance*

L. Suarez: "Armbands with zoomorphic umbo" (1977: 48).

ii. Rings (sometimes slightly oval) with a narrow section and no umbo, i.e. whose section does not exceed 1.90 cm in width. These can be divided into two categories, defined by stylistic characteristics.

a. Cut out decoration, all around the outside edge. They include all the specimens with dentate edges, either circular or oval, with circular or flat sections, such as the one in Fig. 187. The edge of

the circumference is made out of triangles. A thin incised line follows all the contour of the circumference. Two holes have been cut through two square-shaped edges, like the "horse-collar" ornament in Fig. 176. Some specimens have no holes (function: "bracelet").

FUNCTION : chest ornament

SHELL STRUCTURE : modified valve of bivalve

PROVENANCE : Jalisco

Date: unknown

COMPARISONS : Occidente : Churumuco , Mich.(x6/ no hole); Jalisco

O. areas : El Infiernillo: AD 600-1200 (no hole/ Suarez, 1977: Pl. 50); Toltec, La Mina, Gue. (no hole)

L. Suarez: "Bracelets with dentate edges"(1977: 47).

The two specimens in Fig. 188 resemble the shape of a frog. The four legs have been carved in the round. Three thick incised lines illustrate the fingers of the front and back paws. The eyes have been inlaid with pyrite. The pieces have no holes.

FUNCTION : unknown

SHELL STRUCTURE : modified valve of bivalve

PROVENANCE : Tumba Guallarita, Co. (x2)

Date: unknown

COMPARISONS : Occidente : none

O. areas : none

- b. Low-relief decoration. The specimen in Fig. 189 is decorated with four two-headed serpents, with triangular faces, and four frogs alternatively. Circular depressions mark the eyes of the serpents and of the frogs (Breton, 1903: Fig. 5 s).

FUNCTION : bracelet

SHELL STRUCTURE : modified valve of bivalve

PROVENANCE : Guadalupe Mound, Etzatlán

Date: [400 BC - AD 900]

COMPARISONS : Occidente : Fig. 190 (Guadalupe Mound, with frog representations/ Breton, 1903: Fig. 5. 7)  
Cerro del Huistle (Olguin, 1983: Fig. 20 c)

O. areas : Snaketown: AD 550-1100 (Haury, 1976: Fig. 15.20 g-o)

- iii. Rings with no umbo and a straight section, i.e. whose section exceeds 1.60 cm in height. Anthropomorphic, zoomorphic and non-figurative representations are included under this heading.

- a. Anthropomorphic representations. The specimen in Fig. 191 shows a face, with circular depressions in the eyes and in the ear spools. One of the eyes has a small pyrite circlet inlaid, with a hole in the middle. A rectangular depression indicates the mouth. The eyebrows and the chin are indicated with an incised line, and a thick one, parallel to the edge, illustrates the headdress. The section of the ring is divided into panels, each one containing a

double spiral motif made with incised lines, with a depression in the middle of the spiral (Kelly, 1947: Fig. 69 b).

FUNCTION : bracelet

SHELL STRUCTURE : transverse cut of body whorl of gastropod

PROVENANCE : Apatzingán

Date: AD 450-650 (Delicias phase)

COMPARISONS : Occidente : none

O. areas : El Infiernillo: AD 600-1200 (Suarez, 1977: Pls. 46-7); Guerrero (Mixtec)

L. Suarez: "Bracelets with spirals and narrow section" (1977: 47).

- b. Zoomorphic representations. In Fig. 192, the head of a snake, similar to that in Fig. 157, has been incised on the wider part of the section. The teeth of the animal are illustrated with incised lines. Three circles have been cut through the material (one showing the eye).

FUNCTION : bracelet

SHELL STRUCTURE : transverse cut of body whorl of gastropod

PROVENANCE : Jalisco

Date: unknown

COMPARISONS : Occidente : none

O. areas : Placeres de Oro, Gue. (Spinden, 1911: Fig. 11 a-d)  
El Infiernillo: AD 600-1200 (Suarez, 1977: Pl. 45)  
Gulf Coast (Huastec)

- c. Non-figurative representations. The specimen in Fig. 193 a has four elements of decoration cut through the material: two L-shaped motifs surrounding inverted T-shaped motifs. Two thin incised lines follow the edges of the ornament. The wider edge is decorated with a series of short and thick incised lines. Two circular discs made out of nacre have been inlaid on its surface. Part of the internal whorls of the univalve is visible inside this piece (Fig. 193 b).

FUNCTION : bracelet

SHELL STRUCTURE : transverse cut of body whorl of gastropod

PROVENANCE : Jalisco

Date: [AD 450 -900]

COMPARISONS : Occidente : Fig. 194 (Jalisco), Fig. 195 (Apatzingán)

O. areas : El Infiernillo: AD 600-1200 (Suarez, 1977: Pl. 44)  
Gulf Coast (Huastec), Mezcala, Gue., Mexico  
Los Muertos, Ari: AD 1100-1450 (Haury, 1945: Pl. 72 g)

L. Suarez: "Bracelets with spirals" and wide section (1977: 47).

2.3.D. CYLINDRICAL. This type includes all pieces, either hollow or plain, shaped like a cylinder. In all the hollow specimens, the hole consists of a conically drilled perforation from one side of the piece to the other.

#### 2.3.D.1. No Decoration.

These pieces can measure up to 11.- cm in length or more, and be either straight (Fig. 196) or concave, as in Fig. 197.

FUNCTION : component of a necklace/belt  
SHELL STRUCTURE : outer lip of gastropod  
PROVENANCE : Jalisco Date: unknown  
COMPARISONS : Occidente : recurrent in several sites  
O. areas : recurrent in several sites in Mesoamerica  
L. Suarez: "Cylindrical beads" and "tubular beads" (1977: 28).

A variety of this subtype is shown in Fig. 197. This piece has ten holes on the concave side, all connecting to a long perforation drilled from both ends of the tube. It could have been used as a whistle ("silbato de la muerte"), for producing a soft sound accompanying a main instrument (F. Flores, pers. comm.).

FUNCTION : musical instrument (?)  
SHELL STRUCTURE : hinge of bivalve  
PROVENANCE : Colima Date: unknown  
COMPARISONS : Occidente: San Sebastian: 400 BC-AD 100 (Long, 1966: Fig. 82)  
Jalisco  
O. areas : none

**2.3.D.2. With Decoration.** Two subdivisions can be found : anthropomorphic and zoomorphic representations, both with two stylistic characteristics. In most specimens, the decoration is found all over the cylindrical piece, except on the smaller concave edge.

#### Anthropomorphic representations.

i. In Fig. 198, the design consists of four series of incised vertical lines, with three circles inserted at regular intervals, showing a stylised representation of a human face, like in Fig. 166. The eyes and the mouth are illustrated with circular depressions. A single hole has been drilled from the top surface to the side. The piece, plain inside and broken in the middle, shows signs of wear and has been badly restored. A similar motif, with a double square inside the circle, has been engraved on a stone from Cemetery I, Amapa (Meighan, 1976: Pl. 19).

FUNCTION : component of ornament  
SHELL STRUCTURE : outer lip of gastropod  
PROVENANCE : Colima (?) Date: unknown  
COMPARISONS : Occidente : Colima (Furst, 1978: Fig. 66)  
O. areas : none

ii. In Fig. 199, the hollow and short cylindrical beads are topped by anthropomorphic faces carved in the round. The eyes are marked by two circular depressions; a horizontal, slightly oval thick incised line, indicates the mouth; under the chin, a thin incised line

shows what resembles a bear.

FUNCTION : component of necklace/belt

SHELL STRUCTURE : outer lip of gastropod

PROVENANCE : Apatzingán

Date: unknown

COMPARISONS : Occidente : Jalisco , Michoacán (x4)

O. areas : none

### Zoomorphic representations.

- I. In Fig. 200, a double representation of an unidentified animal has been carved. At each extremity of the cylindrical piece, the face of the animal can be seen, with circular depressions showing the eyes; the paws are covering the snout. Incised lines show the back paws. A perforation has been drilled all along the tube, from both ends.

FUNCTION : component of necklace/belt

SHELL STRUCTURE : outer lip of gastropod

PROVENANCE : Colima

Date: unknown

COMPARISONS : Occidente: Zacoalco (von Winning, 1971: Fig. 2 d), illustrating the head of a crocodile (?); the body has not been decorated;

Colima

O. areas : none

- II. A plain specimen (Fig. 201 a), broken on both sides, with three sets of designs illustrated on its surface by means of incised lines: 1) on one side, a snake with a triangular face; a double zigzag line illustrates the body (Fig. 201 b); 2) over the top surface, the whole body of two unidentified animals (frogs?), with the faces facing each others; four legs and the paws are visible on both edges (Fig. 201 b); 3) on the opposite edge, double face snakes, with triangular faces and a zigzag body (Fig. 201 c). In the three illustrations, circular depressions indicate the eyes. The same repetitive pattern was probably continued all along the surface of this piece.

FUNCTION : component of ornament

SHELL STRUCTURE : outer lip of gastropod

PROVENANCE : Jalisco

Date: [400 BC - AD 900]

COMPARISONS : Occidente : none

O. areas : none

**2.3.E. OTHER GEOMETRIC SHAPES.** This type includes all pieces characterised by geometric shapes not included in types 2.3.A., 2.3.B., 2.3.C. and 2.3.D.

**2.3.E.1. No Decoration.** Eight variants can be taken into consideration, related to the geometric outline of the artifact. Most of the pieces under this heading belong to "Size a".



**2.3.E.1.a. Quadrangular.** This variant embraces all the pieces with four angles, including squares, rectangles, trapeziums and lozenges, sometimes difficult to differentiate. All the pieces, unless indicated, are thin and flat, with straight edges.

**a. Squares.** Two stylistic subdivisions can be taken into consideration.

- Squares with one, two or three circular holes (Fig. 202) cut through the material, usually located in the centre of the square or in the middle of one of the edges, on a straight line.

FUNCTION : component of necklace/ belt/ headdress or cloth

SHELL STRUCTURE : non-identified origin

PROVENANCE : Jalisco

Date: [Classic/ early Postclassic]

COMPARISONS : Occidente: Tuxcacuesco: AD 950-1200 (Kelly, 1949: Fig. 88 n)  
Apatzingán : AD 450-650 (Kelly, 1947: Fig. 71 a-f)  
Jalisco (several identical specimens)  
O. areas : El Infiernillo: AD 600-1200 (Suarez, 1977: Pl. 33 j-l); Placeres de Oro (Spinden, 1911: Pl. VI m-r) - Guerrero

L. Suarez: "Quadrangular pendants", Groups 28 & 29 (1977: 39).

- A square-shaped hole has been cut through the centre of the piece (Fig. 203).

FUNCTION : component of necklace/ belt/ headdress or cloth

SHELL STRUCTURE : non-identified origin

PROVENANCE : Playa del Tesoro

Date: AD 400-600 (Beltrán, pers. comm.)

COMPARISONS : Occidente: Tuxcacuesco: AD 950-1200 (Kelly, 1949: Fig. 88 j)  
Tizapan (Meighan & al, 1968: Fig. 43 e); *Nayarit*  
O. areas : Guerrero

**b. Rectangles.** It includes all the pieces with a length of 4.- cm or less. The proportion of the longer edge to the shorter edge might vary depending on the pieces, and the position of the holes changes accordingly.

- The specimen in Fig. 204 has two holes, cut through the material next to one of the shorter edges.

FUNCTION : component of necklace/ belt/ headdress or cloth

SHELL STRUCTURE : non-identified origin

PROVENANCE : Jalisco

Date: [Classic/ early Postclassic]

COMPARISONS : Occidente: Cojumatlán: AD 1100-1300 (Lister, 1949: Fig. 35 s), Apatzingán: AD 450-650 (Kelly, 1947: Fig. 7 h-k)  
Playa del Tesoro, *Michoacán*, *Jalisco*  
O. areas : El Infiernillo: AD 600-1200 (Suarez, 1977: Pl. 29 f-g), Culiacán: AD 1300-1500 (Kelly, 1945a: Fig. 72 o-p)  
Placeres de Oro (Spinden, 1911: Pl. VI h-l)

- The specimen in Fig. 205 is a combination of the last two

variants, and consists of a rectangle and a square joined together. The specimen has two holes cut through the material. This shape resembles the geometric motif in Figs. 193, 194.

FUNCTION : component of necklace/ belt/ headdress or cloth

SHELL STRUCTURE : non-identified origin

PROVENANCE : Jalisco

Date: unknown

COMPARISONS : Occidente : Jalisco (several identical specimens)

O. areas : none

- In Fig. 206 , the piece ("Size b") has two holes, cut through the material next to the narrower base. Other similar specimens may have only one hole for suspension.

FUNCTION : component of necklace

SHELL STRUCTURE : non-identified origin

PROVENANCE : Colima

Date: unknown

COMPARISONS : Occidente : Colima (x9)

O. areas: El Infiernillo: AD 600-1200 (Suarez, 1977: Pls. 29 h-i)

Casas Grandes : AD 1200-1340 (Di Peso, 1974: Fig. 534)

Cueva de La Candelaria (Aveleyra & al, 1956: Figs. 8, 9)

Tikal: late Formative (Moholy-Nagy, 1985: Fig. 10.5)

L. Suarez: Groups 19, 21, 23 and 24 (1977: 36).

c. Lozenges. This variant embraces all the pieces resembling an oblique-angled parallelogram with four equal sides. The specimen in Fig. 207 has a circle cut through the material in the middle of the piece at an angle. The same treatment has been used for the suspension hole.

FUNCTION : component of necklace/ belt

SHELL STRUCTURE : non-identified origin

PROVENANCE : Jalisco

Date: unknown

COMPARISONS : Occidente : none

O. areas : none

**2.3.E.1.b. Triangular.** It includes all the pieces which are shaped like a triangle. The specimen in Fig. 208 has a hole cut through the top vertex (Kelly, 1947: Fig. 69 n).

FUNCTION : component of necklace/ belt/ headdress or cloth

SHELL STRUCTURE : non-identified origin

PROVENANCE : Apatzingán

Date: AD 450-650 (Delicias Phase)

COMPARISONS : Occidente: Cerro del Huistle: AD 0-300 (Olguin, 1983: Figs. 5, 6)

Apatzingán ; Michoacán

O. areas : none

Variations. The four specimens in Fig. 209 are made up of two triangles joined by their vertex. A triangular section has been cut through each individual triangle. The pieces have a flat surface and no holes.

FUNCTION : "mosaic" (see Ch. 7: 231)

**SHELL STRUCTURE** : outer lip of gastropod

**PROVENANCE** : Jalisco

**Date:** unknown

COMPARISONS : Occidente : none

Q\_areas : none

The specimen in in Fig. 210 has a hole drilled conically through both sides of the loop. Similar pieces have sometimes been classified under "trapezoidal-shaped".

**FUNCTION** : component of necklace/ belt/ headdress or cloth

**SHELL STRUCTURE** : non-identified origin

**PROVENANCE** : Playa del Tesoro, "Pozo" 1 Date: AD 400-600 (Beltrán, pers. comm.)

COMPARISONS: Occidente : Tuxcacuesco: AD 200-950 (Kelly, 1949: Fig. 88 d)

**Cerro del Huistle: AD 0-300 (Olguin, 1983: Figs. 7, 8)**

## Apatzingán

O. areas : El Infiernillo: AD 600-1200 (Suarez, 1977: Pl. 27 e-o)

L. Suarez: Group 16 (1977: 35).

**2.3.E.1.c. Oval.** It embraces all the pieces which have two convex edges and are shaped like an ellipse. In the specimen in Fig. 211, two holes have been cut through the material.

**FUNCTION** : component of necklace/ belt/ headdress or cloth

**SHELL STRUCTURE** : non-identified origin

PROVENANCE : Jalisco

**Date:** unknown

COMPARISONS : Occidente : *Jalisco* (several identical specimens)

O. areas : none

**Variations.** The specimen in Fig. 212 is made up of two oval portions, joined through one of their concave edge. Two holes have been cut through each portion.

**FUNCTION** : component of necklace/ belt/ headdress or cloth

**SHELL STRUCTURE : non-identified origin**

**PROVENANCE** : Jalisco

**Date:** unknown

COMPARISONS : Occidente : Jalisco (several identical specimens)

O. areas : none

**2.3.E.1.d. Cross-shaped.** It includes all the pieces whose shape either resembles a cross, or derives from it. The specimen in Fig. 213 has an uneven surface and irregular edges. Two holes have been drilled through the surface of two opposite edges.

**FUNCTION** : component of necklace/ belt/ headdress or cloth

**SHELL STRUCTURE** : gastropod

**PROVENANCE** : Jalisco

**Date:** unknown

COMPARISONS : Occidente : El Otero: AD 500-800 (Noguera, 1944: Fig. 18)

Jalisco (Fig. 214); *unknown provenance*

O. areas : unknown provenance

**2.3.E.1.e. V-shaped.** The two specimens in Fig. 215 (Porter Weaver, 1956: Fig. 25.b), with a slightly convex surface, have one hole cut

through, from top to bottom.

FUNCTION : component of necklace/ belt/ headdress or cloth  
SHELL STRUCTURE : no-identified origin  
PROVENANCE : Chupícuaro, Burial 104 (x3) Date: Formative  
COMPARISONS : Occidente : none  
                  O. areas : none

The piece in Fig. 216, with flat edges, has a hole cut through at an angle on one of its narrower edges (Kelly, 1949: Fig. 88).

FUNCTION : earring  
SHELL STRUCTURE : non-identified origin  
PROVENANCE : Tuxcacuesco, La Mezcalera Date: AD 200-950  
COMPARISONS : Occidente : none  
                  O. areas : Tlatilco: Formative (Lorenzo, 1965: Fig. 87)

**2.3.E.1.f. Pyramidal.** It embraces all the three-dimensional pieces whose shape resembles a pyramid, or derives from it. The specimen in Fig. 217 has straight edges and a perforation drilled conically on both sides of the base.

FUNCTION : component of necklace, belt or headdress, or cloth  
SHELL STRUCTURE : apex of gastropod  
PROVENANCE : Jalisco Date: unknown  
COMPARISONS : Occidente: Zacoalco: AD 300-700 (von Winning, 1971: Fig. 3 f)  
                  O. areas : none

L. Suarez: "Buttons" (1977: 58).

**2.3.E.1.g. Spherical.** It embraces all the three-dimensional pieces whose shape resembles a sphere, or derives from it, with a diameter of 0.20 cm or more.

- The specimens in Fig. 218 have a smooth and even surface and a perforation drilled conically through the diameter.

FUNCTION : component of necklace/ belt/ headdress  
SHELL STRUCTURE : apex of gastropod  
PROVENANCE : Colima Date: unknown  
COMPARISONS : Occidente : *Colima* (several identical specimens)  
                  O. areas : Monte Albán: AD 300-900 (Caso, 1969: Pl. XLIX )

- The natural whorls of the shell are visible in the pieces included in Fig. 219. A hole has been cut through the middle.

FUNCTION : component of necklace/ belt/ headdress  
SHELL STRUCTURE : apex of gastropod  
PROVENANCE : Churumuco, Mich. Date: unknown  
COMPARISONS : Occidente : *Churumuco* (x17)  
                  O. areas : El Infiernillo: AD 600-1200 (Suarez, 1977: Pl. 12)

L. Suarez: "Spherical beads, no decoration" (1977: 29).

**2.3.E.1.h. Other Shapes.** It includes all the small and flat pieces of

irregular geometric shape. They either have no holes for suspension, such as the specimen, in Fig. 220 (Noguera, 1944: Fig. 27), or have one or several perforations, and were probably respectively either stuck to another material, like pyrite, or sewn to cloth or basketry.

FUNCTION : "mosaic" (see Ch. 7: 231)

SHELL STRUCTURE : non-identified origin

PROVENANCE : El Otero Date: AD 500-800 (Schondube, 1979: 41)

COMPARISONS: Occidente : Apatzingán: AD 450-650 (Kelly, 1947: Fig. 71 a-n)  
also recurrent in several sites

O. areas : Tepaltepec Basin (Goggin, 1943: Fig. 4 g),  
El Infiernillo: AD 600-1200 (Suarez, 1977: Pl. 82)  
also recurrent in several sites

L. Suarez: "Inlays" (1977: 57).

**2.3.E.2. With Decoration.** Only four variants are grouped under this heading. Some of the pieces included into these categories belong to "Size b".

**2.3.E.2.a. Quadrangular.** This variant includes anthropomorphic (a) and zoomorphic representations (b), sometimes difficult to differentiate, and non-figurative (c). In the first instance, the human or animal representation has been incorporated within a quadrangular ornament. These are treated in a naturalistic or abstract way.

a. The design in Fig. 221 is treated in a naturalistic style. The decoration is made up of thin incised lines which illustrate a human face and the rectangular body and the legs of an animal. An incised circle surrounds the oval eye. The crest and the tail are cut in the round. Circular depressions are set within the rectangular body, at the back of the head and in each of the four parts of the crest. Two holes have been cut through the material. The design probably illustrates the profile view of a reptile, with a human face.

FUNCTION : component of ornament

SHELL STRUCTURE : outer lip of gastropod

PROVENANCE : Jalisco

Date: unknown

COMPARISONS : Occidente : none

O. areas : unknown provenance (painted)

The specimen in Fig. 222 shows a stylised representation of a human figurine. Two incised lines have been carved, parallel to the base. The feet are pointing outward. A circle has been cut through the middle of the head.

FUNCTION : component of ornament

SHELL STRUCTURE : non-identified origin

PROVENANCE : Jalisco  
COMPARISONS : Occidente : none  
O. areas : none

Date: unknown

- b. In Fig. 223, the design is made up of thick incised lines illustrating the lozenge-shaped body and the four legs. Two circular depressions show the eyes. Four holes have been drilled conically from each side of the rectangular-shaped piece to the back. The design might illustrate the dorsal view of a frog.

FUNCTION : component of ornament

SHELL STRUCTURE : outer lip/dorsum of gastropod

PROVENANCE : Jalisco

Date: unknown

COMPARISONS : Occidente : Fig. 224; San Sebastian: 400 BC-AD 100 (Long, 1966: Figs. 98, 99)

O. areas : Guerrero, Jaina

Stylistic representations of fish include specimens like those in Fig. 225. The eyes are treated in the same way as in Fig. 91. The mouth and the fins are indicated by grooves. There are no holes for suspension.

FUNCTION : "mosaic" (see Ch. 7: 231)

SHELL STRUCTURE : outer lip of gastropod

PROVENANCE : Colima (?)

Date: unknown

COMPARISONS : Occidente : *Colima* (x3)

O. areas : none

The specimen in Fig. 226 seems to illustrate the dual representation of a head, on each side of the rectangular-shaped piece. Both are profile views. Two circular depressions show the eyes. An incised line has been carved parallel to the bottom edge. A unique central and circular hole has been cut through the middle and is surrounded on both sides by a short and thick incised line which borders both heads.

FUNCTION : component of ornament

SHELL STRUCTURE : body whorl of gastropod

PROVENANCE : Playa del Tesoro Date: AD 400-600 (Beltrán, pers. comm.)

COMPARISONS : Occidente : Playa del Tesoro (x3)

O. areas : none

The shape of the stylised zoomorphic representation in Fig. 227 derives from two lozenges joined by the apex. The eyes are cut through the material. The ears have been carved in the round, with a hole cut through in the middle. One of the ears is broken.

FUNCTION : component of ornament

SHELL STRUCTURE : outer lip of gastropod

PROVENANCE : Jalisco

Date: unknown

COMPARISONS : Occidente : none

O. areas : none

- c. The side view of this three-dimensional piece (Fig. 228 a & b) resembles that of a lozenge, with two thin edges and a wide section close to the narrower edge. One thick incised line has been carved parallel to the wider edge. On the opposite side, an oval depression is visible. A hole has been drilled conically from both sides, under the widest section.

FUNCTION : component of ornament

SHELL STRUCTURE : outer lip of gastropod

PROVENANCE : Apatzingán

Date: unknown

COMPARISONS : Occidente: none

O. areas : Uaxactún: Formative (Kidder, 1947: Fig. 53 a)

Barton Ramie: 700-300 BC (Willey & al, 1965: Fig. 304 a)

Toledo District (x14/ M. Velasco, pers. comm.)

Campeche (M. Velasco, pers. comm.)

- The specimen in Fig. 229 is decorated on both sides. On one side, a fringe made out of half a circle, surrounded by two quarter circles, has been carved in the round along the wider base. A short and thick incised line has been carved in the middle of the half circle. A hole, next to the narrower base, has been cut at an angle. On the other side, two incised lines have been carved, parallel to the bases.

FUNCTION : component of ornament

SHELL STRUCTURE : non-identified origin

PROVENANCE : Occidente

Date: unknown

COMPARISONS : Occidente : none

O. areas : none

- The specimen in Fig. 230 has a dentate edge carved in the round along the wider base.

FUNCTION : component of ornament

SHELL STRUCTURE : non-identified origin

PROVENANCE : Jalisco

Date: unknown

COMPARISONS : Occidente : none

O. areas : none

- A lozenge section has been cut through the middle of the concave piece (Fig. 231). One thin incised line, parallel to the edges, follows each contour. A hole has been cut next to one of the vertices.

FUNCTION : component of ornament

SHELL STRUCTURE : modified valve of bivalve

PROVENANCE : Jalisco

Date: unknown

COMPARISONS : Occidente : none

O. areas : none

**2.3.E.2.b. Triangular.** The illustration of a bird has been done with incised lines (Fig. 232).

FUNCTION : component of ornament  
SHELL STRUCTURE : non-identified origin  
PROVENANCE : Jalisco Date: unknown  
COMPARISONS : Occidente : Cerro del Huistle (Olguin, 1983: Fig. 7 h)  
O. areas : none

**2.3.E.2.c. Oval.** This variant includes only pieces whose shape derives from an ellipse. The specimen in Fig. 233 is covered in its entire surface by thin incised lines, parallel to each other and following the whole contour of the artifact. The piece has a flat surface and no holes.

FUNCTION : "Mosaic" (see Ch. 7: 231)  
SHELL STRUCTURE : outer lip of gastropod  
PROVENANCE : Jalisco Date: unknown  
COMPARISONS : Occidente : none  
O. areas : none

**2.3.E.2.d. Spherical.** This variant includes pieces in the shape of a sphere, such as those in Fig. 234. The design covers the whole surface and is made up of wide incised lines: either in the shape of a double circle, or of two sets of curved lines surrounding a circular depression. A hole has been drilled conically from side to side of the sphere.

FUNCTION : component of necklace/ armband/ belt/ headband  
SHELL STRUCTURE : apex of gastropod  
PROVENANCE : Apatzingán Date: [AD 450-900]  
COMPARISONS : Occidente : Apatzingán (x18)  
O. areas : El Infiernillo: AD 600-1200 (Suarez, 1977: Pl. 13)

L. Suarez: "Decorated spherical beads" (1977: 29).

**Variations.** These consist of spherical pieces, topped by a rim, which can be plain or incised with a flower-like design (Fig. 235). A hole has been drilled conically from the centre of the rim to the opposite side.

FUNCTION : spindle-whorl  
SHELL STRUCTURE : apex of gastropod  
PROVENANCE : Nayarit Date: unknown  
COMPARISONS : Occidente : Nayarit (x2)  
O. areas : unknown provenance

**2.3.F. FINGER-LOOPS.** This type includes all objects with two U-shaped parallel surfaces. They are associated with *atlatl*, or spear-throwers, used by the ancient Mexicans, and were tied with a cord to the wooden shaft of the *atlatl*. Examples of those can be found, for instance, at the British Museum (Fig. 236) and at the



**2.3.F.1. No Decoration.** The parallel surfaces can be divided into three categories.

**a. Flat on both edges (Fig. 237).**

FUNCTION : finger-loop

SHELL STRUCTURE : siphonal canal of gastropod

PROVENANCE : Colima

Date: [Classic]

COMPARISONS : Occidente : Tuxcacuesco (Kelly, 1949: Fig. 88 h)

Tingambato: AD 400-950 (Piña Chan, 1982: Fig. 26 e)

Totoate, Jal. (Ekholm, 1962: Fig. 1 c)

O. areas : El Infiernillo: AD 600-1200 (Suarez, 1977: Pl. 90 d)

**b. Concave on the outside edge (Fig. 238/ Kelly, 1947: Fig. 69 p).**

FUNCTION : finger-loop

SHELL STRUCTURE : siphonal canal of gastropod

PROVENANCE : Apatzingán Date: found from the Delicias through the Chila phase (AD 450-1500)

COMPARISONS : Occidente: Apatzingán: middle Classic (*ibid* : Fig. 69 p-q)

O. areas : El Infiernillo: AD 600-1200 (Suarez, 1977: Pl. 89 a-b, d), Teotihuacán, Tetitla/Yayahuala (Séjourné, 1966: Fig. 18)

**c. Round on both edges (Fig. 239).**

FUNCTION : finger-loop

SHELL STRUCTURE : siphonal canal of gastropod

PROVENANCE : Jalisco

Date: [late Formative/ Classic]

COMPARISONS : Occidente: San Sebastian: 400 BC-AD 100 (Long, 1966: Fig. 109)

Totoate, Jal. (Ekholm, 1962: Fig. 1 d)

Chupícuaro: 300 BC-AD 100 (Porter Weaver, 1956: Figs. 25 d-e); Jalisco , Nayarit , Michoacán

O. areas: El Infiernillo: AD 600-1200 (Suarez, 1977: Pl. 90 a-b)

Tampico/Las Flores: early Postclassic (x2/ Ekholm, 1944: Fig. 52 Z); unknown provenance.

L. Suarez: "Finger-loops", Types C 1c, A 1a-b-d and C 1a-b (1977: 61-22).

All these pieces have two holes. In most specimens, each hole has been drilled conically at the end of each loop, from the inside to the outside surface. They are however a few exceptions, such as the finger-loops in Figs. 238, 241, and the one mentioned by Ekholm (1962: Fig. 1 d), where the holes run from side to side each loop.

**2.3.F.2. With Decoration.** The decoration is always carved on the convex surface. All the specimens under this category have a flat inside surface. They are divided into three variants: anthropomorphic, zoomorphic and non-figurative representations.

**2.3.F.2.a. Anthropomorphic Representations.** Two human figures

with folded arms are illustrated (Fig. 240). Both rims are decorated with circular depressions.

FUNCTION : finger-loop  
SHELL STRUCTURE : siphonal canal of gastropod  
PROVENANCE : unknown Date: unknown  
COMPARISONS : Occidente : none  
                  O. areas : none

**2.3.F.2.b. Zoomorphic Representations.** These include two subdivisions.

- I. Zoomorphic representations carved in the round (Fig. 241). The animal can be identified as a pisote. Circular depressions indicate the eyes. The mouth is made out of a horizontal slit and of a circular depression respectively. Each specimen has two holes at the end of each loop: one of them has been drilled from the inside to the outside surface, the other from side to side of the loop (left handside figure).

FUNCTION : finger-loop  
SHELL STRUCTURE : siphonal canal of gastropod  
PROVENANCE : Jalisco Date: unknown  
COMPARISONS : Occidente : San Nicolas (snake/ Ekholm, 1962: Fig. 1e)  
                                  Jalisco ( x2), unknown provenance (ibid Fig. 1 k): all with  
                                  pisote representations  
                  O. areas : El Infiernillo: AD 600-1200 (Suarez, 1977: Pl. 89 c)  
                                  unknown provenance (with pisote representations)

L. Suarez: " Finger-loops", Type A 2 (1977: 62).

- II. Zoomorphic representations carved in the round along the two rims (Fig. 242). The profile of twelve bird heads has been carved perpendicular to the convex surface, and make up two continuous and thin fringes. Circular depressions illustrate the eyes. The same treatment of birds heads can be found in Fig. 148.

FUNCTION : finger-loop  
SHELL STRUCTURE : siphonal canal of gastropod  
PROVENANCE : [Jalisco/ Colima] Date: [200 BC - AD 900]  
COMPARISONS : Occidente : none  
                  O. areas : none

**2.3.F.2.c. Non-figurative Representations.** These include several subdivisions.

- I. Incised lines carved along the two rims. These are the only element of decoration (Fig. 243). The thickness of the incised lines can vary according to the specimens concerned.

FUNCTION : finger-loop  
SHELL STRUCTURE : siphonal canal of gastropod  
PROVENANCE : Michoacán? Date: unknown  
COMPARISONS : Occidente : Cerro del Huistle (Olguin, 1983: Fig. 22);

- II. Incised lines carved along the two rims, with circular depressions in the middle (Fig. 244). The two incised lines are thick. Twelve circular depressions have been carved on the flat surface between the two incised lines. Two inlaid green stones are still visible in the circular depressions.

FUNCTION : finger-loop

SHELL STRUCTURE : siphonal canal of gastropod

PROVENANCE : San Gregorio, Mich.

Date: unknown

COMPARISONS : Occidente : San Sebastian (Long, 1966: Fig. 109, bottom)

O. areas : none

- III. Geometric designs made up of incised lines (Fig. 245). On one half of the finger-loop, a series of parallel lines have been carved over the surface, ending in a V-shape. On the other side of each piece, an oval motif has been carved.

FUNCTION : finger-loop

SHELL STRUCTURE : siphonal canal of gastropod

PROVENANCE : Apatzingán

Date: unknown

COMPARISONS : Occidente : none

O. areas : El Infiernillo: AD 600-1200 (Suarez, 1977: Pl. 90 e)

Tampico/Las Flores: early Postclassic (x2/ Ekholm, 1944: Fig. 52 y)

L. Suarez: "Finger-loops", Type C 1c (1977: 62).

- iv. Nubbins in high relief (Fig. 246/ Kelly, 1947: Fig. 69 r).

FUNCTION : finger-loop

SHELL STRUCTURE : siphonal canal of gastropod

PROVENANCE : Apatzingán Date: found from the Delicias through the Chila phase (AD 450-1500)

COMPARISONS : Occidente: Tizapan (Meighan & al, 1968: Fig. 43 l)

Totoate, Jal. (Ekholm, 1962: Fig. 1 b)

O. areas: El Infiernillo: AD 600-1200 (Suarez, 1977: Pl. 90 c)

El Prisco/ Panuco: late Postclassic (Ekholm, 1962: Fig. 1) unknown provenance (ibid: Fig. 1 h)

L. Suarez: "Finger-loops", Type C 1b (1977: 62).

**2.3.G. MISCELLANEOUS SHAPES.** This type includes all pieces whose shape does not fit into any of the previous headings. All of them, with the exception of the pieces in 2.3.G.2.c., have been manufactured out of the natural shape of the shell, with little alterations.

#### **2.3.G.1. No Decoration.**

**2.3.G.1.a. Spirals.** These pieces were obtained by sectioning vertically a big gastropod. The vertical section and the spire of the univalve can be seen on both side of the artifact. The specimen in Fig. 247 has one hole cut through the section of the shell.

FUNCTION : chest ornament  
SHELL STRUCTURE : vertical section of gastropod  
PROVENANCE : Jalisco Date: unknown  
COMPARISONS : Occidente: none  
O. areas : Tampico/Las Flores: early Postclassic (Ekholm, 1944: Fig. 52); Chichen Itza (Proskouriakoff, 1962: Fig. 53 p) Gulf Coast, Central Mexico

A variety of this piece consists of cutting a small univalve longitudinally along the spire and the columella. The specimens in Fig. 248 have no man made holes for suspension (Kelly, 1947: Fig. 69 m).

FUNCTION : chest ornament  
SHELL STRUCTURE : longitudinal section of gastropod.  
PROVENANCE : Apatzingán Date: found from the Delicias through the Chila phase (AD 450-1500)  
COMPARISONS : Occidente: Apatzingán (x11), El LLano , Jal. (x4/ Kelly's excavations)  
O. areas : none

**2.3.G.1.b. Spoon-shaped Ornaments.** The only specimen found in Western Mexico has been reported by E. Olguin (1983: Fig. 18 a). It consists of a convex triangular ornament with two holes cut through the material on the shorter edge, such as the specimen in Fig. 249.

FUNCTION : chest ornament  
SHELL STRUCTURE : dorsum of gastropod  
PROVENANCE : Cerro del Huistle Date: [Classic/Postclassic]  
COMPARISONS : Occidente : Amapa: AD 486-1508 (Meighan, 1976: Pl. 111)  
O. areas: El Infiernillo: AD 600-1200 (Suarez, 1977: Pl. 78)  
Casas Grandes : AD 1200-1340 (Di Peso, 1974: Fig. 534.6)  
Cueva de la Candelaria (Aveleyra & al, 1956: Fig. 16)  
Tampico/ Las Flores: early Postclassic (Ekholm, 1944: Fig. 52)  
Uaxactún: Formative (Kidder, 1947: Fig. 86 d 7)  
Chetumal area (Proskouriakoff, 1962: Fig. 53 x-y)  
San Luis Potosí; Maya, Gulf Coast

L. Suarez: " Decorated *xenomorfos* pectorals" (1977: 55).

**2.3.G.1.c. Other Shapes.** Several subdivisions can be included under this heading.

I. Cylindrical pieces made out of the columella of a gastropod. The specimen in Fig. 250 has two connecting holes drilled widthwise at the back.

FUNCTION : chest ornament  
SHELL STRUCTURE : columella of gastropod  
PROVENANCE : Occidente Date: unknown

COMPARISONS : Occidente : *Jalisco* ; another similar piece is illustrated by Mallory (1980: Fig. 20);  
                  O. areas : El Infiernillo: AD 600-1200 (Suarez, 1977: Pl. 94 a)  
                          Casas Grandes: AD 1200-1340 (Di Peso, 1974: Fig. 534.6)  
                          Sartaneja, Belize: late Postclassic (Boxt, 1988: Fig. 8)  
                          Mata del Muerto, Tamaulipas; Maya  
L. Suarez: "Burins" (1977: 64).

In Fig. 251, only the body whorl of the univalve has been removed.

FUNCTION : chest ornament

SHELL STRUCTURE : columella and spire of gastropod

PROVENANCE : Occidente

Date: unknown

COMPARISONS : Occidente : none

O. areas : none

ii. Irregularly shaped cylindrical pieces. One hole has been cut through one extremity (Fig. 252).

FUNCTION : component of ornament

SHELL STRUCTURE : columella of small gastropod

PROVENANCE : *Jalisco*

Date: unknown

COMPARISONS : Occidente : *Jalisco* (several identical specimens)

O. areas : Casas Grandes: AD 1200-1340 (Di Peso, 1974: Fig. 534.6.30); unknown provenance

iii. Elongated pieces with natural striations, such as the specimen in Fig. 253. A broad incised line has been cut all along the length; one hole has been drilled conically through the material at each extremity.

FUNCTION : component of ornament

SHELL STRUCTURE : outer lip of gastropod (helmet shell)

PROVENANCE : *Jalisco*

Date: unknown

COMPARISONS: Occidente: San Sebastian: 400 BC-AD 100 (Long, 1966: Fig. 101)  
Playa del Tesoro: AD 400-600 (Beltrán, pers. comm.)

O. areas : Culiacán: AD 1300-1500 (Kelly, 1945a: Fig. 72 e)

iv. Pieces with unspecified shapes, such as the specimen in Fig. 254, which resembles a scraper. A hole has been cut through conically through the material next to the longest edge.

FUNCTION : component of ornament

SHELL STRUCTURE : outer lip of gastropod

PROVENANCE : *Jalisco*

Date: unknown

COMPARISONS : Occidente : recurrent in several sites, with unspecific shapes.  
Other specimens with unspecific shapes have been reported by Kelly (1949: Fig. 87 e-f) in Tuxcacuesco, La Mezcalera.

O. areas : recurrent in several sites in Mesoamerica

### 2.3.G.2. With Decoration.

#### 2.3.G.2.a. Spoon-shaped. Only the elongated, naturalistic faces (Fig.

**255)**, similar to those in the hollow pottery figurines from Jalisco, and one arm indicated by incised lines, have been illustrated. Concave depressions indicate the ears. Two small holes for suspension have been cut through each elbow.

FUNCTION : chest ornament

SHELL STRUCTURE : dorsum of gastropod

PROVENANCE : Jalisco

Date: [400 BC -AD 900]

COMPARISONS : Occidente : Amapa: the exterior surface is much eroded and carved with incised lines and circles. The interior bears a black adhesive, suggesting that the object was attached to something (Meighan, 1976: 123).

O. areas : none

**2.3.G.2.b. Rectangular Convex Plates.** The rectangular-shaped and convex specimen in Fig. 256 shows two parallel incised lines engraved along one of the longer edges, on the convex side. Four holes have been drilled conically on each corner.

FUNCTION : component of armband

SHELL STRUCTURE : dorsum of gastropod

PROVENANCE : Apatzingán

Date: unknown

COMPARISONS : Occidente : *Apatzingán* (x5); *Huetamo* , Mich. (x2)

O. areas : El Infiernillo: AD 600-1200 (Suarez, 1977: Pl. 77)

Teotenango: AD 750-1150 (Piña Chan, 1972: Phs. 27-29)

Panuco, Maya

L. Suarez: "Reshaped *xenomorfos* pectorals", Group A (1977: 55).

**2.3.G.2.c. Miniature Representations.** Those include the small, flat and thin pieces with a nacre surface. Most of them have a variety of non-identified shapes. Some of them (Fig. 257, top row, left, and Fig. 258, right) show an anthropomorphic figurine, with a circle cut through the head and through the arms. None of them has any holes for suspension, but all the specimens without exception have a circle or a double circle cut through various parts of the body.

FUNCTION : "mosaic" (see Ch. 7: 231)

SHELL STRUCTURE : modified valve of *Spondylus*

PROVENANCE : Jalisco

Date: unknown

COMPARISONS : Occidente : *Jalisco* (x17/ different shapes)

O. areas : none

**2.3.G.2.d. Other Shapes.** It includes all the pieces with an unidentified shape, like the cylindrical pieces with anthropomorphic representations (Fig. 259) which represent human heads. The circular eyes are inlaid with pieces of coral. Each inlaid piece has a hole drilled through the middle. An inlaid turquoise illustrates the nose. Two connecting holes have been drilled on both sides of the head, at the height of the eyes.

FUNCTION : component of ornament

SHELL STRUCTURE : columella of gastropod  
PROVENANCE : San Gregorio, Mich. Date: unknown  
COMPARISONS : Occidente : *San Gregorio* (x10)  
O. areas : none

Further miscellaneous shapes.

1. Spade-shaped ornaments, thin and elongated, e.g. Cerro del Huistle (Olguin, 1983: 98, Fig. 12) and Cojumatlán (Lister, 1949: Fig. 35 v).
2. "Strand-dividers", approximately 1.50 cm in length, with a narrow section and two holes, e.g. El Arenal (Long, 1966: Figs. 153-4), San Sebastian, with or without decoration (ibid: Figs. 91-3), Cerro de Huistle (called "D" type), forming a headdress over the skull of skeleton 51-A, in association with rectangular and cylindrical pieces and stone ornaments (Olguin, 1983: 97, Fig. 11 a-c). They probably functioned as a device to separate and hold together two strands of a necklace (Di Peso, 1974: Fig. 513.6).
3. "Peinetas", i.e. Cerro de Huistle (Olguin, 1983: Fig. 11 e).
4. "Drop-shaped" ornaments, e.g. San Sebastian (Long, 1966: Fig. 96).
5. "Botones", small circular or quadrangular pieces, with a size of about 0.60 cm and one flat surface, e.g. Tizapan el Alto (Meighan, 1968: 152), Cerro de Huistle, Burial 15.25 (x3/ Olguin, 1983: Fig. 21 f-h).

## **Chapter three**

### **Interpretation of Univalves**



## ANALYSIS AND INTERPRETATION OF AUTOMORPHIC PIECES

The purpose of this chapter, and of the four following ones, is to analyse and to explain the use of the material included in the Classification. These artifacts had a double function: utilitarian and symbolic. Utilitarian pieces were usually accompanied by a symbolic connotation, for instance a trumpet used for a ceremony dedicated to a specific deity, or a pectoral with a symbolic design.

To attain these objectives, two main sources of information will be used.

**1** - The archaeological reports from the Occidente and other areas of Mesoamerica provide the following information:

- a) an account of the main species of shells used for the manufacture of each specific type of artifact;
- b) an account of the context where this material was found, its association with the deceased and with other types of artifacts;
- c) information on dates.

Unfortunately, most of the data referring to shell artifacts in archaeological reports from the Occidente are incomplete, as in the Tuxcacuesco-Zapotitlán area (Kelly, 1949:129) and lack precision. In addition, documented shell specimens are very limited in number, as in the Autlán zone (Kelly, 1945b: 72). Consequently, information provided by other sites outside the area will be taken into consideration to complement these data, and for comparative purposes.

**2** - The historical accounts and the ethnoarchaeological examples. These, together with the representations of shells in other materials, i.e mural paintings, pottery and stone, help in interpreting the function of the artifact.

Since historical accounts are virtually non-existent in the Occidente, similar examples in other areas will be provided for the interpretation of the function of the material.

In addition, the study will include considerations of the function and placements of the holes, the types of modifications and the decoration of the object.

This chapter is divided into two main categories: the Univalves "Size a" (1.1.A.1.) and the Univalves "Size b" (1.1.A.2 and 1.1.B.).

## **I. Univalves "Size a" (1.1.A.1.)**

The data provided in Table 1 (p. 151) leads to the following conclusions concerning the species used for the manufacture of the artifact, the context where it comes from and its date.

### **SPECIES/FAUNAL PROVINCES**

The total number of each species found in any individual context has only been provided when the information was available in the site report (this argument applies also to Tables 2 to 10). Shells are often found in sets of more than two at a time in association with the same skeleton.

In the Occidente, out of the nineteen different families of univalves "Size a", found in archaeological context, the species most used for the manufacture of non-decorated ones, found in more than three sites, are the following: *Agaronia* species, the most commonly used being *A. testacea*, *Columbella* species, *Conus* species, *Oliva* and *Olivella* species and *Trivia* species. However, this information is incomplete due to the fact that in many sites the genus has not been identified by the author of the report.

All the material has been manufactured from Pacific species, with the exception of the *A. hyatula* (which could have been confused with *A. testacea*; the *A. hyatula* comes from the eastern Atlantic) and the *O. reticularis*, both found in the Tuxcacuesco-Zapotitlán burials. It seems therefore that the source of the raw material was the nearby Pacific coast.

Land snails were occasionally used. In Cuitzeo, seventeen specimens of *Bulimulidae orthalicus*, with one hole for suspension, were found in a burial context (Suarez, pers. comm.).

### **MANUFACTURE**

It seems that the absence or presence of holes, together with their position, and the different types of modifications were not related to any genera in particular.

HOLES - Most of the specimens have only one hole; the nature of these suspension holes may however vary according to the specimens concerned: it normally pierces the end of the lip or of the siphonal

canal, the tip of the spire or the body whorl. They may be drilled holes, conical or cylindrical, a horizontal perforation (Fig. 7), or a hole roughly broken through the back of the shell. Unfortunately no information referring to the number of holes is provided in some reports, as Cojumatlán and Apatzingán. A few small univalves have double perforations, but this treatment is, however, very rare (Cerro del Huistle and Kaminaljuyu: Kidder & al, 1946: Fig. 164 a, middle row). The single perforation permitted hanging or stringing. Sometimes the pattern of alteration would enable firm sewing to a fabric (Andrews, 1969: 55).

MODIFICATIONS - All the specimens included in this table have had their periostracum removed, and the outside surface smoothed. The types of modifications performed on these pieces are dealt in the Classification, under Subtype 1.1.A.1. (b to d).

DECORATION - No occurrences of incised, excised or high relief decoration have been located in the Occidente, and they are rare in other areas of Mesoamerica.

Paint was probably used to decorate those pieces, although I believe that the natural colour and the attractive pattern of the shell were sufficient decorative elements. *O. porphyria*, for instance, is easily distinguishable due to its unique design, made of brown-reddish zigzag markings over a whitish backing. It is much more attractive in colour and design than any of the Atlantic *Oliva* (Andrews, 1969: 43). Traces of paint can be seen in some specimens, as in San Sebastian, Tomb I, where traces of a yellow-brown substance was found on a lot of 67 *A. testacea* (Long, 1966: 216). Other occurrences of paint have been located, for instance, in Casas Grandes, where 794 specimens of *Conus* and *Oliva*, some of them with incised decoration and painted in blue, yellow or green, were found in the fill of two rooms and a plaza (Di Peso, 1974: 480, 482, 487).

In the Maya area, *Oliva* sp. with incised and excised decoration have been used for the manufacture of skull representations: Mayapán (Proskouriakoff, 1962: Fig. 45 a), Chiapa de Corzo (Lee, 1969: Fig. 135). In Uaxactún (Ricketson & al, 1937: Pl. 69 a), the longitudinal cut of the shell only has been used for these skull representations.

## CONTEXT

All the material comes from primary and secondary burials. In two

instances, Las Cebollas and San Sebastian (material found by looters), it came from shaft tombs and in Chupícuaro from a cache. It is usually associated with adult male skeletons. There are no known occurrences in the Occidente of associations with female or infant skeletons, although the latter has been found in a burial in Casas Grandes (Di Peso, 1974: 398).

The association of these artifacts with the skeleton of the deceased has not been mentioned for three main reasons: a) in most sites the burials are so fragmentary that the relationship of the offerings to the body is unknown, as in the Tuxcacuesco-Zapotitlán burials (Kelly, 1949: 191); b) the context has been disturbed, as in San Sebastian (Long, 1966); c) most site reports provide insufficient information.

## DATES

Most of the material has been found in contexts dating from the late Formative to the early Postclassic. Unfortunately no information is provided for this particular type of material, and no general pattern seems to emerge from the data provided by the site reports. In Cerro del Huistle, most of the material (94%) belongs to the period between AD 0-300; this percentage decreases by the middle Classic, and no material belonging to the Postclassic has been found (Olguin, 1983: 327). In the Tuxcacuesco- Zapotitlán area, worked shells have been found during the three phases dating from the early Classic to the Postclassic (Tuxcacuesco, Coralillo and Tolimán complexes), although they are less plentiful during the early Classic, or Tuxcacuesco complex (Kelly, 1949: 129). In Apatzingán, Chila worked shells are on the whole simpler and less distinctive than those of the Delicias complex (ibid, 1947: 116).

In the Occidente, few worked shells have been found in a Formative context. Specimens belonging to the subtype 1.1.A.1.(c) have been found in the Tehuacán Valley (Formative/ MacNeish, 1967: 127) and in Chupícuaro (Porter Weaver, 1956: Fig. 25 f, surface find). The usage of small univalves as ornaments since the Formative is illustrated in Monument 14, San Lorenzo, which depicts a priest wearing a headdress, from which elongated univalves are hanging (Piña Chan, 1989: Fig. 42).

## FUNCTION

The pieces included in the subtype 1.1.A.1.(a) were probably used as components of a necklace, a bracelet or a belt. In Casas Grandes, for instance, specimens of *O. dama* and *Nassarius moeustrus* have been found around the neck and the wrist of two skeletons in two different burials belonging to the late Postclassic (Di Peso, 1974: 394). Some pottery figurines from Nayarit wear small univalves, usually in pairs or individually, attached to an armband (Fig. 260) or to a belt (Fig. 261).

Further usages of these shells are illustrated in the following examples. In Cerro del Huistle (Olguin, 1983: 69), two thousand one hundred and fifty five specimens of *Olivella* species, whose length varies between 0.25 and 0.40 cm, have been found over the skull of a skeleton in burial 15-25, used as a headdress (AD 0-300). They all are unmodified and have irregular perforations on their surfaces. The shells surrounded the top of the skull and were arranged in the shape of a bathing cap. The author suggests that these pieces may have been part of a headdress and sewn to a piece of cloth (ibid: 266). In Cueva de la Candelaria, a garment made of several unmodified *Mr. apicina* has been found in a burial on each side of the skull of a skeleton (Aveleyra & al, 1956: 127, Fig. 24). Each shell is sewn to a string hanging from a thin length of woven fibre. The authors refer to this ornament as "flores" and believe that they were used as earrings in pairs. In his unpublished notes, Palmer refers to the same "flores" found on the chest of a skeleton, hanging from the neck with a fibre string, in the "Cueva de la Laguna", Coahuila (ibid: 127). In Casas Grandes, a woven fibre belt with more than 80 *Conus* tinklers attached to it has been found in a cave. It is similar to one depicted in the Dresden Codex, worn around the waist and ankles of the pulque gods and called *Oyualli*, or "rattling ornaments" (Di Peso, 1974: 467). In addition, it has also been suggested that these pieces were used for the adornment of skirts and belt fringes (The Maremont Collection of pre-Columbian Art: Fig. 70). At least two were found on the hips of Skeleton B, Burial 5 in Piedras Negras (W. Coe, 1959: 57).

Most of the pieces included in the subtype 1.1.A.1. (b to d) are usually referred to in the literature under the name "tinklers". These are small, elongated univalves, which vary in length from approximately 2.- to 6.50 cm. Specimens in any given set are usually almost uniform in size. Their main aesthetic attractions were their colour and the natural design on the outside surface of the shell. In the Occidente, these objects are generally made of *Oliva*, *Olivella*,

*Conus*, *Trivia* and *Agaronia* species. These pieces have a very wide distribution in Mesoamerica and are frequent in most archaeological sites, sometimes found in sets of from two to several hundred, as in Cerro del Huistle, mentioned earlier.

Tinklers are so called because their commonest use was probably for attachment to garments or ceremonial paraphernalia, such as necklaces, bracelets, bangles and belts, where, knocking together, they emitted a dry, rattling sound. According to Castañeda and Mendoza (1933: 575), they were used for accompanying the rhythm of the dancers who wore them around their wrist, their ankles or their waist. They are sometimes also called jingle rattles when a number of them are "loosely attached together so as to clash together when shaken" (Izickowitz, 1935: 33). The various ways tinklers were used have been illustrated by Di Peso (1974: Fig. 508.6 and 578.6) and by the shell representations on clay figurines.

Further evidence for the utilitarian and symbolic functions of this material is provided by the following sources.

#### 1. Historical accounts

The importance attributed to this type of ornament in pre-Columbian times is attested by the various references in the chronicles. The different ways shells were used, as special attributes of gods and of the Aztec elite, has been mentioned by several chroniclers. In the Florentine Codex, Sahagún (Anderson & al, 1970: 9) refers to *Quetzalcoatl* wearing a necklace made of gold, from which small univalves were hanging, and a leather garment beneath the knees, decorated with small univalves. In the same codex, both *Oliva* and *Olivella* species have been identified, but their significance remains unknown. The same author describes a vestment sent by Motecuhzoma to Cortes, which had "many little shells" sewn on it and hanging from it (Saville, 1922: 14). In the Borbónico Codex, a servant who accompanies *Quetzalcoatl* is wearing a skirt decorated with univalves and bivalves which might represent lunar symbols (Suarez, 1989: 36). The same use of univalves is illustrated in the Cospi Codex and in the Rios Codex, in which a god, which could be identified as Mixcóatl, wears a dress decorated with univalves (Suarez, 1989: 36). Diego Durán, in his "Historia de las Indias de Nueva España e islas de tierra firme", refers to the usage of headdresses ornamented with shells and of necklaces made of small univalves and bivalves (ibid, 1985b: 264, 265). In the "Crónica Mexicana" of the Ramirez Codex, warriors are wearing shells that

rattled in order to frighten their enemies (Tezozomoc, 1980: 312).

## 2. POTTERY REPRESENTATIONS

**OCCIDENTE.** At Las Peñitas, a mound northwest of Tepic (von Winning, 1956: 161) three round hand-modelled conch shells of clay, 3.- to 5.- cm in length, were found in a burial. One is slightly flattened. All are brown, of a poorly fired paste. A white coat of paint has been laid over the exterior. The contours are incised and painted red with fugitive pigments. Six large "ollas" were located in the same burial, placed in a semi-circular position below the surface of the mound. Inside one of these "ollas" human bones were found, in association with an alabaster effigy vase and twenty copper bells. A number of pottery vessels were placed haphazardly between the "ollas". Unfortunately, the location of the clay conch shells has not been indicated by the author. According to von Winning (1962), the characteristics of the Peñitas collection bear analogies with the Aztatlán complex, Sinaloa. Small clay shells have not been reported from any other areas of the Occidente.

**CENTRAL MEXICO.** Pottery representations of univalves are not uncommon in middle and late Classic Teotihuacán, where they were used mainly as attachments on pottery vessels. Among the small clay objects known as "adornos" which have served as appliqués on vessels and incense burners at Teotihuacán, representations of shells are remarkable for their variety in form. They were made during the late Tlamimilolpa through late Xolalpan phases (ca. 400-650), and possibly into Terminal Classic Metepec phase (Kolb, 1987: 39). Univalves and bivalves were represented, either on their own or both making part of the same element of decoration. Some ceramic "adornos" have been identified as *Strombus* and *Turbinella* (ibid: 42). They were cast from molds, as can be deduced from some pottery molds found and from the fact that so many of them are identical. After firing the shells were painted. Red and yellow predominate, blue, green and white appear less frequently. In some instances, the lower part of the shell is painted red, while the upper part is yellow. Von Winning (1949: 127) believes that there was no consistency in the way colours were applied. These shell ornaments were attached to the vessels and incense burners after firing by means of bits of clay. Gamio (1922: 200) has noted the similarities of shells between the stone sculptures on the Pyramid of *Quetzalcoatl* in Teotihuacán and the small clay ornaments. While the biological species are imports from coastal areas, the clay imitations were made by the people of Teotihuacán (von Winning, 1949: 141). Similar applied moldmade "adornos" were also found on

several censer fragments discovered in the underwater deposits of Lake Amatitlán, at Lavaderos and Agua Caliente (de Borhegyi, 1966: 363).

**NORTH AMERICA.** For the Southwest, Fewkes reports clay imitations of *Olivella* and *Conus* shells at the Peabody Museum and several instances of wooden models of these same species (Tower, 1945: 27)

Representations of small unmodified univalves also appear as ornaments in small clay figurines. In the Occidente, their use as a body ornament, e.g. as a component of an armband and of a belt, is shown in Figs. 260 and 261. In Teotihuacán figurines, *Oliva* shells form part of a necklace, or are suspended from it (Séjourné, 1966: 158, Fig. 111 a, row 6:1). *Oliva* shells also appear as belts, strung together around the waist, on the anthropomorphic burial urns of Monte Albán (Eisleb, 1983: 65), and on figurines of Classic Veracruz (Denver Art Museum, Denver, No. 1965.203/ Rijksmuseum voor Volkerkunde, Leiden, No. 3697/3). One of the few representation of univalves used for the decoration of a headdress comes from a ceramic head of Classic Veracruz, of nearly life-size, wearing an elaborate headdress made of small and large elongated univalves (Denver Art Museum, No. 1965.208). The last two examples illustrate the use of some species as tinklers.

Clay models of shells were also commonly used as whistles, flutes and ocarinas in Western South America, as in Mexico, and some of these seem to have been designed to be played always in pairs (Furst, 1965a: 29).

### 3. MURALS

In the Occidente, there are no mural paintings, but representations of unmodified univalves and bivalves, either on their own or together, can be found in other areas of Mesoamerica. The biological identification of some of the species has been made possible due to the biological characteristics of some gastropods, such as the shape of the spire and of the body whorl, or the representation of nodules. In Cacaxtla, specimens of *O. porphyria* (x6), *Astrea olivacea* (x1), *Astrea brevispina* (x2) and *Cypraeacassis tenuis* (x1) are illustrated, in association with other marine shells and aquatic animals, in the freezes surrounding the murals of the "Eagle Lord" and of the "Jaguar Lord", Structure A, South and North porticos respectively (Polaco, 1986: Pls. 11, 18, 20). The living organism can be seen coming out of the shell of the two *Astrea* species. They all are Pacific species



(ibid: 532). The murals date from the period AD 700-900 (Mc Vicker, 1985). In Teotihuacán, such occurrences can be found in the Painted Patio at the urban residence at Atetelco, which includes a mural depicting *Oliva* shells, in association with other univalves and bivalves (Kolb, 1987: 29); in a mural painting of Room 13, Zone 2, of the Palace of the Jaguar, where the shape and the design of *OLiva* shells are naturalistically represented (Miller, 1973: Fig. 61); in Tetitla, Portico 1, Murals 1 and 2, and Room 1, Mural 4, with stylised representations. In this last example, the shells are seen hanging like drops from one side of a rectangular-shaped design. In all instances, the association of the shells with the water element can be accepted.

#### 4. STONE

Occurrences of stone representations of unmodified univalves are unknown in the Occidente. However, they often appear on high relief compositions of Maya monuments, usually worn as body ornaments. Boekelman (1935) has identified *O. porphyria* on ornamental girdles on four Copán stelae and one from Quiriguá. Moholy-Nagy (1963: 78) points out several representations of this shell on Tikal stelae of the late Classic period, where the natural shell is also found (Andrews, 1969: 43). These are perforated at the apex and shown attached in groups to the belts of the figures on Stelae 5, 20, 21 and 22, as well as on the lintel of Temple III. The figure on Piedras Negras, Stela 7, wears a fringe of these objects on his skirt. They are also illustrated in Seibal, Stela 12, Naranjo, Stela 7 and 8 and Yaxchilán, Lintel 42 (W. Coe, 1959: 57).

The individual species mentioned above probably did not have any distinct symbolic significance of their own. They were all associated with the sea and rain, growth and fertility, and share the same symbolism attached to all marine molluscs. Their association with the water element is obvious and is backed by their relationship with water in murals. In the Florentine Codex, for instance, *Oliva* shells are associated with the water (Suarez, 1985a: 14). Fearer Safer & al (1982: 155) comment that at all times Mexico's farming peoples have relied on the "magic of sound" to bring rain, and they quote an ancient chant to *Tlaloc*, the rain god:

All day long we have made rain  
In the courtyard of the temple.  
With the little mist rattles we have  
Called to the water in the paradise of *Tlaloc*

In the iconography of the Zapotec people of Oaxaca, *Olive* shell rattles are among the symbols associated with *Cocijo*, god of rain,

and *Xipetótec* , god of spring. On funerary urns representing these deities, all identifiable symbols on images of *Cocijo* , and many of *Xipetótec* , with *Oliva* shells hanging from his belt refer to rain or water (ibid: 153, 154).

## II. Univalves "Size b" (1.1.A.2./ 1.1.B.)

The basic information on this group is provided in Tables 2, 3 and 4 (pp. 154-162). Unfortunately, these data are vague, or incomplete, in many reports. The information referring to the species, the modifications and holes, the decoration of the shells and their context, is often ignored.

### SPECIES/ FAUNAL PROVINCES

The number of each species found in any individual context seems to be usually one, and sometimes two, at a time. Because of the lack of information for many of the sites, it is impossible to provide the total number of univalves found in any individual context, but this was most likely relatively low. This is probably explained by the scarcity of the material, considered as a highly valued commodity. There is however one exception, Las Cebollas, where 125 univalves were found in the same context.

In the Occidente, the species used for the manufacture of univalves, "Size b", with or without modification or decoration, belong to five main families: the *Fascioliidae* family, the *Strombidae* family, the *Turbinellidae* family, the *Tonnidae* family and the *Muricidae* family.

A. *Fascioliidae* family. Of the several species included in this family, only two seem to have been collected for manufacture in Western Mexico.

The *Fasciolaria (Pleuropoca) princeps* Sowerby, 1825, or **Panama Horse Conch**. This is one of the largest of the Panamic province gastropods, measuring from 15.- to 22.50 cm. They can be found from the Gulf of California to Peru, and live offshore (Keen, 1971: 611).

Occidente: seven occurrences (\*) of this species, all (when the information is available in the literature) with the apex removed: Barra de Navidad, Lake Chapala, San Sebastian, Apatzingán, San

Gregorio, Zamora and Zuruamato.

Other areas: Kaminaljuyu and Teotihuacán.

A twin species, the *Fasciolaria (Pleuroploca) gigantea* Kiener, 1840, or the Florida Horse Conch, can be found from the southeast United States to the northeast of Mexico.

Occidente: there is only one occurrence (\*), in the Tepaltepec Basin, with the apex removed.

Other areas: this species has several occurrences in the Maya area (Altar de Sacrificios and Mayapán). In addition to those mentioned in Table 3, Andrews (1969: 16) reports of various specimens located in an Isla Cancún midden (84 unworked, Formative), Barton Ramie (1 unworked, in mixed debris), Tikal (34 unmodified), Uaxactún (1 with apex removed), Dzibilchaltún (25 unworked and 4 cut, preparatory to further manufacture; Formative to Pure Florescent), Chichen Itza (1 juvenile), Mayapán (1 with apex removed and 1 unworked, probably Decadent period) and Kaminaljuyu. Further occurrences: Teotihuacán and Monte Albán, modified and unmodified specimens respectively.

This species was reputed to be the symbol of the Aztec moon deity *Tecciztecatl*, the Mexican Moon God (Linné, 1942: 151). This appears either on the brow of the god or at the back of the neck. In all the representations in the codices, this species is easily identifiable (Suarez, 1981:31).

Other *Fascioliidae* found in Maya area: *F. hunteria* Perry, *F. tulipa* Linné, *F. Latirus ceratus* Wood and *Latirus infundibulum* Gmelin (Andrews, 1969: 15). There is no occurrence of *Fasciolaria* sp. in North America (Table 4).

B. *Strombidae* family. Most *Strombus* sp. live close to the shore, and inhabit only tropical waters (Paulsen, 1974: 597). Five species have been used in the Occidente.

The *Strombus galeatus* Swainson, 1823, or the Giant Eastern Pacific Conch, a Pacific species. It is probably the heaviest shelled, and one of the largest West American gastropods, and can measure up to 19.-cm in length. Because of its large size, the animal is a favoured source of food among the Mexicans, and large heaps of the shell can be seen along the Gulf of California coast (Keen, 1971: 421). They

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(\*) The figure mentioned is based on the number of sites where a specific species has been found, and not on the total number of species found in all these sites. The latter information is not provided in all the reports.

are easily recognisable because they have no nodules around the spire and the body whorl.

Occidente: one occurrence in archaeological context, in Playa del Tesoro/Las Hadas; the specimens in Figs. 8, 20, 26 are made from this species.

Other areas: Teotihuacán, Casas Grandes, El Infiernillo and San José Mogote, in the latter three instances with the apex removed. In addition, Chavez (1969: 220) has reported it in Chiapa de Corzo, and Pires-Ferreira (1978: 89) in Tierras Largas and Laguna Zope (Formative). This species seems to have been used quite frequently in North America in Postclassic times where six occurrences have been located (Table 4): Cheylon, Gila Pueblo, Hemenway, Los Muertos, Pueblo Bonito and Snaketown. In addition, Fewkes reports one specimen in Little Colorado Ruins (Haury, 1945: 159).

The *Strombus gigas* Linné, 1758, or the **Pink Conch**. It is a Caribbean species, which can be found from Bermuda to the West Indies, through the Gulf of Campeche and the Caribbean shores of Central America. This species, together with the *S. galeatus*, is the largest conch. It can measure up to 20.- cm in length and lives on sand, in the littoral and offshore (Abbot & Dance, 1986: 75).

Occidente: five occurrences of this species with the apex removed (Las Hadas, San Sebastian, Chupicuaro, Las Cebollas and Ixtlán del Rio); one occurrence with no modifications (Apatzingán); one occurrence with no information on modifications (Sayula); and three occurrences where the species has not been specified (El Otero, Tepaltepec Basin and Tingambato).

Other areas: Mayapán, with or without modification, Templo Mayor and El Infiernillo, with the apex removed. In addition, Andrews (1969: 9) and Kolb (1987: 95) report this species in the Maya area in the following sites: Barton Ramie (Classic & Postclassic), Tikal (1 specimen unworked, undated), Uaxactún (5 specimens with body whorl removed, Classic) and Chiapa de Corzo. In North America (Table 4), this species has been located in the Grand River Reserve, with the apex removed.

The *Strombus gracilior* Sowerby 1825, or the **Eastern Pacific Fighting Conch**, a Pacific species found from the Gulf of California to Peru. It is a smaller shell than the *S. gigas*, averaging 8.- cm in length, which lives on sand flats and on muddy lagoons, offshore in depths to 45 m. A closely similar species in the Atlantic is the *S. pugilis* Linnaeus, 1758 (Keen, 1971: 420).

Occidente: two occurrences, without modifications, in Barra de Navidad and San Sebastian.

Other areas: no occurrences in Mesoamerica. In North America (Table 4), this species has been found in Gila Pueblo and in Tseh So, both occurrences with the apex removed.

The *Strombus granulatus* Swainson 1822, or the **Granulated Conch**, a small Pacific species living on exposed beaches of rock and sand, but mostly offshore, in depths of up to 75 m, from the northern end of the Gulf of California to Ecuador (Keen, 1971: 421).

Occidente: one occurrence only, in Yurécuaro, with no information on the modifications.

Other areas: no occurrences.

The *Strombus (Tricornus) peruvianus* Swainson, 1823, or the **Peruvian Conch**, a Pacific species, which lives below low-tide line from the northern end of the Gulf of California to Ecuador. Although it is not as large or heavy a shell as *S. galeatus*, it may reach a length of 15.- cm or more ( Keen, 1971: 421).

Occidente: two occurrences, in San Sebastian and Las Cebollas, with the apex removed.

Other areas: no occurrences.

The *Strombus pugilis* Linné 1758 or the **West Indian Fighting Conch**, a Caribbean shell, although common in other areas of Mesoamerica, has not been found in the Occidente.

*Strombus* sp. have also been used throughout South America, e.g. in Peru, where there are still used nowadays. Tello (1937) has reported that the *Strombus* trumpet was important as early as in Cupisnique-Chavín times.

c. Turbinellidae family (also called *Xancidae* ). Only one species of this family has been used in Western Mexico, the *Turbinella angulatus* Solander, 1786, or the **West Indian Chank**, a Caribbean species, which can be found from eastern Mexico to Panama. They live on sandy bottoms and on offshore atolls (Polaco, 1986). Adult specimens can measure up to 20.- cm in length (Abbott & Dance, 1986: 210).

Occidente: three occurrences with the apex removed (San Sebastian, San Gregorio, Las Cebollas) and two with no information on the modifications (la Eztanzuela and San Aparicio).

Other areas: Altar de Sacrificios, Dzibilchaltún, Tikal, Templo Mayor, Teotihuacán, where it was a prominent species, and El

Infiernillo, all with the apex removed. In addition, Andrews (1969: 16) has reported occurrences of this species in the following sites in the Maya area: Dzibilchaltún (1 with apex removed, Formative cache), Holmul (1 with apex removed), Tikal (2 with apex removed, undated), Uaxactún (1 unworked specimen). There is no occurrence of *Turbinella* sp. in North America (Table 4).

D. Tonnidae family. The identification of some of these shells is not easy. They are almost exclusively tropical and prefer to live in deeper water. These shells can measure an average of 10.- to 18.- cm in length (Abbot & Dance, 1986: 117).

Occidente: one specimen only, with no modification, from El Otero. The species has not been identified.

Other areas: Lubaantún, Piedras Negras (not certain), both with circular holes, and El Infiernillo, with the columella removed.

E. Muricidae family. Although these species are smaller than 0.80 cm in length, they are included in "Size b" because of their use as trumpets. They are characterised by short and stubby spines, and a long and thin canal.

The *M. (Murex) recurvirostris* Broderip, 1833, or the **Bent-beak Murex**, a Pacific species inhabiting the West Mexican coast (Keen, 1971: 514) is the only species mentioned in the literature.

Occidente: San Sebastian, with one hole drilled next to the edge of the lip and Cuitzeo (no genus mentioned).

Other areas: El Infiernillo, with the apex removed. *Murex* sp. have been located in the Maya area (Andrews, 1969: 13) and in North America, in Los Muertos, Pueblo Bonito and Waputkin, all the latter with the apex removed.

Some species, like the *Ml. melongena* Linné, 1785, an Atlantic species, and the *Ml. patula* Broderip and Sowerby, 1829, a similar species from the Pacific, do not seem to have been used in the Occidente, in spite of their availability on the nearby coasts.

This raises the question of why some species have not been used in the manufacture of shell trumpets, when they were probably fairly easily available on the nearby coasts. There seems to have been a preference for a rather limited range of species. These same species were also used for the manufacture of other types of artifacts, such as Reshaped Pieces (Group II).

Furst (1966:158) suggests that different species might have symbolised different deities. It would seem however that the *Fasciolarias* and *Turbinellas*, whose difference was not recognised by the Teotihuacanos, were associated with the same deity. And perhaps by the West Mexicans too, as trumpets from Western Mexico are often "decorated in a style similar to that of Teotihuacán" (ibid: 157), but this statement applies to the decoration of few pieces only (Fig. 22). Those western shells in this style which can be dated are approximately contemporaneous with those of the same period at Teotihuacán and may demonstrate Teotihuacán influence in Western Mexico (Taylor, 1966: Appendix II-A).

Andrews (1969: 45, 60-61), however, reports a change in the use of some species for the Maya area. He includes in his study molluscs used for food and for the purpose of manufacture. He points out that *Spondylus*, for instance, was not common in Formative deposits, but became more so in Classic times. His example, unfortunately, refers only to bivalves. Moholy-Nagy (1963) makes another chronological observation, based on Tikal. She believes that the early Classic period was the time of the greatest importation of Pacific species, and she speculates that this may have been related to the Teotihuacán influence and trading pattern. She believes that with the late Classic the Atlantic species dominated. Unfortunately, it is not possible to make such observations for the utilisation of species in the Occidente, due in part to the scarcity of raw material found in the area.

In conclusion, it can be said that the source of the raw material seems to be both the Pacific and the Atlantic faunal provinces. Some species, like the *F. princeps*, the *S. gigas* and the *T. angulatus* have had a wider usage and distribution in the Occidente than others. In inland sites, this can be explained by the availability of the raw material, as a result of trade contacts, probably indirectly with the Atlantic coasts, rather to any other reasons, as suggested by Furst, mentioned previously. But in sites like Comalá, Las Hadas and Barra de Navidad, the presence of Atlantic species (e.g. *T. angulatus* or the *S. gigas*), where local ones are available, can only be explained by: a) some religious significance attributed to these species; b) the prestige linked to "foreign" goods; c) the fact that some species were easier to modify and reshape than others. This, in turn, probably created a demand for these commodities.

## MANUFACTURE

All the specimens included in Tables 2, 3 and 4 and in the Classification, except for the one in Fig. 8, have had the periostracum removed. The surface of the shell was smoothed by grinding and was then polished, sometimes for the purpose of decoration.

**HOLES.** Most of the specimens have holes for suspension, with a diameter ranging from .09 cm to .02 cm. Two types of holes can be taken into consideration: the functional holes (a), referred to as suspension holes, and the non-functional holes (b), for the purpose of decoration.

a. The positions of these holes varies according to the pieces concerned, and are located as follows:

- Two or more holes are perforated along the edge of the outer lip of the univalve. The *S. peruvianus* from Tomatlán has four holes along the lip (Mountjoy, 1982: 323).
- One hole perforated on the siphonal canal (Figs. 20 and 26, both *S. galeatus*, and several Maya specimens of *F. princeps* ).

The two types of placements of holes, however, can be found on the same piece (Fig. 23). These holes were a device of attachment or suspension, usually through the lip of the univalve, by means of a string. Various ceramic figurines from Western Mexico are shown wearing suspended or attached trumpets on their backs (Fig. 270). In other areas, examples of shell trumpets used with straps include a specimen from the Cañete Valley, Peru (Furst, 1965a: Fig. 6) and those depicted in Moche pottery.

b. One or several holes have been cut through around the spire (Fig. 271) or other part of the surface of the univalve, such as the dorsum (Fig. 23). Their function might have been to modify the sound of the instrument, or for decorative purposes. According to Furst (1966: 94) the holes, apart from their use for the attachment of carrying straps, could have been a device for the suspension of ceremonial objects such as feathers or small shells. The latter custom is known ethnographically from the Sierra Nevada de Santa Marta in Colombia, where the Ica attach small *Olivella* shells to trumpets used in solar rituals (Bolinder, 1925: 78). A single small *Olivella* with a drill hole was found in association with a conch shell in the north chamber (Las Cebollas, Tomb I) but this, of course, need not indicate that it was so used (Furst, 1966: 95).

Some specimens however, have no holes for hanging.

**MODIFICATIONS.** All the types of modifications have been dealt with



in the Classification (1.1.A.2.). As for the Automorphic pieces, "Size a", it seems that the different types of modifications, and the absence or presence of holes, were not related to any genera in particular. There is one exception, however: the *Tonna* species, which do not seem to have had the apex removed. This can be explained by the fact that, even with the removal of the apex, these pieces could not have been used as trumpets.

**DECORATION.** No pattern seems to emerge: univalves with or without apex, whatever their function, either went through the process of decoration or were left with their natural surface. This decoration consisted of two stages: the alteration of the surface of the material, either incised, excised, or in high relief, and the painting. In some instances, only the first stage was performed. It seems however that the decoration might have been associated with the use and symbolic significance of the univalve. Unfortunately, it is difficult to associate the decoration with any specific deity, and such exceptions are rare (Fig. 16).

I believe that most specimens were painted. The painting could be applied to a surface which had been altered: in Las Cebollas, one shell bears traces of green and yellow fresco paint in combination with an incised pattern (Furst, 1966: 95). And in Zuruamato (Fig. 14), a residue of green stucco can be seen over the incised pattern (Irwin & von Winning, 1974). Or it could be applied to a non-altered surface: in San Sebastian, four specimens with no other means of decoration retain traces of yellow-brown coating (Long, 1966: 217-8-9). Where the painting covers the whole surface of the shell (Figs. 20, 26), it is however difficult to determine whether the shell had gone through the first process of decoration.

The techniques of painting differed, according to the cultural area and the period the piece belongs to. It seems that in the Occidente the technique of "cloisonné" was often used, e.g. specimens in Fig. 26 and from the Chapala area. The same technique of decoration is found in Casas Grandes, where a circle of "cloisonné" has been painted on one specimen (Di Peso, 1974: 515).

In Teotihuacán, specimens painted in fresco decoration (Séjourné, 1957: Fig 51) and in red and green stucco (Kidder & al:1946: 147) with hair thin black line work - a technique which flourished in this site and other areas of Mesoamerica during the Classic period and later (von Winning, 1974) - has been reported. This technique has also been used in El Otero (Fig. 26).

Unfortunately the technique of painting is not mentioned in most site reports, but the colours which prevailed were: a) red, in Cuitzeo (remains of red stucco/ Macias Goytia, pers. comm.), Monte Alban (Caso, 1969: 161), Tikal (Ricketson & al, 1937: 202) and Uaxactún (Kidder, 1947: Fig. 48); b) blue and black, in a cache of the Templo Mayor, where two specimens painted in blue with black lines were found in a stone box, also painted in blue (Castillo & al, 1975: Pl. XLIX). These two colours, both associated with water and *Tlaloc*, emphasise again the symbolic identification between shell and water (Nagao, 1985: 54).

Illustrations of painted shell trumpets can be found in the Florentine Codex (Anderson & al, 1970: Ill. 28), where two musicians are blowing into two stylised shell trumpets, decorated with painted stripes (Suarez, 1985a: 11).

In addition, some pieces were probably decorated with other materials. These could be inlays set into the surface of the shell. In Kaminaljuyu, for instance, traces of dark adhesive have been found on the surface of a decorated shell. The author suggests that they may formerly have held inlays, perhaps organic (Kidder & al, 1946: 147). Inlays or other materials could have been used also for the decoration of the holes (Fig. 12) and of the aperture of the apex, as mentioned before.

## CONTEXT

In the Occidente, all the material comes from burial contexts. In four instances, San Marcos, San Sebastian, El Otero and Las Cebollas, these are found in shaft tombs. In other sites, the trumpets come from a context related to the shaft tombs complex, e.g. Cerro Encantado (Bell, 1972: 1238).

In other parts of Mesoamerica, univalves have been located in burials, in ceremonial contexts, as in Central Mexico and in the Maya area, and more exceptionally in domestic ones. The latter has only been reported for San José Mogote, some house compounds in Teotihuacán (where these finds might have been related to a ceremonial context within the compound), Mayapán, and Casas Grandes, where very few trumpets were found in ceremonial contexts. Most of them were found in "profane architecture" (Di Peso, 1974: 515).

The univalves were deposited in the tombs with the dead as part of

the ritual inventory (Porter Weaver, 1981: 123). The placement of objects within the burial was clearly premeditated, although the symbolic meaning behind the artifacts, including their arrangement, remains undeciphered.

In San Sebastian, Tomb I, for instance, two shell trumpets were found in the same chamber next to two male skeletons (No. 1 and 5), in association with male ceramic figurines and an *atlatl*. Both interments were probably done with a time gap of about 200 hundred years (Long, 1966: 41). Associations of trumpets with figurines are also found in San Marcos and in Tingambato. In Apatzingán, a decorated shell trumpet was found on the chest of a skeleton (the sex is not mentioned by the author). The piece was scattered with slate disk beads (Kelly, 1947: 119). In Placeres de Oro, two unmodified pieces were found in a burial in association with fragmentary human bones and teeth, two table urns, one metate, one jadeite pendant and other worked shell elements. They showed no sign of use (Spinden, 1911: 41). And in Pueblo Bonito, New Mexico, 12 *S. galeatus*, cracked in use and with signs of repair, were found associated with a human skeleton and bracelets (Jackson, 1917: 49).

In some instances, these pieces, whether functioning as trumpets or not, were used as containers for depositing offerings. In Las Cebollas, forty six small tubular beads were found impacted in the soil inside one of the *Turbinella* trumpets (Furst, 1966: 96), and two small shell rings together with two ornaments of unknown significance were found inside another specimen (ibid: 97).

## DATES

We do not know how far back in time the use of conch shells as trumpets in the Occidente goes, as we do not have any early examples. As Furst (1965a: 29) points out "we cannot tell whether the conch shell was 'invented', in the sense that someone deliberately set about experimenting with a conch shell to determine if it might be made to serve as an instrument, or whether its use as a trumpet was discovered by accident". In addition, he points out that "conch shell trumpets represented an important object of trade as from the Formative period" (ibid: 30). This is backed up by the fact that they were found in Formative contexts in several sites, for instance in the Maya area (Dzibilchaltún) and in San José Mogote.

In the Occidente, the earliest examples date back to the late

Formative (San Marcos, San Sebastian, Tomatlán) and can be found up to the early Postclassic (Tingambato and Ixtlán del Río). Based on the evidence of the historical accounts, mentioned later in this chapter, and on that from other sites in Mesoamerica, it is right to assume that they were used up to conquest time, and probably later. All the specimens from North America belong to a Postclassic tradition.

Since most of the pieces do not come from any archaeological context, their age must be determined by stylistic comparisons with analogous dated specimens from other sites.

## FUNCTION

The function of these univalves, either with the "apex removed" (1.1.B.1.) or with the "apex not removed" (1.1.B.2.), was ritual. The latter category includes all the symbolic pieces, with no utilitarian use, linked with a ceremonial context. Unfortunately, little information is available for interpreting the use of such pieces.

Most of the specimens included in 1.1.B.1., together with some non-decorated ones (Figs. 9, 13) had an utilitarian function as trumpets. In addition, they were related to symbolic attributes connected with a specific deity (see "Historical accounts" below). In the Aztec world, they were associated with social and religious ceremonies, e.g. at midnight, when the priests rose to mortify themselves (Seler, 1902-3: 226), and were part of the priestly paraphernalia. They were used during rites of passage such as mortuary rituals (Furst, 1966: 27), in funeral ceremonies (Marti, 1968: 67), in the ball game (Durán, 1971: 313) and to awake people before ceremonies (ibid: 83). They also had a role to play in warfare: a ceramic vessel from Western Mexico shows an individual standing at the top of a slope with a shell trumpet in his hand, while warriors stand on the slopes (von Winning & al, 1968). In the Occidente, trumpets probably played a rôle in shamanistic behaviour and were part of the shaman's paraphernalia: in many societies shamans may well have functioned as war leaders because of their possession of spiritual power and authority in the social structure.

Even its use in war, both in Mesoamerica and South America, is certainly not unrelated to ritual and magic, in view of the ceremonial and ritual aspects of much of Indian warfare (Seler, 1960 n: Vol. 2, 613).

In addition, conch shells were considered as funeral offerings, as in the burials and shaft tombs of the Occidente, and as heirlooms (Kolb, 1987: 102).

Shell trumpets are, strictly speaking, one-note instruments, producing only one uniform sound. The acoustics of the conch have been little studied, and there is a good deal of uncertainty about their behaviour. Strictly speaking, a conch trumpet is a cone-shaped tube, closely coiled like a spiral. The air blown into the trumpet goes through the space in between the inner wall which forms the central columella, which is all-but a straight line, and the outside wall, which is concave and a great deal longer. Montagu (1981: 274) suggests that "the fact that in New Guinea a straight bamboo tube is used as a conch substitute and produces a sound similar to that of a conch suggests that the vibrations of the air in a conch may possibly be transmitted through the wall from one whorl to the next, rather than along the air column, and that it may in fact function as a simple vessel trumpet rather than as a coiled tube".

Before being used as a trumpet, some modifications had to be made to the shell. In all the specimens included in 1.1.B.1, the apex of the spire was removed by grinding, and the resulting orifice was usually smoothed. Conch shells become trumpets only when a blow hole is made through the apex. Its removal was a necessary step in testing for the quality of the sound, and was certainly carried out in the place of manufacture, or workshop.

This sounding orifice formed a simple but efficient mouthpiece. The sound could be varied in intensity either by controlling the quantity of air blown in, or by covering up part of the aperture or apex. Di Peso (1974: 515) suggests that they could probably produce basic natural tones and overtones by tightening the lips in the appropriate way. Durán (1971: 495) reports their "abominable, dismal sound".

There seem to have been two major devices for modifying the sound: the use of mouthpieces and the perforation of small holes.

a. Special mouthpieces are known to have been fitted through the opening of the modified spire. According to Caso (1969:160), they were cylindrical in shape and probably made out of wood, clay or bone. This device is illustrated in Teotihuacán. In the murals of the "Templo de las Mariposas", two jaguars with plumed headdresses are seen blowing decorated conch shells with rimmed, tubular mouthpieces. Rain is shown falling in large drops from the shells (Bernal, 1963: 36-37). Fragments of similar mouthpieces have been found in situ (Marti, 1968: 70). In the "Templo de los Caracoles Emplumados", stone reliefs of four-foot-high conch shell trumpets with mouthpieces are visible (Miller 1973: 50, Figs. 24, 26). The use

of mouthpieces seems to have spread to the United States: in Pueblo Bonito, New Mexico, several trumpets had mouthpieces made of clay (Pepper, 1920: 69). All the shell trumpets, however, were probably not used with a mouthpiece, as most representations of musicians blowing into a shell trumpet show them applying their lips directly to the apex of the instrument (Codex Magliabechiano. Nuttall, 1903: Fig. 35).

b. Marti (1968) suggests that some of the holes drilled through the surface of the univalve might have been used for modifying the sound. Montagu (1981: 274) reports the use of conch trumpets (*Bursa bubo* Lamark) in Fiji, where a finger-hole has been pierced in the parietal wall for producing two fixed pitches. This might explain the drilling of the eight small circular holes around the apex and of the two holes on the parietal wall of the specimen in Fig. 277, from the Gulf Coast. This specimen has no holes for hanging. It is doubtful however that the holes in Figs. 12, 19 and 25 were made for this purpose.

The linking of two shells, one with a higher and the other with a lower tone, has been reported by Furst (1965a: 29). This use can be seen in pottery representations of a joined pair of musicians blowing into a shell trumpet, from Colima (Fig. 268/ von Winning, 1974: Fig. 41). The two trumpets seem to belong to the same species, and it is therefore debatable whether they could produce different sounds. The custom of paired instruments is documented for trumpets in Mesoamerica in murals, in codices and on pottery. In the Cañada del Diablo, near the Valle de Bravo in the State of Mexico, a sacrificial scene on a mural dating to Toltec times shows a pair of players blowing on trumpets and flanking a third man with a conch shell trumpet (Marti, 1955: 60). Illustrations of this ritual custom (which the Spaniards called "trompetas gemelas") may be found in Sahagún (Anderson & al, 1970: Ill. 28). One of these shows two men blowing on two straight trumpets, the instruments crossing over each other; another depicts two players blowing conch shells while standing in a canoe.

The dual role of shell trumpets, and their association with *Tlaloc*, is illustrated in the Tetitla murals where two shell trumpets with mouth pieces surround the image of *Tlaloc*. In the same compound, *Tlaloc* is surrounded by two conch shells belonging to another species from which a human head is coming out (Séjourné, 1966: Figs. 152, 143). This double usage is also illustrated in the "Relación de Michoacán", where a group of two musicians are seen blowing into

two conch shells during the funeral ceremony of a Tarascan ruler (see reference below).

Different types of sounds, however, could have been produced by different species. According to Di Peso (1974: 515), the trumpets made out of *Ml. patula* and *Mu. nigritus* produced high pitched tones which were quite unlike the deep, loud sounds of those made out of *S. galeatus*.

These univalves could have a double use as musical instruments, for the obtention of two different sounds: they could be used as a trumpet and as a rasp, with incised with parallel notches or dentate edges to produce a rasp sound (Fig. 13).

However, as Feldman (1968: 166) points out, the removal of the tip of the apex does not always imply the use of the univalve as trumpet. In some cases, only a very small section of the apex was removed, barely sufficient to permit the passage of air. The *T. angulatus* and one of the *F. princeps / gigantea* in the San Gregorio collection were cut up in such a manner that they would have been impossible to blow. The same criterion applies to a few specimens found in Las Cebollas (Furst, 1966: 95) and to the one from Michoacán (Fig. 23). The orifice created by the removal of the tip of the apex might have been used for the inlay of another material, like stones or feathers. Kidder and Smith (1951:42) describe a specimen found in Nebaj, where the tip of the apex had been removed, suggesting that the cup-shaped hollow had been used for an inlay. In the "Templo de los Caracoles Emplumados" of Teotihuacán mentioned above, the shell trumpets display feathers inserted in the aperture of the apex (Miller 1973: 50, Figs. 24, 26).

In Central Mexico, they were called *tecciztli* by the Aztecs (Seler, 1963: Pl. 53.18). The importance of the use of conch shells as musical instruments and as symbolic pieces is clear not only from the frequency of their appearance in the codices and from ethnographical examples, but also from illustrations of pottery representations of univalves and pottery figurines, and from the representation of univalves in murals and in stone. Unfortunately little information is provided by the archaeological records, apart from the fact that these pieces were high status commodities, accompanying the deceased in the burial.

## 1. HISTORICAL ACCOUNTS

These illustrations provide the best information referring to the use of conch shells as musical instruments and of their association with Mesoamerican deities. Unfortunately, they lack references concerning the type of species used. However Suarez (1989: 35) has identified *Strombus* and *Fasciolaria* species in the Florentine Codex. This is based on the characteristics of some parts of the gastropods, such as the aperture of the lip or the shape of their spire, which makes their identification possible.

**OCCIDENTE.** In Michoacán, shell trumpets were blown at the funeral of Tarascan princes in the 16th. century. There is reference in the "Relación de Michoacán" to their use, together with that of elongated trumpets, or horns: one picture (Craine & Reindorp, 1970: Pl. 13) illustrates four musicians in paired groups, two of them blowing into shell trumpets, upon the burning of the body of a Tarascan *calzonci*, or ruler. The shell trumpets could possibly be *Turbinella* or *Fasciolaria* (Anonymous, 1903: 58, 61, 167). During the same ceremony, sea shells were placed in the tomb on the bundle of blankets containing the ashes of the Tarascan ruler.

In addition, Friar Ponce (1872: 13, 82, 114, 117, 119), in his inspection trips through the Occidente, was received in at least six towns, including Tzayula and Atoyaque, with the music of what seem to have been shell trumpets.

**CENTRAL MEXICO.** References to shell trumpets and to their association with specific deities are numerous in the historical documents. In the Codex Borbónico, a dignitary is seen blowing into a shell trumpet (Paso & Troncoso, 1988: Pl. 29). The same type of representation is illustrated in the Codex Bodley (Caso, 1960), in the Vindobonensis (J. Furst, 1978: Fig. 92) and in the Tovar Manuscript (Lafaye, 1972: Pl. XVI). Durán (1971: 87, 241, 451) refers to the use of shell trumpets in the ceremonies associated with several deities, such as *Huitzilopochtli* and *Tlaloc*, and in those taking place at dawn and at midday. The same use is referred to by Bernal Diaz (1908:16), in connection with their sounding as a preliminary to attack and by Muñoz Camargo (1948: 75) in his history of Tlaxcala, in association with *Camaxtli*.

Sahagún also refers to the shell trumpet, possibly a *Strombus*, among the musical instruments used by the Aztecs (Anderson & al, 1979: Ills. 70, 88). In Book I, he illustrates two musicians blowing into shell trumpets - probably *Fasciolaria Tulipa* - during a



sacrificial ceremony in front of the Temple of *Chalchiuhtlicue* for the feast of *Etzalcualiztli* (ibid, 1970: Ill. 28). According to him and to other sources, the ancient Mexicans held a special festival once or twice a year, on the day *Nahui Ollin* , in honour of *Tezcatlipoca* , Lord of the Night.

At noon on each of the four days preceding this festival, conch-shell were blown by the priests, whereupon everybody, great and small, old and young, gashed their tongues and ears, and presented their blood to the sun... The linking together of ear-piercing and the use of shell-trumpets is of considerable significance (from Jackson, 1917: 51).

Seler (1902-3:134) mentions again their use as a war signalling device in Mesoamerica, where various warrior cults, or "leagues", sounded them when preparing for battle. In his description of the Codex Vaticanus, reference is made to the blowing of shell-horns in the temples at midnight, as a signal for the priests to arise and mortify themselves, to sing, and then to go in procession to the bath.

In the same work and elsewhere, *mocauani* , the Fasting Man, Ruler of the Nineteenth Day-count *quiauitl* , or "Rain", is figured blowing a conch shell and associated with *Tonatiuh* , the Sun God. In sheet 22 of this same codex, *Tepeyollotli* , the Heart of the Mountains and God of the Caves, wears the shell-horn as a breast ornament and a second horn lies before him at the threshold of the temple. The same deity is illustrated in the Codex Borgia, where he is figured blowing the shell-horn (ibid, 1963: Pl. 14.VIII), and in the Codex Feyervary-Mayer, where he is seen wearing a shell trumpet on his chest. Another shell is represented in front of him, and according to Suarez (1981: 30) this suggests the use of the shell as a trumpet. An identical use of a conch-shell worn on the chest by a dignitary in a procession is seen in the Codex Selden and has been identified as a *Fasciolaria* (ibid: 30).

Other references to shell trumpets include, for instance, an illustration in the Codex Magliabecchiano, showing *Xochipilli* , the God of Flowers and Food Supplies, being carried in procession preceded by a priest blowing a conch-shell trumpet (Nuttall, 1903: Fig. 35). In the Codex Nuttall, *Xipetotec* (Suarez, 1989: 36) is seen holding a big univalve in his hand (Nuttall, 1975: 2).

It is however difficult to associate all the material of the Classification with a specific deity. The only specimens which can be connected with a specific one (Figs. 16, 20) have a direct association with *Tlaloc* and with the snake. It would be dangerous, at this stage, to make any further assumptions about the

representations on any other pieces.

Shell trumpets can also be associated with animals, e. g. the jaguar and the snake. In the *Tonalamatl* of Aubin, the association between jaguar and shell is represented as a personification of *Tepeyollotli* (Seler, 1902-3: 103). The jaguar is the dominant figure of the page, and carries a conch shell. The Codex Vaticanus illustrates the association of the conch shell with the snake (ibid: 66).

The shell was also brought into association with the water element, as has been mentioned before, with conception, pregnancy and birth and with the moon. As the interpreter of the Codex Telleriano-Remensis says: "así como sale del hueso el caracol, así sale el hombre del vientre de su madre" (Jackson, 1917: 50). In the Codex Borgia, a male representation is seen emerging from a conch shell, and again symbolises birth (Seler, 1902-3: Fig. 125; 40, 57). This same symbolic attribute of the conch shell is illustrated in the Codex Nuttall (Nuttall, 1975: 16), in which a yellow painted human figure is seen emerging from a conch shell. The Dresden Codex shows the snail associated with the gods of birth, i.e. the birth of a female child from a sea-shell (Gates, 1932: Ch. VIII, Sc. 58.37). Two figures of the association of the Moon God with the conch-shell can be seen in the same manuscript (Jackson, 1917: 60, 66). This seems to bear some relation to the ancient myth that Venus was born from the froth of the sea, within a shell (ibid: 55). The association of the conch shell with birth and the water can also be seen in representations of *Xólotl*, the dog deity: he is seen emerging from a conch shell - which symbolises the mother womb - in the water, where he was meant to be born (Suarez, 1981: 31).

As the emblem of the moon, the shell also appears with the figure of a man holding in his hand a blood-stained agave-leaf spike, emerging from the mouth - the God in the shell- which might have reference to the waters being pent up, or possibly to different phases of the moon. The moon god is thought by Seler to derive from the relation in which the moon stands towards women, to the influence it exercises on the body of women (ibid: 30).

**MAYA AREA.** Diego de Landa (Tozzer, 1941: note 407) lists shell trumpets among the musical instruments of the Yucatecan Maya. In the "Anales de los Cakchiqueles", León Portilla (1971: 458) reports of the use of shell trumpets during a battle of the Cakchiqueles against the Quichés. Shells were also deeply involved in Maya ideas of cosmogony. The Old God of the Maya is frequently depicted as

carrying a large conch on his back, and occasionally as emerging from one. The conch shell was not only the Maya symbol of birth, but also of the earth interior, of the underworld and the realm of the dead, of darkness and night (Andrews, 1969: 48). A representation of a shell added to the sun glyph converted it into a symbol for night (Moholy-Nagy, 1963: 71).

## 2. ETHNOGRAPHIC EXAMPLES

**OCCIDENTE.** We have only one illustration of the use of shell trumpets in this area. C. Lumholtz (1900: 185) gives us details of the use of a species of *Murex* (*M. nigritus*) as a trumpet at ceremonies and feasts, i. e. the feast of raw corn "tamales". Once a year the Huichol bring the shell trumpet out of its hiding place in a ceremonial centre. When the special "tamales" have been dedicated to the gods, the indians blow the *Murex* trumpet to signal the deities that the sacred feast is ready. To the Huichol the markings on the *Murex* shell symbolise water and kernels of corn, the two most important elements in their existence. After describing various other objects used at the feast of "tamales de maíz crudo", Lumholtz mentions that:

At the same feast, but only on the eastern side of the river, seashells (*Ku'ra*) are employed as a kind of musical instrument. When the heap of "tamales" is dedicated to the gods by the shamans, some of the people are appointed to blow into such shells five times in the daytime and five times at night. This is done as a signal to all the gods. After the feast the shells are carried to Mesa del Nayarit, where they remain through the wet season, to be afterwards brought back again for the next feast of the same kind. They are kept in the Mesa del Nayarit in a god-house. According to tradition, the Chichimecas brought them first from that part of the coast where San Blas is today.

Lumholtz was unable to procure any shell that had actually been used at the feast, but he found one in the god-house of the Sun (*Tayau*) in *Téaka'ta*, which, according to his informants, was smaller than those used. The species was *Murex (Phyllonobus) radix* Gmelin, from the South Pacific Ocean. In Huichol it is called *Ku'ra*. Much difficulty was experienced in buying the specimen. The man who had deposited it, and who was one of Lumholtz' party, at first absolutely refused to part with it: it remained for him a valuable prayer for life (ibid:186).

The use of univalves without modification of the spire (1.1.A.2 [c & e], 1.1.B. 2) is also illustrated in the Occidente. In the Huichol mythology, we find a direct reference to shells which involves an association between them and the Water Goddess *Keamukame*, the snake and the "peyote". During the times of the ancient *Párikuté*, the

chief of all the animals, the god of hunting, gave to somebody a closed *takwátsi* (a basket) urging him to take it to a house where a *Niwetari*, or sacred conch shell, could be found. He had to put the shell into the basket, without opening it. Full of curiosity, the messenger, who later was to become a *zopilote* (vulture), opened the basket, letting a scorpion escape. Very upset, *Párikuté* told the *zopilote* that from now on the unpredictable behaviour of the scorpion would affect everyone and that he would bite people without any justification. This was the reason why he had ordered to deposit it in the *Niwetari*, so that only *Parikuté*, in accordance with the orders given to him by the Father God, could tell the scorpion who should be attacked (Furst & al, 1972: 28). In addition, Olguin (1983: 243) refers to the relationship between the conch shell and *Tayaopa*, the snake, found in the Huichol mythology and in several religious ceremonies, and with the "peyote", during the pilgrimage of the peyote (ibid: 247).

**CENTRAL MEXICO.** The use of shell trumpets has been revived nowadays by a subgroup of the "Concheros", called the "Mexicas". They still make use of shell trumpets among other musical instruments used to accompany their dances (Susanna Rostas, pers. comm.).

**MAYA AREA.** Tozzer (1947: note 407) has reported the use of shell trumpets among the Lacandons of the Usumacinta Valley who used to call upon the gods with them.

**OTHER AREAS.** In the northern part of the Gran Chichimeca, they are called *tsu'thlan'na*, or "great shell", by the Western Pueblo inhabitants, and are used in the *Palülükoñi* and *Soyaluña* ceremonies which feature the great plumed serpent with hidden trumpeters imitating the roar of this mythical beast. Certain northern frontiersmen believed that these large univalves were "powerful medicine" and had to have special keepers to guard them and to blow them only on the proper occasion because, if blown without discretion, they could kill (Fewkes, 1896: 366/ Parsons, 1936: 297).

In North America, ethnographic examples are numerous in several areas. Shell trumpets are used among the Hopi of Arizona when singing a war song and when performing their Snake-Antelope ceremony (Parsons, 1936: 642-643). The Zuni use them when under attack (Boekelman, 1936: 27) and at the ceremony of the coming *Ko'loowisi*, the Plumed Serpent, when the priest constantly blows the Great Shell as the voice of the Serpent (Stevenson, 1901-2:

94-95). Fearer Safer & al (1982: 127) report that "one of the most powerful Zuni fetishes was the 'Big Shell', a white (unidentified) univalve shell that priests of Zuni's Big Shell Society blew as a trumpet and from which the priests derived their power".

### 3. POTTERY REPRESENTATIONS

Pottery representations of univalves can be divided into two categories: whole univalves and figurines.

3.1. **WHOLE UNIVALVES.** Numerous pottery models of shell trumpets, some of them illustrating Pacific coast varieties, such as the *Fascioliidae* sp., but others representing the Caribbean *Strombus gigas*, have been found in the Occidente and to a lesser extent in other parts of Mesoamerica. Most of these specimens are shown with their apices removed. By holding the top of the spire in the right hand and supporting the body whorl in the left, these reproductions of shell trumpets might have been blown from the hole in the apex (Furst, 1965a: 24). Unfortunately most of these pieces do not come from an archaeological context, and their provenance, except for that of their geographical area, is unknown. They can be divided into three groups.

A. Spouted gastropods. These can in turn be divided into two subgroups.

A.1. The pieces with the spout on the siphonal canal or on the spire. The specimen in Fig. 262, from the Occidente, has had the hole of the spire blocked up, thus not allowing any air through. The spout is located on the siphonal canal, and could have been used to blow the air into the instrument. Five similar pieces have been located. In all these examples the hole reproducing the aperture of the apex is wide and has been cut vertically to its edge.

A.2. The pieces with the spout on the dorsum, like the specimen in Fig. 263, from Colima. This piece, which could be used neither as a musical instrument nor as a container, probably belonged to the same tradition as the spouted vessels from Colima, illustrated by Gallagher (1983: Fig. 108).

In all these pieces, the nodules and the lip, where two holes have been perforated on each extremity, have been naturalistically represented. Some show striations along the lip, as in Figs. 262, 263, perpendicular to the edge, and could also have been used also as rasps. All are monochrome, either of a light cream colour (Fig. 262) or of a reddish-buff one, with a polished surface, and probably

belong to to the pottery tradition of Colima. They could be representations of the *Strombidae* family, most probably of *S. gigas*.

**B. Non-spouted gastropods.** The aperture of these pieces is located at the apex, and is usually narrower than in Group A. In some specimens the apex has not been cut (Fig. 264, from Colima). One or two holes have been perforated through the lip. Some pieces have no hole. Three other specimens have been located.

The shape of some specimens resembles that of the spouted gastropods included in the previous group, and some of those show striations along the lip. They are probably representations of the same species. Others have a more elongated shape (Fig. 264), and the nodules, if visible, are stylistically represented. Because of the outline of the body whorl and that of the lip, they could be representations either of the *Fascioliidae* family, possibly *F. princeps*, or of the *Turbinellidae* family, when the nodules are represented, possibly *T. angulatus*. Most of these pieces are monochrome, made either of a red earthenware, sometimes covered with a white slip, like most of the specimens from Colima, or of a cream one, from Jalisco.

Only one decorated piece (Fig. 265/ Group A.1) has been located, from the Valle de Atemajac, Jalisco. It is made of black ware ("barro oxidado"), and presents a smooth and shiny surface. The design consists of thin incised lines covering the body whorl, the lip, and the siphonal canal, making up a pattern of semi-circles and curves outlining rectangular motifs. The latter are covered either by a red or by an off-white slip, still visible on most rectangular surfaces.

From archaeological context, the following specimens have been located.

**WESTERN MEXICO.** Only two specimens have been found. A representation of *Turbinella* or *Fasciolaria* has been reported in Apatzingán (Feldman, 1974: Table 5). And a broken clay shell trumpet is mentioned by Piña Chan (1960: Ph. 40) for El Cerrito, Valle de Guadalupe, Jal. Only the columella and part of the spire are still visible. This specimen, and the fact the biological species was accurately reproduced inside, adds evidence to the possible usage of some clay models of conch shells as musical instruments.

**CENTRAL MEXICO.** In Teotihuacán, ceramic conch shell trumpets, apparently attempts to replicate *Strombus*, were made in "granular

ware" and are recorded at Tetitla around AD 400-700 (Séjourné, 1966: 206, Fig. 121, Lam. 107/ Kolb, 1984: Fig. 1).

**MAYA AREA.** A human figure, probably representing the Old God, or God N, is occasionally depicted emerging from a conch shell (Nicholson, 1967: 126). The shell represented is probably a *Tonna* species. And a polychrome bowl, said to be from Yucatán (Lothrop, 1957: Pl. LXXXII), has a panel representing God N sitting on or emerging from an enormous conch shell.

**OTHER AREAS.** In Monte Albán I, small stylistic and monochrome pottery representations of univalves have been found, which were probably used as containers (Paddock, 1970: 100).

c. Composite pieces. These are quite rare in the Occidente. This group includes all the pieces made of two components: the body whorl (Fig. 266) or the spire (Fig. 267) of a gastropod and a zoomorphic or non-figurative representation. The first specimen, from Jalisco or Colima (Fig. 266) , consists of the spire of a univalve, terminating in a long spout, and of a feline head. The interior whorls of the shell and the beginning of the columella are represented with accuracy inside the opened mouth of the feline, in which one tooth is still visible. The lips of the animal are depicted with realism. The piece is resting on two cylindrical legs, underneath the feline head, which have been restored, and is covered all over with a dark brown slip.

Fig. 267 (published by Gallagher, 1983: Fig. 86) illustrates a conch shell with a square vessel, from Colima. The design incised on the vessel, surrounded by two sets of parallel zigzag lines, resembles the two-headed serpent motif with a zigzag body illustrated on a bracelet from Guadalupe Mound (Fig. 189). The whole motif is surrounded by a panel, made up of square patterns, similar to those found on anthropomorphic figurines (see Tables 13,14) . The same type of vessel is reproduced in a pottery from Colima, representing a woman holding a square-shaped vessel (von Winning, 1974: Fig. 53). A similar specimen consisting of a univalve with the apex removed, combining the shape of the head of an animal (feline?) with the spire of a univalve, possibly from Colima, has been illustrated by Marti (1968: 77). The function of these specimens is unknown and they can be considered as a non-utilitarian ceremonial pieces.

In Tikal, a spouted jar in the form of a bird with the body of a conch shell trumpet has been found in a burial belonging to the early

Classic (Moholy-Nagy, 1985: Fig. 10.9). The entire vessel bears a post-firing decoration of polychrome painted stucco.

In support of the view for the use of pottery representations of shell trumpets, the following sources of information can be used.

1. The internal structure of the shell. An X-ray photograph of a pottery trumpet, at the American Museum of Natural History, New York, shows the interior of the instrument, where the columella and the coiled walls have been naturalistically represented (Marti, 1968: 78). Unfortunately this is the only example of X-ray photograph which has been reported for Mesoamerica, and further research should be done on the specimens from the Occidente. Montagu (1981: 275) has provided information for two examples: one specimen from the Mochica culture, probably from the Pacasmayo region, at the British Museum, where the central columella and the whorls of the natural shell have been carefully reproduced, as can be seen in the X-ray photograph (ibid: Pl. 14); the second specimen, said to be from Chimbote, is at the University Museum of the University of Pennsylvania (ibid: Pls. 15, 16).

2. Ethnographic examples. Another example in support of this view is provided by the "Concheros" of Central Mexico. One of the dancers uses a pottery representation of a shell trumpet, apparently of Maya provenance, for calling at ritual moments during the dances (Susana Rostas, pers. comm.).

These instruments made of pottery raise two linked questions: how did the craftsmen make such instruments ? why should they have taken such trouble ? One may presume that the internal construction of the natural shell was well enough known to Western Mexican craftsmen. However, the technical problems involved in doing so were probably not simple to solve, as each whorl of the shell had to fit over the previous one without any interruption in the air column, and the sutures be secure enough not to break away in firing or in use. These instruments must have been modelled by hand and may have been mounted on a stick during the modelling process (Montagu, 1981: 275). As to the question of why it was necessary to make pottery representations of shell trumpets, one can only guess. It might have been due to the scarcity of raw material, at least at a particular moment, when the demand for such instruments exceeded their supply. This problem is closely linked to trade routes with the western and the eastern coasts, and might have been tied to the interruption of such trade routes for a specific reason, such as



warfare. There are enough natural shell trumpets surviving in the Occidente to suggest that there was no great shortage of the natural material. This is supported by the fact that in Las Cebollas one hundred and twenty five complete and fragmentary conch shells were found in a single tomb.

Unfortunately, no dates are available for pottery representations of shell trumpets. The instruments made of shell were probably used first, and the pottery replicas were later introduced, perhaps due to necessity. The latter underlines the importance of the conch trumpet in Western Mexican cultures, and emphasises the virtuosity of the craftsmen. It is unfortunate, however, that no specific reference to shell trumpets made of pottery can be found in the written records or the ethnoarchaeological evidence. I suspect, however, that the only objective of making pottery replicas of univalves was not essentially for using them as musical instruments, as can be seen from the specimens lacking the representation of the inside whorl (specimen from the Sainsbury Collection, Norwich, No. UEA 673, Maya provenance, and included in Groups A and B).

This technique is not confined to the manufacture of shell trumpets. Clay models of shells were used as whistles and, with finger-holes, as "ocarinas" in Mexico and western South America. Some of these also have the internal modelling of the natural shell naturalistically represented.

**3.2. FIGURINES.** Male figurines, especially the redware figurines from Colima, are often depicted with a conch shell, and are a good illustration of the way these pieces were used, and how they were carried. All the conch shells illustrated seem to belong to the *Strombus* family, probably *S. gigas*. Three types of such figurines can be taken into consideration.

**A.** Figurines holding a shell trumpet in their hands and blowing into the instrument. The musicians are either standing or sitting. Most of these monochrome figurines come from Colima and are wearing a single-horned headdress, such as the exceptional paired musicians in Fig. 268. Furst (1965a: 34) associates these single-horned figurines with shamans and the ritual functions they had to assume. Other figurines holding a shell trumpet have been located in the Tuxcacuesco-Ortices area of Jalisco, but they tend to be uncommon in other parts of Mesoamerica. Marti (1968: 92), however, has illustrated a figurine representing a Zapotec priest blowing into a shell trumpet.

**B.** Seated figurines holding a shell trumpet on one crossed leg,

usually the left one, and a small stick on the opposite raised arm (Fig. 269). The conch shells illustrated with these figurines resemble the one described in Fig. 262, and show a set of striations along the lip. The instrument in this instance could have had a double use, as a trumpet and as a rasp, like the specimen in Fig. 13. Most of these specimens are also made of burnished dark red slip and come from Colima.

C. Figurines carrying a conch shell on their back (Fig. 270), also from Colima. These illustrate, together with the illustrations on the codices, one of the ways shell trumpets were carried and explain the position of the suspension holes along the lip of the univalves, used for inserting a string. There is however no representation of figurines wearing these univalves on the chest as a pectoral. All these figurines seem to be restricted to Colima and have not been found in any other areas of Mesoamerica.

#### 4. MURALS

References to univalves in mural paintings are non existent in the Occidente but can be found in Central Mexico.

In Cacaxtla, three species have been identified (Polaco, 1986: 533) in the friezes surrounding the murals of the "Eagle Lord" and of the "Jaguar Lord", and in Structure A, dating from the period AD 700-900 (Mc Vicker, 1985): a) two representations of *T. angulata*, one in each mural: the living organism can be seen coming out of the shell in one of the representations (Polaco, 1986: Fig. 13); b) two representations of *S. gigas* in the mural of the Jaguar Lord: in both instances, the shell is represented with its vertical section, and again the living organism can be seen coming out of the shell (ibid: Fig. 15); in both murals, the shell is associated with bivalves and other aquatic animals and connected to the water; c) one representation of *F. gigantea*: the standing figure in the latter mural is holding the big gastropod, whose apex has not been removed and which does not seem to be decorated, between his hands (ibid: no page mentioned).

In Teotihuacán, the association of the shell with the water element is again visible in the Temple of the Agriculture, which originally had a painted fresco of ten shells and horizontal green "wave" motifs in a corridor called the "Hall of the Molluscs" (Marquina, 1951: 90-91, Lam. 22/ Miller, 1973: 66, Figs. 79-80). The molluscs represented include *Turbinella* or *Strombus*, in association with apparent *Spondylus*, associated with the waves (Kolb, 1987: 28). In

Zone 2 of the ceremonial complex between platforms 4 and 5 of the Plaza of the Moon Pyramid, the "Talud of the Painted Shells" was found at the top of the staircase (Miller, 1973: 46, Figs. 12-14). The molluscs represented were *Strombus*, again in association with *Spondylus* (Kolb, 1987: 27). The same type of painted representations were also found in frescoes of urban residences such as Atetelco and Tetitla, either with both molluscs in association, or with one species represented on its own (ibid: 30-31). Conch trumpets were also associated with *Cozcacuahli*: a mural in Tetitla depicts this god coming out of a conch shell (Séjourné, 1966: Fig. 161).

The use of shell trumpets is again illustrated in the rock paintings of Ixtapantongo, where a priest is seen blowing into a shell trumpet during what appears to be a ceremony (Villagra, 1971: Fig. 27).

## 5. STONE

**CENTRAL MEXICO.** In the Templo Mayor, three monolithic and naturalistic representations of a univalve, measuring 1.05 m and made of one block of andesite, were found next to the *Tlaloc* pyramid, in a east-west direction. They probably represent a *S. gigas*. Such pieces were probably dedicated to *Tlaloc* (Luna Erreguerena, 1982: 241). They have the apex removed, which shows not only the symbolic significance attached to the shell, but also to the musical instrument. There is a similar specimen at the Philadelphia Museum of Art (Kubler, 1954: Fig. 39), assumed to come from Teotihuacán. Other occurrences can be found in the Mezcala area (Peabody Museum of Natural History, New Haven, No. PM 8575).

Stone representation of univalves are also part of decorative elements of architecture. In Teotihuacán, on the facade of the Temple of *Quetzalcoatl*, conch shells, identified as *Strombus* in association with *Spondylus* and with the Plumed Serpent, occur on the entablature (Kolb, 1987: 39). The same symbolic association is reported from Zuni Pueblo, in Western New Mexico (Furst, 1965a: 28). On the facade of the Temple of the Plumed Conch Shells, probably dating to Teotihuacán II, stone relief of conch shell trumpets, which appear to be *S. gigas* or *T. angulatus*, are represented. Each of the shells is decorated with three circular discs, a characteristic motif on Teotihuacán conch shells which is also found on some West Mexican shell trumpets. (Furst, 1966: Pl. 42/ Kolb, 1987: 33). The same species, with the same type of design, is also reproduced on murals, such as those from the Temple of Agriculture.

On the north wall of the Pyramid of Xochicalco, the stone reliefs offer another example of the association of the shell with animals: conch shells are seen attached to the heads of the animals (Seler, 1960: Vol. 2, 143).

**MAYA AREA.** At Punta Celarain, the southern tip of Cozumel Island, a small temple has, as a roof ornament, a diminutive temple some 50.-cm high, with a rounded spire atop. Set into the spire, and facing in all four directions, are four vertical series of *Strombus* trumpets of varying sizes, perhaps the earliest recorded wind-vane with built-in sound (Andrews, 1969, 56). Representations of a man emerging from a large conch shell are portrayed in several columns in Modified Florescent structures (Tozzer, 1957: Fig. 175) and in two of the niches in the front facade of the Iglesia (Andrews, 1969: 49), both at Chichen Itza.

**Table 1. Univalves. "Size a". from archaeological contexts and surface collection in Western Mexico.**

**Key for Table 1**

**A.** = *Agaronia*  
**Cl.** = *Columbella*  
**Cn.** = *Conus*  
**Cy.** = *Cyprae*  
**G.** = *Guttata* \*  
**L.** = *Lambidium*  
**Le.** = *Leucozonia*

**Mr.** = *Marginellidae* family

\*mentioned by Olguin, 1983.

**N.** = *Natica*

**Ne.** = *Neritina*

**O.** = *Oliva*

**Ov.** = *Olividae* family

**Pr.** = *Persiculata*

**Pl.** = *Planaxis*

**P.** = *Policines*

**Pu.** = *Prunum*

**Th.** = *Thais*

**Tr.** = *Trivia*

**Tu.** = *Turritella*

**A.** = Atlantic species

**col.** = columella

**h** = hole

**P** = Pacific species

**sp.** = spire

**t.e.** = truncated edge

**c.f.** = refers to the same

**Fig.** in the Classification

<u>No./Species</u>	<u>Modifi-</u> <u>cations</u>	<u>Decora-</u> <u>tion</u>	<u>Context</u>	<u>Dates</u>	<u>Faunal</u> <u>Prov.</u>	<u>Obs.</u>	<u>Ref.to</u> <u>Clas.</u>
<u>Apatzingán, Mich. (Kelly, 1947: 114)</u>							
1 <i>Cl. sp.</i>		h/t.e.	none	burial	AD 450-650	- 1	<u>Fig. 6</u>
- <i>Cn. sp.</i>		h	none	"	"	- -	<u>Fig. 4</u>
- <i>L. Tuberculosum</i>		h	none	"	"	P -	<u>Fig. 4</u>
- <i>N. sp.</i>		h	none	"	"	- -	<u>Fig. 4</u>
1 <i>O. porphyria</i>		h/t.e.	none	"	"	P -	<u>Fig. 6 c.f.</u>
9 <i>Ol. family</i>		h	none	"	"	P -	<u>Fig. 4</u>
1 <i>P. reclusiana</i>		h	none	"	"	P -	<u>Fig. 4</u>
2 <i>Tr. solandri</i>		h/t.e.	none	"	"	P -	<u>Fig. 6</u>
<u>Cerro del Huistle, Jal. (Olguin, 1983: 64-73)</u>							
1 <i>A. testacea</i>		no sp, h	none	burial	-	P -	<u>Fig. 5</u>
2 " "		no sp/1 h	none	"	AD 0-300	P -	<u>Fig. 5</u>
2 <i>Cl. major</i>		1 h	none	"	"	P -	<u>Fig. 4</u>
3 " "		no sp, h	none	" -	"	P -	<u>Fig. 5</u>
1 <i>Cn. diadema</i>		1 h	none	surface	-	P -	<u>Fig. 4</u>
1 <i>Cn. sp.</i>		no sp/1 h	none	fill	-	P -	<u>Fig. 5</u>
2 <i>G. ocellata</i>		no sp, h	none	-	-	- -	<u>Fig. 5</u>
1 " "		no sp/1 h	none	-	-	- -	<u>Fig. 5</u>
1 <i>Le. cerata</i>		2 h	none	surface	-	P -	<u>Fig. 4</u>
1 <i>Mr. sp.</i>		1 h	none	burial	AD 0-300	- -	<u>Fig. 4</u>
3 <i>O. spicata</i>		no sp, h	none	-	-	P -	<u>Fig. 5 c.f.</u>
1 " "		no col, h	none	burial	AD 0-300	P -	<u>Fig. 5</u>
2 " "		no sp/1 h	none	"	"	P -	<u>Fig. 5</u>
1 " "		no sp/1 h	none	surface	-	P -	<u>Fig. 5</u>
5 " "		no sp, h	none	burial	AD 0-300	P -	<u>Fig. 5</u>
7 " "		no sp/1 h	none	"	AD 500-650	P -	<u>Fig. 5</u>
2155 <i>Ov. sp.</i>		1 h	none	burial	AD 0-300	- 2	<u>Fig. 4</u>
15 <i>Pr. bandera</i>		1 h	none	-	"	P -	<u>Fig. 4</u>
1 " "		no sp, h	none	-	"	P -	<u>Fig. 5</u>
32 " "		no sp, h	none	burial	"	P -	<u>Fig. 5</u>
52 " "		no sp/1 h	none	"	AD 300-500	P -	<u>Fig. 5</u>
1 <i>Pl. obsoletus</i>		1 h	none	-	"	P -	<u>Fig. 4</u>
8 <i>P. uber</i>		1 h	none	burial	AD 500-650	P -	<u>Fig. 4</u>
1 <i>Pu. curtum</i>		1 h	none	"	AD 0-500	P -	<u>Fig. 4</u>
3 " "		no sp, h	none	-	"	P -	<u>Fig. 5</u>
5 " "		no sp/1 h	none	surface	"	P -	<u>Fig. 5</u>

1	<i>Th. triangularis</i>	1 h	none	burial	AD 0-650	P	-	<a href="#">Fig. 4</a>
1	<i>Tr. radians</i>	no sp/1 h	none	"	AD 0-300	P	-	<a href="#">Fig. 5</a>
2	<i>Tu. lentiginosa</i>	1 h	none	"	"	P	-	<a href="#">Fig. 4</a>
<b>Chupicuaro, Mich. (Porter Weaver, 1956: Fig. 25 f)</b>								
-	<i>O. sp.</i>	h/t.e.	none	burial/ cache	Formative	-	-	<a href="#">Figs. 4.7</a>
<b>Cojumatlán, Mich. (Lister, 1949: 78, 98)</b>								
-	<i>Mr. sp.</i>	h	none	burial	AD 1100-1300	-	3	-
-	<i>O. sp.</i>	h/t.e.	none	"	"	-	-	<a href="#">Fig. 6</a>
-	<i>Ov. sp.</i>	h/t.e.	none	"	"	-	-	<a href="#">Fig. 6</a>
<b>Las Cebollas, Nay. (Furst, 1966: 95)</b>								
1	<i>Ov. sp.</i>	1 h	none	shaft t.	ca. AD 100	-	-	<a href="#">Fig. 4</a>
<b>San Sebastian, Tomb I, Jal. (Long, 1966: 163, 216)</b>								
67	<i>A. testacea</i>	h/t.e./	none	looters	400 BC-AD 100	P	-	<a href="#">Fig. 7 c.f.</a>
				horizontal perforation				
<b>Tepaltepec (Rio), Mich. (Goggin, 1943: 55)</b>								
-	<i>Cn. sp.</i>	no sp/h(?)	-	surface	-	-	-	<a href="#">Fig. 5</a>
-	<i>O. sp.</i>	no sp/h(?)	-	"	-	-	-	<a href="#">Fig. 5</a>
-	<i>Tr. sp.</i>	no sp/h(?)	-	"	-	-	-	<a href="#">Fig. 5</a>
<b>Tizapan el Alto, Jal. (Meighan &amp; Foote, 1968: 152)</b>								
1	<i>Cn. sp.</i>	h	none	burial	ca. AD 100-1200	-	4	-
<b>Tuxcacuesco-Zapotitlán, Jal. (Kelly, 1949: 129)</b>								
6	<i>A. hyatula</i>	1 h	none	burial	ca. AD 150-750	A	5	<a href="#">Fig. 4</a>
1	<i>A. testacea</i>	1 h	none	"	"	P	-	<a href="#">Fig. 4</a>
9	<i>Cl. fuscata</i>	1 h	none	"	"	P	-	<a href="#">Fig. 4</a>
-	<i>Cn. sp.</i>	1 h/t.e.	none	"	"	-	-	<a href="#">Fig. 6</a>
2	<i>Cy. arabicula</i>	1 h	none	"	"	P	-	<a href="#">Fig. 4</a>
1	<i>Ne. sp.</i>	1 h	none	"	"	-	-	<a href="#">Fig. 4</a>
1	<i>O. reticularis</i>	1 h/t.e.	none	"	"	A	-	<a href="#">Fig. 6</a>
6	<i>O. sp.</i>	1 h/t.e.	none	"	"	-	-	<a href="#">Fig. 4 c.f.</a>
-	<i>Trivia sp.</i>	1 h/t.e.	none	"	"	-	-	<a href="#">Fig. 6</a>

## Observations

When the material comes from unstratified levels, no information has been provided on the context.

1. All the shell material belongs to levels dating from the Delicias through the Chila phase. Kelly (1947: 185) places the Delicias complex, to which most of the shell material belongs, at the same time as Teotihuacán III. The rest of the shells belong to the Chila complex (overlapping with the Conquest); they are unworked and have no holes. On the whole, Chila shell manufactures are simpler and less distinctive than those of the Delicias complex (Kelly, 1949: 116).

2. Found as part of a headdress, probably sewn to cloth, surrounding the skull of a skeleton (Olguin, 1983: 266).

3. According to the author, fairly numerous shell objects were found: three hundred and six specimens, out of which thirty one were complete enough to be assigned to species.

4. Found near the skull of an adult male.

5. The dates correspond to the Tuxcacuesco, Coralillo and Tolimán complex. Shells were worked during these three ceramic horizons, although they appear to be less plentiful during the Tuxcacuesco complex. The author, who only provides approximate dates, suggests that this apparent distribution is probably attributable to incomplete data, for some of the artifacts of that horizon indicate both skill and imagination, and technically they are as good as the later work.

**Table 2. Univalves, "Size b", from archaeological contexts and surface collection in Western Mexico.**

**Key for Tables 2, 3, and 4**

<i>B</i> = <i>Busycon</i>		a	= apex
<i>C</i> = <i>Charonia</i>		CC	= ceremonial context
<i>Cm</i> = <i>Cymathium</i>		D	= domestic
<i>F</i> = <i>Fasciolaria</i>		Dc	= decorated
<i>M</i> = <i>Murex</i>		I	= incised decoration
<i>MI</i> = <i>Melongena</i>		Pa	= painted decoration
<i>Mr</i> = <i>Muricanthus</i>		S	= surface collection
<i>S</i> = <i>Strombus</i>	'trumpet'		= name in the literature, but no details on modification
<i>T</i> = <i>Turbinella</i>	x		= several specimen mentioned, but number not specified
<i>Tn</i> = <i>Tonna</i>	W		= workshop
c.f. = refers to the same Figure in the Classification			

<u>No./Species</u>	<u>Modifi- cations</u>	<u>Decora- tion</u>	<u>Context</u>	<u>Dates</u>	<u>Faunal Obs. Prov.</u>	<u>Ref.to. Clas.</u>
<b>COLIMA</b>						
<u>Playa del Tesoro/Las Hadas</u> (Beltrán, 1988: 71)						
1 <i>S. gigas</i>	a.removed	-	-	-	A	-
1 <i>S. galeatus</i>	a.removed	-	-	-	P	-
<u>Playa del Tesoro</u> (Feldman, 1968: Table II)						
x <i>F. princeps</i>	unworked	-	-	-	P	-
<b>JALISCO</b>						
<u>Barra de Navidad</u> (Feldman, 1968: Table II)						
2 <i>S. gracilior</i>	unworked	-	-	-	P	-
1 <i>F. princeps/</i>	a.removed/	-	-	-	P	-
<i>gigantea</i>	2 h				A	-
<u>Cerro Encantado</u> (Bell, 1971: 734)						
1 -	"trumpet"	none	burial	AD 100	-	1
(fragments)						
<u>La Estanzuela</u> (Feldman, 1968:165/ 1974: Table 6)						
- <i>T. angulatus</i>	-	-	-	-	A	-
<u>Juanacatlán</u> (Schondube, pers. comm.)						
-	-	-	-	AD 600-900	A	-
<u>Lake Chapala</u> (Instituto Jalisciense de Antropología e Historia, Guadalajara)						
1 <i>F. princeps</i>	a.removed	I	-	-	P	2 <u>Fig. 22</u>
<u>San Aparicio</u> (Feldman, 1974: Table 6)						
- <i>T. angulatus</i>	-	-	-	-	A	-
<u>San Marcos</u> (Long, 1967: 522)						
x -	"trumpets"	-	sh.t.	500 BC-AD700	-	3



San Sebastian (Long, 1966: 95, 217- 220)

1	<i>S. peruvianus</i>	a.removed/ 3 h	-	sh.t.	400 BC-AD 100	P	4	-
1	<i>S. gigas</i>	a.removed	-	"	"	A	-	-
1	<i>S. gracilior</i>	1 h?	-	"	"	P	-	-
2	<i>T. angulatus</i>	a.removed/ 3 h	-	"	"	A	-	-
1	<i>F. princeps</i>	only sp.	-	"	"	P	-	-
1	<i>M. recurvirostris</i>	1 h	-	"	"	P	-	-

Sayula (Kelly, 1947: 119/ Feldman, 1974: Table 6)

-	<i>S. gigas</i>	-	-	-	-	P	-	-
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Tomatlán (Mountjoy, 1982: 323)

1	<i>S. peruvianus</i>	a.removed/D (?)	Tom-5	400 BC-AD 300	P	-	-
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MICHOACAN

Apatzingán (Kelly, 1947: 119/ Feldman, 1974: Table 5)

1	<i>S. gigas</i>	none	none	burial	AD 450-650	A	5	-
1	<i>F. princeps</i>	a.removed	1	"	"	P	-	<u>Fig. 22</u>

Chupicuaro (Museum of the American Indians, N.Y.; No. 24/2892)

1	<i>S. gigas</i>	a.removed	Pa	-	-	A	-	<u>Fig.21c.f.</u>
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Cuitzeo (Macias Goytia, pers. comm.)

1	<i>M. sp.</i>	circular h	Pa	burial	Classic	-	6	<u>Fig.12c.f.</u>
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El Otero (Noguera, 1944: Fig. 13)

2	<i>S. sp.</i>	a.removed	1	sh.t.	AD 500-800	-	7	<u>Fig. 22</u>
1	<i>Tn sp.</i>	none	Pa	"	"	-	-	<u>Fig.30c.f.</u>

San Gregorio (Feldman,1974: Table 6)

-	<i>T. angulatus</i>	a.removed	-	tombs?	-	A	8	-
-	<i>F. princeps/</i> <i>gigantea</i>	"	-	tombs?	-	P	-	-
-	<i>S. princeps</i>	none	-	tombs?	-	A	-	-

Tepalcatepec, Rio (Goggin, 1943: 55)

-	<i>F. gigantea</i>	"trumpet"	-	S	-	A	-	-
-	<i>S. sp.</i>	"	-	S	-	-	-	-

Tingambato (Piña Chan, 1982: Fig. 27 a, b, d)

1	<i>S. sp.</i>	a.removed	none	burial	AD 400-950	-	9	<u>Fig.13c.f.</u>
2	-	"	none	"	"	-	-	-
1	-	none	none	"	"	-	-	-

Yurécuaro (Feldman, 1974: Table 6)

-	<i>S. granulatus</i>	-	-	-	-	P	-	-
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Zamora (Plancarte, 1893)

-	<i>F. princeps</i>	-	-	-	-	P	-	-
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<u>Zuruamato</u> (Irwin & von Winning , 1974)					
1	<i>F. princeps</i>	a.removed	I/Pa -	AD 900-1200	P - <u>Fig.17c.f.</u>
NAYARIT					
<u>Las Cebollas</u> (Furst, 1966: 94)					
120	<i>T. angulatus</i>	a.removed	I/Pa sh.t.	early Classic	A 10 <u>Fig. 22</u>
		h(s)			
4	<i>S. gigas</i>	a.removed	none "	"	A - -
		h(s)			
1	<i>S. peruvianus</i>	a.removed	none "	"	P - -
		h(s)			
1	<i>M. recurvirostris</i>	a.removed	- "		P - -
	1 h				
<u>Ixtlán del Rio</u> (Marti, 1968: 74)					
1	<i>S. gigas</i>	a.removed I	-	early Postclassic	A - <u>Fig. 24 c.f.</u>
		h/circular h			

### Observations

1. The fragments of the shell trumpet were found as grave goods, in association with "cornudos" figurines. No decoration is mentioned by the author. He links the site to Chupícuaro by the character of its subterranean stone features. Meighan & al (1970: 21), however, mention three conch shells found in this site, and give radiocarbon dates of the second century AD. They believe that this burial is contemporary with the shaft-tombs further west.
2. This specimen is reported to come from Lake Chapala. Its decoration is similar to that on shell trumpets from Las Cebollas tomb, from Teotihuacán and from Kaminaljúyu (Bell, 1971: 728).
3. The trumpets were found in association with hollow clay figurines, polychrome vessels, metates, obsidian mirrors, jade and shell ornaments.
4. All these specimens come from Tomb I. They were found by looters, who provided the information on their provenance. Radiocarbon dates were obtained from three samples (Berger & al, 1965). They gave dates of ca. 140 BC, ca. 280 BC and ca. AD 240. The first date was obtained from a *Strombus gigas* (Caribbean), the second from an unnamed Pacific shell, and the third from a *Murex nigritus* (Pacific). Subsequently, research on local upwelling and on the carbonate content of contemporary Pacific coast marine shells obtained prior to the atomic bomb tests has resulted in a revision of these dates (Berger & al, 1966/ Long and Taylor, 1966), and the date sequence now is: 140 BC, 120 BC and AD 400. The first date has not been revised, due to the lack of comparable data from the Caribbean area. It is possible that considerable time may have elapsed before the shell found its way along the trade routes to the Occidente, and that it was placed in the tomb at a somewhat later date. Nevertheless, the Pacific shell dates seem to reflect two different periods of tomb use, starting in the late Formative, whereas the bone-collagen dates suggest yet another period between them (Bell, 1971: 726).
5. Unfortunately, the information provided by the author referring to these two pieces does not mention which one is decorated. Consequently, the order of the information provided above could be inverted.
6. The univalve was found in the west chamber of a tomb, in association three human skeletons, pottery vases and shell and jade artifacts. The specimen has a circle cut through the outer lip side of the body whorl, where a round jade piece resembling an "orejera" has been inlaid; a non-identified orange stone has been placed in the middle. It

is partially covered with red stucco. The author believes that this piece was used as a pectoral, although the number of holes is not mentioned. Based on ceramic typology, she dates this piece to Classic Teotihuacán. A Teotihuacán mask made out of greenish alabaster was found in the main hall of the tomb (Macias Goytia, pers. comm).

7. These two specimens have also been identified as *F. princeps/gigantea* by Feldman (1968: Table II).

8. According to the author, the *T. angulatus* and the *F. princeps/gigantea* are cut in such a manner that they would have been impossible to blow.

9. One of the specimens (Fig. 27 d) has a series of grooves cut along the siphonal canal, and has probably been used as a "raspador". The three specimens were found in the burial chamber of Tomb I, together with skeletal remains, pottery figurines and bowls, stone and obsidian objects. No association of the offerings could be worked out. The shell pieces were concentrated on the northeastern corner of the chamber (Piña Chan, 1982: 54).

10. Out of a total of 125 complete or fragmentary conch shells recovered in the same tomb, 111 were end-blown trumpets. 85 of the conch shells have one, two, three, or four drilled holes along the lip. No direct evidence of drilled holes was found on 36 shells, most of them trumpets, but all of these were eroded in those areas of the lip where drilled holes are normally made. According to Furst, it is likely that most of these shells were also drilled.

Seven of the *Turbinella* trumpets are decorated with incised and carved designs, all considerably eroded. One shell has traces of green and yellow fresco paint in combination with an incised pattern which resembles the most common Teotihuacán shell decoration, as well as the decoration of a Peruvian specimen illustrated by d'Harcourt (1925: Pl. IX, 5). A comparison of these specimens to the numerous representations of conch-shells at Teotihuacán shows that the same shell (*T. angulatus*), apparently having the same function, predominated at both places. The decoration on the Las Cebollas shell trumpets is very similar to those shown on the Teotihuacán conch-shells, and on a shell trumpet from Kaminaljuyu, although the Kaminaljuyu specimen is a *F. princeps*, native of the Caribbean.

In addition, Furst (1966: 138, Pl. 41) mentions two types of designs found on several trumpets: triangular human heads in raised relief and incised frogs.

Although the prevalence in West Mexico of a shell native from the Caribbean may simply reflect widespread trade, Furst notes that it may equally well indicate that "some well-defined meaning, possibly related to ritual, was attached to a particular species". If this is true, he suggests that there may have been an ideological link between the West Mexican shaft-tomb cultures, Early Classic Teotihuacán and, if the design motifs are taken into consideration, possibly Early Classic Kaminaljuyu (ibid: 153-170).

All of the five *Strombus* shells are trumpets, but none is decorated. It is interesting to note that the blow-holes of the *Strombus* trumpets are much smoother than those of the *Turbinella*, which, according to the author, may be explained by somewhat longer use prior to burial. The edges of the apex cuts of some of the *Turbinella* are so rough as to suggest minimal use. On some of these perhaps the modification was made only shortly before burial. In some cases, only a very small section of the apex was removed, barely sufficient to permit the passage of air. Each shell was carefully examined to determine whether it was actually modified to serve as a trumpet, or whether the apex and nuclear whorls might have been broken accidentally, or being removed to permit extraction of the mollusc inside, as is still done by fishermen in the Caribbean. However, even the shells with a minimal apical hole were evidently used as trumpets, since all were drilled also along the lip (ibid: 95).

**Table 3. Univalves, "Size b", from selected archaeological contexts and surface collection in other areas of Mesoamerica.**

<u>No./Species</u>	<u>Modifi- cations</u>	<u>Deco- ration</u>	<u>Context</u>	<u>Dates</u>	<u>Faunal Prov.</u>	<u>Obs.</u>	<u>Ref.to Clas.</u>
<b>CENTRAL MEXICO</b>							
<u>Templo Mayor</u> (Castillo & al, 1975: Pl. XLIX)							
2 <i>T. sp.</i>	-	Pa	CC	Postclassic	-	1	-
2 <i>S. pugilis</i>	-	-	"	"	A	1	-
x <i>T. angulatus</i>	a.removed	-	offering 7	"	A	2	-
x <i>S. gigas</i>	a.removed	-	"	"	A	2	-
<u>Teotihuacán</u> (Kolb, 1987: 137, 144/ Rubin de la Borbolla, 1946: Figs. 4-5)							
x <i>S. galeatus</i>	-	I	-	early Classic	P	3	<u>Fig. 22</u>
x <i>S. pugilis</i>	-	-	Tlamimilolpa	Classic	A	5	-
x <i>T. angulatus</i>	-	I	-	early Classic	A	3	<u>Fig. 22</u>
4 <i>F. gigantea</i>	none	I	offering 1	"	A	4	<u>Fig. 22</u>
- " "	-	-	T. Agricultura	Classic	A	5	-
- " "	-	-	T. Quetzalcoatl				
- " "	-	-	Tlamimilolpa				
1 -	a.removed	Pa	Tetitla (?)	-	-	6	<u>Fig. 25</u>
x <i>F. (Lamark)</i>	-	-	La Ciudadela	Classic	A	5	-
-	-	-	Tetitla, Zacuala				
x <i>F. princeps</i>	-	-	Xolalpan	"	P	5	-
x <i>T. angulatus</i>	-	-	Tlamimilolpa	"	A	5	-
-	-	-	Xolalpan				
<b>MAYA AREA</b>							
<u>Altar de Sacrificios</u> (Willey, 1972: 221, 228)							
1 <i>F. gigantea</i>	-	-	ceremonial	Classic	A	7	-
1 <i>T. angulatus</i>	-	-	-	"	A	-	-
<u>Dzibilchaltún</u> (Andrews, 1969: 56)							
1 <i>T. angulatus</i>	-	-	cache	mid. Formative	A	-	-
<u>Kamilnaliúyu</u> (Kidder, Jennings and Shook, 1946: 14 6)							
3 <i>F. princeps</i>	a.removed	I	tombs	mid. Classic	P	8	<u>Fig. 22</u>
1 <i>Ml. patula</i>	"	-	tomb	"	P	-	-
<u>Lubaantún</u> (Joyce, 1926: Pl. XXIV, Fig. 4 )							
1 <i>Tn. sp.</i>	circular h	none	-	AD 730-860	-	-	<u>Fig. 12</u>
<u>Mayapán</u> (Proskouriakoff, 1962: 384)							
1 <i>Cm. femorale</i>	-	none	domestic	late Postclassic	A	-	-
1 <i>F. gigantea</i>	none	none	"	"	A	-	-
3 <i>S. gigas</i>	"	none	"	"	A	-	-
3 <i>S. gigas</i>	a.removed	none	"	"	A	-	-
<u>Piedras Negras</u> (W. Coe, 1959: 56, Fig. 52 q/ Satterwhaite, 1933: Pl. VII d))							
1 <i>Tn. sp.?</i>	2 circular h	none	-	late Classic	-	-	<u>Fig. 12</u>

<u>Tikal (Moholy-Nagy, 1985: 148)</u>							
1	<i>T. angulatus</i>	a.removed	-	fill	-	A	- -
2	<i>Ml. sp.</i>	slit cut	none	-	-	-	- -
<u>Uaxactún (Kidder, 1947: Fig. 48)</u>							
1	<i>Ml. melongena</i>	slit cut	none	terracea	AD 250-500	A	9 -
1	-	a.removed	Pa	burial	-	-	10 -
1	<i>S. pugilis</i>	"	"	none terrace	AD 250-500	A	- -
OTHER AREAS							
<u>Alta Vista, Zac. (Pickering, 1985: 303)</u>							
1	-	a.removed	-	CC	-	-	11 -
<u>Barrio del Rosario Huitzo, Oax. (Flannery, 1976: 336)</u>							
1	<i>Malea</i> sp.	fragments	none	midden	700-650 BC	-	18 -
<u>Casas Grandes, Chi. (Di Peso, 1974: 515- 521)</u>							
160	<i>S. galeatus</i>	a.removed	I	D	AD 1150-1300	P	12 -
1	<i>S. galeatus</i>	"	Dc	CC	c. AD 1300	P	13 -
9	<i>Ml. patula</i>	"	none	D	"	P	12 -
1	<i>M. nigrilus</i>	"	none	D	"	P	12 -
<u>El Infiernillo, Gue. (Suarez, 1977: 52-3, 63-4)</u>							
2	<i>S. gigas</i>	a.removed	none	burial	AD 600- 1200	A	- -
1	<i>S. galeatus</i>	"	"	I	"	P	14 -
2	<i>T. angulatus</i>	"	"	none	"	A	- -
1	<i>Cm. sp.</i>	"	"	none	"	-	- -
2	<i>Tn. galea</i>	columella	none	"	"	A	15 -
2	<i>C. tritonis</i>	a.removed	I	"	"	P	16 -
1	<i>M. sp.</i>	"	"	none	"	-	- -
<u>Monte Albán, Tomb 7, Oax. (Caso, 1969: 161/ Pl. III):</u>							
1	<i>F. gigantea</i>	a.removed	Pa	burial	AD 300-900	A	17 -
<u>Placeres de Oro, Gue. (Spinden, 1911: 41)</u>							
2	-	none	none	burial	-	-	-
<u>San Jose Mogote, Oax. (Flannery, 1976: 336)</u>							
1	<i>S. galeatus</i>	a.removed	none	workshop	1100-1000 BC	P	18 -

## Observations

1. The two *Xanthus* were found in a painted stone box of an offering, together with the *Strombus* and other univalves (Castillo & al, 1975: Pl. XLIX). Both specimens were painted in blue with black lines, like the painting used in the box. A cache containing a stone box, painted in blue, with shells painted in blue and black is also reported in cache XXIII by Nagao (1985: 110).
2. O. Polaco (1982: 144).
3. Most of these specimens, located in the Teotihuacán Museum, have incised circles around the nodules. Others bear signs of red and green stucco, with hair-thin black linework (Kolb, 1987: 137).
4. These four specimens were found in the Temple of *Quetzalcoatl*, in the offering located at the bottom of the staircase of the temple, in association with ornaments made

out of shell, green stone and jade beads, obsidian knives and arrowheads, and human teeth. Two conch shells were decorated with double circles incised around the main nodules and the body of the univalve. One of them also has a band of geometric pattern incised along the main body, perpendicular to the lip. The tip of the apex has not been removed in both specimens. Another specimen has no decoration; the tip of the apex is missing and might have been broken. The author does not provide any information concerning the fourth conch shell (Rubin de la Borbolla, 1946: Figs. 4 & 5).

5. The trumpet is decorated in fresco with hieroglyphs representing a cycle and the numbers 12 and 9 (Séjourné, 1957: Fig. 51).

6. C. Kolb (1987: 137, 144).

7. This specimen has no definite cutting mark; the lower half of the walls is missing, and only the columella has been retained, on which erosion is so advanced that evidence of work might have been destroyed (Willey, 1972: 228). The author does not mention in which context these two specimens were found.

8. One of the specimens has two thick incised lines and three towards lower end, emphasising the nodules; each of the nodules, except the small ones at the end of the spire, is also emphasised by an incised ring. Between the larger ones and the spiralling on the lower part of the shell are circular depressions 1 cm in diameter, where traces of dark adhesive can be seen (Kidder & al, 1946: Fig. 162 a). The other two pieces also have double incised lines around the nodules.

9. This piece has three perforations in form of "H" on the dorsum of the univalve, and a hole near the orifice (Kidder, 1947: 62). A similar specimen has been found in Tikal (Moholy-Nagy, 1985: 148).

10. Specimen painted in red.

11. This piece was found in association with skeletons (two male adults) and a pyrite mirror with a paint cloisonné back, under the floor of the pyramid in a plaster-lined crypt. According to the author, it had been sealed with a plaster and pole layer, reopened to deposit the next remains, then resealed (unique in Alta Vista).

12. Some of the trumpets are decorated with a geometric (double concentric triangle) incised pattern (Di Peso, 1974, Types IB & IIB: 519). One of them is decorated with incised motifs and a variety of tesserae, or mosaic pieces (ibid, Type IB: 519). Five rasp trumpets have also been found. As Di Peso points out, a few of the Casas Grandes "aerophones" (smaller specimens are also called "horns") were also used as "idiophones", as the lips or bodies of some specimens were notched after the fashion of a rasping stick. These rasp trumpets were defined as hollow-bodied musical instruments. Their lip was cut back, either on a stepped pattern, or incised with parallel notches to create a resonant rasp when rubbed with a stick or similar object (Izikowitz, 1935: 160). The incised notches could as well be found along the dorsum of the columella. The simple rasp design has a wide distribution in both time and space throughout Mesoamerica and the Gran Chichimeca. The dates are provided by Leblanc (1980: 804).

13. This piece is called "altar piece" by Di Peso (1974: 515). The apex of the spire and the entire outer whorl, including the lip, have been removed, thus exposing the columella. The latter modification is not usually applied to trumpets. Upon the smooth white face of this conically shaped piece, turquoise tesserae form a rectangular mosaic. This piece is the only one limited to a sacred context. This object was unique among the artifacts excavated from Paquimé, Unit 8, and dates to the Diablo Phase of the Medio period. It might have been used as a trumpet.

14. Only one specimen has been decorated, with incised decoration in relief, but the author does not mention to which species it refers. The design consists of four sets of two well-defined parallel lines surrounding widthwise the spire, the bodywhorl and the siphonal canal. Several circles, covering the whole surface of the univalve, have been carved in high relief between each line, all positioned along a straight band (Suarez, 1977: 63, Pl. 93). This piece, together with the other *Strombus*, the *Cymantium* and the *Turbinella* show two holes ("perforaciones bicónicas") drilled through the edge of

the lip , one in each extremity .The *Murex* specimen is badly damaged.

15. This piece has a double set of two holes: two along the outer lip, and two on the dorsum (ibid: 52, Pl. 74 a).

16. One specimen is decorated in high relief, and offers two main elements of decoration, one over the spire and one over the body whorl. Profile views of stylised monkeys are illustrated on the spire: they are in a sitting position, and their tails and limbs are clearly visible. A frontal view of a human figure sitting on a stool is represented on the body whorl. The head is illustrated with a skull, and on both sides of the legs two monkeys can be seen, similar to those represented on the spire. Six holes have been drilled, three along the outer lip, and three along the inner lip, opposite each other (ibid: 53, Pl. 75). The other specimen, 17.90 cm long, is also decorated in high relief and entirely covered by a geometric design made of several parallel lines, among which are inserted circular and scroll motifs. Two sets of two holes have been drilled, along the outer and inner lips, facing each other (ibid: Pl. 76).

In both pieces, the tip of the apex has been cut, probably for decorative reasons, but does not allow any air to go through. The author believes that both pieces were worn horizontally by stringing through the two sets of opposite holes.

17. Found in the upper part of Tomb 7, associated with three earplugs and jade beans. Two small holes are visible. Also visible are traces of red paint (Caso, 1969: 161).

18. The *Malea* sp. was found in a midden associated with a series of public buildings. The *Strombus* (Flannery, 1976: Fig. 11.7) was found in a shell-working area in a household cluster. Pires-Ferreira (1976: 311) believes that both could have been used as trumpets.

**Table 4. Univalves." Size b". from selected archaeological contexts and surfacecollection in North America.**

<u>No./Species</u>	<u>Modifi-</u> <u>cations</u>	<u>Decora-</u> <u>tion</u>	<u>Context</u>	<u>Dates</u>	<u>Faunal</u> <u>Prov.</u>
<u>Alton</u> , Illinois (Furst, 1965a: 26)					
- <i>B. perversum</i>	a.removed	-	-	-	A
<u>Casa Grande</u> , Arizona (Fewkes, 1912: 144-5 / Jackson, 1917: 48)					
-	a.removed	-	Compound B	14th. cent.	P
<u>Cheylon</u> , North Arizona (Fewkes, 1896: 365/ Tower, 1945: 31)					
1 <i>S. galeatus</i>	a.removed	-	-	-	P
1 <i>Ml. patula</i>	"	-	-	-	P
<u>Gila Pueblo</u> , south Arizona (Boekelman, 1936: 29/ Tower, 1945: 31)					
1 <i>S. galeatus</i>	a.removed	-	-	14th. cent.	P
1 <i>S. gracilor</i>	"	-	-	"	P
1 <i>Ml. patula</i>	-	-	-	-	P
<u>Grand River Reserve</u> , Ontario (Boekelman, 1936: 27-31)					
1 <i>S. gigas</i>	a.removed	-	-	-	A
<u>Hemenway</u> , Arizona (Boekelman, 1936: 29)					
- <i>S. galeatus</i>	a.removed	-	-	c. AD 1100-1450	P
1 <i>Ml. patula</i> :	"	-	-	"	P
<u>Los Muertos</u> , Arizona (Haury, 1945: 159, Pl. 73 a-c)					
2 <i>S. galeatus</i>	a.removed	-	-	c. AD 1200-1400	P
1 <i>Ml. patula</i>	"	-	-	"	P
<u>Neuter Cemetery</u> , Ontario (Boekelman, 1937: 295-6)					
x <i>B. perversum</i>	-	-	-	-	A
<u>Pueblo Bonito</u> , New Mex. (Pepper, 1920: 69, 85, 190/ Judd, 1954: 305/ Boekelman, 1936: 29)					
1 <i>S. galeatus</i>	a.removed	-	Room 13	AD 900-1300	P
1 <i>Ml. Patula</i>	"	-	"	"	P
5 <i>M. sp.</i>	"	-	" 38	"	-
<u>San Cayetano</u> , sth. Arizona (Di Peso, 1956: Fig. 60.3)					
4 <i>Strombus</i>	a.removed	-	D	-	-
<u>Snaketown</u> , Arizona (Gladwin & al: 1937: Pl. CXXII/ Haury & al, 1976: 321)					
2 <i>S. galeatus</i>	a.removed	-	burial	AD 900-1100	P
<u>Tseh So</u> , Chaco Cañon (Tower, 1945: 31)					
1 <i>S. gracilior/</i> <i>pugilis</i>	a.removed	-	-	-	P A
<u>Waputkin</u> , Arizona (Tower, 1945: 31/Boekelman, 1936: 29)					
1 <i>M. nigrilus</i>	a.removed	-	-	-	-



## **Chapter four**

### **Interpretation of Bivalves**

The data provided by archaeological reports on the manufacture and use of bivalves is scarce, and does not yield much information (Table 5: 170).

#### SPECIES/FAUNAL PROVINCES

In the Occidente, the following species were used for the manufacture of bivalves.

A. Pectinidae family. The *Argopecten circularis* Sowerby, 1835 is the commonest species in the family in the Panamic province. It measures about 5.- cm in length, and can be found in depths of 1.- to 1.35 m (Keen, 1971: 87). Specimens made from this species have been found in Cerro del Huistle.

B. Spondilidae family. Although not often mentioned in any reports for the manufacture of automorphic pieces in the Occidente, the *Spondylus* have probably been used for the production of automorphic and reshaped pieces. It is a fairly thick, strong shell, and was probably valued for its surface colour, which varies from mauve to brilliant orange. *Spondylus* sp. are usually found at an average depth of sixty feet, and since they cement themselves solidly to rocks, they were most likely obtained with considerable difficulty even by experienced divers (de Borhegyi, 1966: 356). They were probably one of the most valued commodities in the Classic period of Mesoamerica (Wilmer, unpub: 12).

The *Spondylus princeps* Broderip, 1833, or thorny oyster, is a Pacific species, found from the Gulf of California to Ecuador. It can measure as much as 10.- to 15.- cm in diameter (Keen, 1971: 96). It is a strikingly beautiful shell, traded widely in pre-Columbian times in Mesoamerica. Boekelman (1935: 262-266) outlines the history of its use and its distribution, from the Southwestern district of the United States down to the Peruvian territory. It appears to have been a highly priced shell connected with religious and ceremonial activities, as well as the raw material for a number of artifacts (Andrews, 1969: 43).

OCCIDENTE: occurrences of reshaped pieces in San Gregorio and Yurecuaro (Kolb, 1987: 91).

OTHER AREAS: occurrences of automorphic pieces in El Infiernillo (Suarez, 1977: 31), Chiapa de Corzo and Maya area (Andrews, 1969: 25).

Its twin Atlantic species, the *S. americanus*, has not been found in Western Mexican sites (Kolb, 1987: 91). It does not contain the deep

red colours of *princeps* , which explains the frequent occurrence of the Pacific species on the Atlantic watershed (Andrews, 1969: 43).

The *Spondylus calcifer* Carpenter, 1857, a Pacific species found in the Gulf of California to Ecuador. It is the largest of the American *Spondylus* (Keen, 1971: 96). It is characterised by numerous and evenly distributed spines, and by its wide purplish-red interior band.

OCCIDENTE: occurrences of reshaped pieces in Amapa, Cojumatlán, Once Pueblo and Playa del Tesoro (Kolb, 1987: 91).

OTHER AREAS: occurrences of automorphic pieces in the Maya area (Andrews, 1969: 25).

Other species used for the manufacture of reshaped pieces in the Occidente, and probably for the automorphic ones as well, include: the *Pinctada mazatlánica* Hanley, 1856 (Cerro del Huistle), the *Glycymeris gigantea* Reeve, 1843 (Cerro del Huistle, Tuxcacuesco-Zapotitlán) and the *Chama echinate* Broderip, 1835 (Cerro del Huistle), all Pacific species.

The raw material used for the manufacture of this type of artifact seems to have come essentially from the Pacific coast.

## MANUFACTURE

**HOLES.** All the specimens have one, two or three holes for suspension. The perforation(s) was located either in the middle of the umbo (single hole/ Fig. 31), or in the middle of the shell (Playa del Tesoro), or on each hinge (two holes). Some specimens have three holes perforated, through the umbo and the hinges, like in Cerro del Huistle (Olguin, 1983: Fig. 1 c), Piedras Negras (W. Coe, 1959: 56) and Uaxactún (Kidder, 1947: 61)

**MODIFICATIONS.** Apart from the removal of the periostracum and the smoothing of the surface of the valve, these included the following alterations of the natural shape of the valve.

- a. The smoothing and grinding of the contour of the shell, which was sometimes slightly altered.
- b. The removal of the spines, for instance for the *Spondylus* .
- c. The removal of the hinges.
- d. A circular hole, probably for the insertion of another material, has been cut through the middle of the valve (Casas Grandes: Di Peso, 1974: Fig. 534.6.12). Similar specimens have been found in Snaketown (Haury, 1976, Fig. 15.23 a-d). No perforated bivalves have been located in Western Mexico.

**DECORATION.** Only one specimen with incised decoration illustrating a human head has been located in the Occidente (Fig. 32). In other areas of Mesoamerica, the decoration can also be incised, with anthropomorphic and non-figurative patterns (British Museum, London, No. PS.03417/ The Art Museum, Princeton, No. Y.1985.48) or excised, with copper or gold inlays showing through each of the circular patterns cut through the valve (British Museum, London, No. 1946,AM.19.21).

## **CONTEXT**

All this material comes from burials. It can also be assumed that the specimens from San Sebastian came from a shaft tomb.

Because of their sacred association, mentioned below, these shells were associated with offerings, used as grave goods in human interments, and occurred in caches with or without other material culture (Kolb, 1987: 23). Modified bivalves were deposited in the tombs with the dead as part of the mortuary inventory, like in Cerro del Huistle (Olguin, 1983: 62). They sometimes occurred in pairs in the grave, such as in Nebaj, where four *Pecten* were found in a grave: each pair was lying with a pyrite-incrusted plaque on each shoulder of a skeleton (Kidder & al, 1951: 56). In Tikal, nine perforated *Spondylus* were found around, over the bogy and at the top of the head of a male skeleton. Because they occur mainly with males, the author believes that they have been given only to rulers (Moholy-Nagy, 1985: 152).

## **DATES**

The same dates (Formative to early Postclassic) and the same observations can be put forward for this type of material as for that belonging to the Univalves "Size a". Their use and their symbolic attributes certainly dates back to the Formative. In Tlatilco (Lorenzo, 1965: 52), one valve with a hole for suspension has been found in a burial. In addition, a large rectangular stone basin adorned with *Pecten* shells has been found in San Lorenzo (Howell & al, 1965: Pl. 1a).

## FUNCTION

These pieces had a utilitarian function as ornaments. They could be used, for instance, as part of a necklace, of a headdress and of a ceremonial dress. Olguin (1983: 62) believes that each valve of the *Argopecten* found on the chest of skeletons in a burial of Cerro del Huistle, in association with small beads, was part of a necklace. This is supported by the illustration provided by pottery figurines, from Teotihuacán and from Jaina, wearing one or two valves suspended from their necklaces. Their use as components of a headdress and of a dress is illustrated in the historical accounts, mentioned below.

In addition, apart from their utilitarian usage, they had at the same time a symbolic connotation. According to Séjourné (1966: 161), *Spondylus* shells, called *teotlchipuli* in Nahuatl, meaning "divine conch" (Seler, 1963: 71), evoked the planet Venus, "Señor de la Aurora". They are generally represented, sometimes in association with univalves, in connection with water, and perhaps symbolise water (von Winning, 1949: 129), and have a relationship with rain and fertility (Kidder & al, 1946: Fig. 95).

The use of bivalves as containers in caches stresses the symbolic function attached to them. Pairs of *Spondylus* were found in caches in the Templo Mayor (Matos Moctezuma, 1988: Fig. 104) and in the Maya area (Copán, Pusilha and Tikal), with offerings of pearls, tiny jade beads and other small offerings inside. In Piedras Negras, a pair of *Arca zebra* was used for this purpose. The valves were sometimes painted with cinnabar (Andrews, 1969: 55/ Moholy-Nagy, 1985: 155).

Finally, they could be used as musical instruments. Castañeda and Mendoza (1933: 576) refer to the usage, among people in Mesoamerica, of two valves to beat out the rhythm by holding one valve in each hand and producing a sound either by rubbing or by percussion.

### 1. HISTORICAL ACCOUNTS

**Central Mexico.** In the Florentine Codex of Sahagún, specimens of *Pecten nodosus* and of *Trachycardiim* have been identified (Suarez, 1985a: 31). Their use and interpretation remains however unknown. In the Codex Borbónico, a servant who accompanies *Quetzalcoatl* is wearing a skirt decorated with univalves and bivalves, which might represent lunar symbols (ibid, 1989: 36). The same usage of bivalves

is illustrated in the Codex Cospi and in the Codex Rios, in which a god, which could be identified as *Mixcóatl*, can be seen wearing a dress decorated with these shells. These are also illustrated wearing headdresses: in the latter mentioned codex, a female deity, which could be identified as *Tecciztécatl*, is seen wearing a headdress decorated with bivalves (ibid).

**MAYA AREA.** Diego de Landa, in his "Relación de las Cosas de Yucatán", refers to the tradition of using a valve attached to a string used for covering the sex of young women during their christening ceremony (Tozzer, 1941: 102 & note 488).

## **2. POTTERY REPRESENTATIONS**

**OCCIDENTE.** Pottery representations of bivalves are unusual in this area. The spouted red ware pottery vase from Colima, illustrating the two valves of a clam (von Winning, 1974: Fig. 97), is a unique example.

**CENTRAL MEXICO.** Naturalistic moldmade ceramic "adornos" representing *Pecten* and *Spondylus* can be found on cylindrical tripod vessels and on the walls of incense burners (von Winning, 1949: 141-143, Figs. 13, 14) and at Lake Amatitlán during the early Classic period (de Borhegyi, 1966: 363). Although the Amatitlán specimens have lost their colours, they were undoubtedly painted red, blue, yellow and white colours after firing like those from Teotihuacán. In this latter site, the "adornos" representing bivalves are frequently superimposed with water symbols in the form of a trilobal drop (ibid: Fig. 5 a). In addition, bivalves, apparently *Pecten*, were illustrated as collar and pectoral ornaments on ceramic moldmade figurines during the late Tlamimilolpa through the Xolalpan phases, ca. AD 400-650 (Séjourné, 1966: 22, 26, 92).

**MAYA AREA.** At Piedras Negras, a burial dating to the early Classic contained eight scarcely-altered *Spondylus* valves, five of which were real shells and three accurate representations in pottery, complete with suspension holes (W. Coe, 1959: Fig. 58 b-d). Thorny oyster shells were worn over the ears of the Underworld deity, God G1 (M. Coe, 1973: No. 45), and sometimes of God B, identified with the Rain God *Chac* (Triak, 1963: Figs. 6, 7).

**OTHER AREAS.** For the Southwest, Fewkes reports clay imitations of *Glycymeris* shells (Tower, 1945: 27).

### 3. MURALS

The biological identification of the species concerned is quite difficult, because the mural painters either stylised the shells, or depicted them as decorated or modified. In most instances, the shell is illustrated with one or two valves, and the identification is sometimes made possible thanks to the shape of the hinge line or of the umbo.

In Central Mexico, a number of Panamanian and Caribbean species have been depicted in wall murals or as bas-relief sculpture in Teotihuacán, and in the mural art of some urban residences. A line of stylised marine bivalves decorate the back and tail of the two jaguars represented in Murals 1 and 4 in the patio of the Jaguars (Kolb, 1987: 27). A mural painting at Teopanacazco includes depictions of *Pecten* , probably *Spondylus* , and other stylised bivalves contained in the garments of the priest-like human figures and on the frieze border (ibid: 31).

### 4. STONE

Three representations have been located in Central Mexico and in the Maya area. In Teotihuacán, in the Palace of *Quetzalpapalotl* , sculptured stones found at the base of the staircase included representations of *Pecten* . And in the facade of the Temple of *Quetzalcoatl*, the configuration of the bivalves, their colour and the hinge areas suggest that those might be representations of *Spondylus* (Kolb, 1987: 39). Moholy-Nagy (1963: 77) refers to fairly naturalistic representations of bivalves in Classic ceremonial contexts. Several specimens, probably *Lyropecten* , are depicted on Stela 4 of early Classic style in Piedras Negras (W. Coe, 1959: 500). These shells, perforated near the hinges, are shown attached to necklaces, bracelets and earplugs. In addition, as has been mentioned above, a basalt rectangular stone decorated with several valves of *Pecten* shells has been found in San Lorenzo.

**Table 5. Bivalves from archaeological contexts and surface collection in Western Mexico.**

**Key for Table 5**

*Ar.* = *Argopecten*      *C.* = *Cardita*  
*Arc.* = *Arca*      *L.* = *Lyropecten*  
c.f. = refers to the same Figure in the Classification

<u>No./Species</u>	<u>Modifi- cations</u>	<u>Decora- tion</u>	<u>Context</u>	<u>Dates</u>	<u>Faunal Prov.</u>	<u>Obs.</u>	<u>Ref. to Clas.</u>
<u>Apatzingán, Mich. (quoted by Kelly, 1947: 114)</u>							
1 <i>Arc. reversa</i>	1 h	none	-	-	-	-	-
<u>Cerro del Huistle, Jal. (Olguin, 1983: 62)</u>							
3 <i>Ar. circularis</i>	1 h	none	burial	AD 0-300	P	-	-
1 " "	3 h	none	"	"	P	-	-
- <i>Ar.</i>	1 h	none	"	"	P	-	-
<u>Morett site, Col. (Meighan, 1972: 81/ Pl. 70 g-h)</u>							
2 -	h	none	mixed levels	-	-	-	-
<u>Playa del Tesoro/ Las Hadas, Col. (Beltrán, pers. comm.)</u>							
2 <i>C. sp.</i>	h	none	burial	AD 400-600	-	-	<u>Fig. 31 c.f.</u>
1 <i>L. subnodosus</i>	h	none	"	"	P	-	-
<u>San Sebastian, Jal. (Long, 1966: 216)</u>							
1 -	-	none	looters	-	-	-	<u>Fig. 31</u>

The number of specimens mentioned for each site refers only to the manufacture of one valve of the shell.



## **Chapter five**

**Interpretation**

**of**

**Anthropomorphic Figurines**

There are few occurrences of shell anthropomorphic figurines and heads mentioned in archaeological reports, either in the Occidente or in other areas of Mesoamerica. In most instances, the information is incomplete and provides insufficient data, i.e. on the manufacture of the figurines, the holes for suspension and their association with the deceased. Specimens have been located in archaeological sites in Jalisco, Colima and Michoacán, but none in Nayarit (Table 6: 185). Most of the specimens included in the Classification (2.1.) do not come from archaeological contexts.

## **SPECIES**

It is difficult to determine which species of shell an object is made from unless it retains characteristic structural features of the original shell, like the hinge teeth or the thickness of the shell. The problem in identifying the species for this research lay in the difficulty of finding a biologist available at the time the author visited the museums and private collections. Consequently, and unless the information was provided by the museum, it has been impossible to identify the species for most of the Reshaped Pieces (Group II). Nevertheless, an attempt has been made, with the help of a biologist, Caroline Cartwright, Department of Scientific Research, British Museum, to identify the section of the shell, referred to as "shell structure". This identification is nevertheless subject to other opinions. As far as the specimens mentioned in Tables 6 to 11 are concerned, it has not only been impossible to identify the species they have been made from, unless these have been mentioned in the archaeological reports, but also difficult to refer to the "shell structure". The same problems have been encountered with the zoomorphic and the non-figurative pieces.

It can be assumed that the same species have been used for the manufacture of Automorphic Pieces mentioned in chapters 2 and 3 (Univalves "Size b" and Bivalves) and for that of anthropomorphic and zoomorphic figurines and non-figurative representations. Several pieces could be made out of the same univalve or bivalve and different sections of the shell were, according to their shape, used for the manufacture of specific pieces. In some instances, for instance, the part of the shell not used after the modification of the univalve, like the outer lip, was utilised for the manufacture of anthropomorphic figurines.

Broadly speaking, it can be suggested that the structure of the shell used for the manufacture of two-dimensional and three-dimensional pieces depended on two variables:

- a. the supply of the raw material, whether pelecypods (bivalves) or gastropods (univalves), together with the availability of specific sections of these shells at the time of manufacture of the piece;
- b. the stylistic characteristics of the area where the artifact was manufactured, i.e. whether the stylistic tradition was based on two or three-dimensional figurines (see Ch. 7).

Two-dimensional figurines were generally made from bivalves, and a few instances with the outer lip or the dorsum of a gastropod, probably young specimens. Three-dimensional ones were generally made of the outer lip, the dorsum or the columella of a mature gastropod, and seldom with the thickest portion of a pelecypod, in this case with large mature specimens.

**MANUFACTURING TECHNIQUES.** The manufacture of anthropomorphic figurines consisted of the following stages.

- a. The selection of a piece of shell, either univalve or bivalve, large enough to obtain the shape of the finished product. This process was made by sawing the edges of the shell, with a sharp instrument, probably a hard stone.
- b. The four edges of the shell were then abraded to the required shape by grinding against a harder material. Each edge of the shell was rubbed against this hard surface until its edges were smooth.
- c. The same process of grinding was applied to the front and back faces of the piece in order to obtain a smooth surface (two-dimensional) and the required features (three-dimensional).

Open spaces, like the leg and arm separations from the body (Figs. 33, 34, 40, etc.), were started by drilling holes between which the shell was removed, presumably with a sharp stone graver. The drilling hole not only served as a convenient starting point for the cutting process, but also reduced the chance of splitting the shell. The hole was then enlarged by grinding to the required shape or by string sawing (Feinman, 1991:74).

**HOLES.** All the pieces have one, two or more holes, either cut through the material, or drilled from side to side of the figurine. Four different arrangements were used for the location of these

holes. Sometimes however more than one arrangement could be applied to a same figurine.

1. One or two circular perforations were cut through the material, from the front to the back of the figurine: along the forehead (Figs. 33, 43, 46, 68), on each elbow (Figs. 39, 50) or on the back (Fig. 55).
2. One hook consisting of a circular perforation was cut through the material at the top of the head (Figs. 40-2, 47, 59), or through the body (Fig. 60).
3. Two holes were drilled conically widthwise from side to side, either through the ears (Figs. 49, 76) or below (Fig. 69), or through the neck (Figs. 36, 74). In some instances, the holes through the ears were connected to two other sets of holes, either drilled through the top of the forehead until the neck (Fig. 34), or horizontally at the back of the body (Fig. 35).
4. Two holes, located either at the back of the body (Figs. 53-4, 62, 75) or the head (Figs. 65, 80) were drilled horizontally and connected with each other.

In some instances, however, no information referring to holes has been provided in the Classification, because either the pieces are located in museum cases, or are museum photographs.

The figurines with only one or two holes were most likely used for suspension as a component of a necklace. Those with more than two holes could possibly have been sewn to a perishable material and used as part of a body ornament or a headdress. All the figurines have holes, either for suspension or to be sewn to another material. This suggests that their utilitarian function was similar, i.e. as a component of an ornament or a garment. There are however two exceptions without holes: an figurine from Apatzingán (Fig. 70); the utilitarian function was probably different, and could once have been affixed to a shaft; and some figurines from Hatzcap Ceel, found in a cache with other similar figurines with holes (Thompson, 1931: 273).

I believe that only those circular perforations mentioned above served for suspension. Other types of perforations, like the ones pierced through the ears, the mouth, under the armpits and the crotches (Table 13), were certainly used for the inlay of other materials. Unfortunately, traces of adhesive are very difficult to find (C. Cartwright, pers. comm.)

Some solid pottery figurines from Jalisco show the same type of holes for suspension, and probably had the same utilitarian function, as components of a necklace, as those made of shell. A pair of male and female figurines from Jalisco (Fig. 273) have two holes located

between the elbows, pierced from front to back. A further example is provided by Fish (1974: 213) who reports on several specimens found in Hacienda de Periquillos, coastal Colima. They all have holes pierced through the ears. One figurine (ibid, Fig. 1a) has four holes, two in the ears and two in the formation of the arms. The author suggests that these figurines might have been worn as a pendant on the chest, by means of a chord running through the holes.

**DECORATION.** In most specimens, only one side of the figurine has been decorated. The decoration, if any, is either on the convex or the concave side of the shell only, and does not carry over to the sides or back. There is one exception (Fig. 70) which has elements of decoration on both sides and the back. The body decoration, whether incised, in the round, or painted, is sometimes difficult to identify because in most instances it has been altered through time.

Two-dimensional figurines are decorated with incised lines and with cut through elements, used for the treatment of the arms and legs, and occasionally for the eyes and ears. The same technique has been used for three-dimensional figurines, with the addition of the carving in the round, used for the treatment of the arms, legs, nose and feet. Circular perforations through the eyes, the mouth, under the armpits and the crotches, were either drilled through the material (two-dimensional figurines) or ground on the surface of the shell using a cylindrical piece of sandstone or some other type of abrasive tool (three-dimensional figurines). These circular-shaped motifs were used for the inlay of another material (Figs. 38, 69, 70). In Apatzingán, remaining bits of inlay found next to the shell figurines indicate that both shell and pyrite were used for the decoration (Kelly, 1947: 125).

In addition to the techniques mentioned above, paint was used for the decoration of figurines. Traces of red paint have been preserved on one arm of a figurine from Chupícuaro (Porter Weaver, 1956: 564), in the incised lines of a profile head from Piedras Negras (W. Coe, 1959: 56) and over the surface of a small death mask from Uaxactún (Ricketson & al, 1937: 202). Black paint has been used for one of the figurines found in Tikal (Moholy-Nagy, 1985: Fig. 10.8). Several colours of paint were probably used in the same figurine for the decoration of body parts and garments, like loincloths and headdresses. This use of paint for the decoration of various parts of the body and ornaments is backed by the illustrations found on small pottery figurines from Amapa (Grosscup, 1961), Los Altos (Williams, 1974) and Hacienda de Periquillo (Fish, 1974). In this latter site, the faces of the figurines are covered with red paint and

the bodies with undulating lines of red over white (ibid: 212).

## CONTEXT

Table 6 shows that all the anthropomorphic figurines from the Occidente come from burial contexts. None of them has been found in a shaft-tomb. However, the assumption that these could belong to the mortuary offerings deposited in shaft-tombs cannot be rejected, since most of these tombs have been found looted, and few have been excavated. In Central Mexico and the Maya area, figurines have been found in burials and caches.

In Mesoamerican mortuary deposits, important individuals were buried with ornaments and symbolic miniature objects indicative of their status. These may have helped as articles to be used by the deceased in the afterlife (Nagau, 1985: 75). These figurines were also part of the mortuary deposits and functioned as offerings which were deposited in the tomb with the dead as part of the ritual inventory. Their relationship with the other offerings and the deceased remains unknown. They were however closely associated with the dead and with specific parts of the skeleton, and have been found in the following relationship with the skeleton: around the neck (Burial 29/ Kelly, 1947: 125), on one side of the chin and beneath the skull (Burial 34/ ibid), next to the left side waist (Burial 36/ ibid: 119) and to the left hip (Kidder & al, 1946: 46). All these examples come from Apatzingán, except from the last one, from Kaminaljuyu.

In addition it seems that several figurines could be associated with a single individual. In Apatzingán, several shell and pyrite figurines have been found in association with different parts of the same skeleton in burials 29 and 34 (Kelly, 1947: 125). In Cuitzeo, four specimens were found in Burial 63, Tomb 2 (Macias Goytia, pers. comm.). As Kelly suggests (1947: 125), these were probably part of a necklace. The Apatzingán specimens are all similar in shape and both belong to the same stylistic tradition (Figs. 36, 37). It can be suggested that shell and pyrite figurines were used for the same ornament. The Cuitzeo specimens are different in style and shape but could however be included as components of the same necklace, with a central element (Fig. 52) surrounded by several other ornaments, all similar in shape.

Unfortunately we do not have much information on the age and sex of the associated skeletons. We know that figurines were used in infant burials, as in Apatzingán, where shell and pyrite figurines were

found with a child burial, No. 29 (Kelly, 1947: 178, Fig. 72 b/ Figs. 36, 37) and in Chupícuaro (Porter Weaver, 1956: 564). However, on the assumption that all these shell figurines all represent males, we can assume that they were only used by adult males.

## DATES

We do not know how far back in time the use of shell anthropomorphic figurines in the Occidente goes, as we only have one example from a Formative context. From the evidence provided in Table 6, it is possible to assume that most pieces date back to the middle and late Classic.

We cannot however discount the assumption that shell figurines were used before and after those dates. During the Formative, shell figurines were found in Tlatilco (Lorenzo, 1965: Fig. 84) and in Chupícuaro (Porter Weaver, 1956: Fig. 251). In addition, if we accept the view, explained in the next paragraph, that shell and solid pottery figurines had a similar symbolic function, the solid pottery figurines from Tlatilco and Chupícuaro come to support the view that similar ones were also made of shell during the Formative in the Occidente.

It seems however that the tradition of manufacturing shell anthropomorphic figurines was discontinued during the Postclassic in the Occidente. We hardly have any examples from that period in archaeological contexts, either from this area or from any other parts of Mesoamerica. Stylistically, only three pieces can be attributed to the Tarascans during the Postclassic (Figs. 70, 78, 79). But the idea that this vacuum is due to the lack of archaeological evidence and to insufficient information cannot be ignored. Consequently the possibility that this tradition existed during the Postclassic should remain open to further research.

Since most of the pieces included in the Classification do not come from any archaeological context, their age must be determined by stylistic comparisons with analogous dated specimens from other sites (see Ch. 8).

## FUNCTION

Shell anthropomorphic figurines (I) and head representations (II) had a double function in Mesoamerica: a utilitarian and a symbolic one, during the lifetime and after the death of the individual. As

utilitarian items, their function is backed by archaeological evidence. They were used either as a component of an ornament \*, i.e. hanging from a necklace, or of a garment. i.e. sewn to a headdress, headband or another piece of cloth. In both instances, they could be used on their own or in association with similar figurines, as in Apatzingán.

Their symbolic interpretation is more difficult to define, and can be revealed through two different sources: the context where these artifacts were found and pottery figurines. During life, we can only assume that they had a symbolic connotation for the individuals who wore them. After death, they were used as mortuary offerings to accompany the deceased.

**I. FIGURINES.** The best source of information which could help in the interpretation of the symbolic function of shell figurines is a comparison with solid pottery figurines. Both were miniature representations of the human form, were decorated with body ornaments and garments, and were used as mortuary offerings. The main structural difference lies in the fact that, as opposed to shell figurines, the pottery ones did not have any holes for suspension. There is little doubt that their symbolic function was probably similar to that of the shell figurines, as similar iconographic elements, like loincloths, headdresses and necklaces, appear in both.

Solid pottery figurines are known from the middle Formative through Postclassic periods, a span of nearly 2500 years. They range from the crudest hand-modelled representations to extremely elaborate mold-made figures, with exquisite details of dress and hairstyle carefully depicted. In most instances, recognisable gods are notoriously absent. Since a great majority is of young women, Séjourné (1952) has suggested that they served as fertility images to ensure abundant harvests, but this does not explain the presence of males. Such figurines are included in some Tlatilco graves, and they are a typical feature of the burial furniture of various sites in middle Formative Central Mexico (M. Coe, 1965: 25). In spite of the abundance of such figurines, their function in ancient West Mexican as well as Mesoamerican society is unknown, and has rarely been

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\* The terminology "pectoral" and "pendant", used in the literature, has been avoided. Its use comes from the fact that these pieces were found in burial contexts either on the chest of the skeleton, or on one of its sides, e.g. El Infiernillo. They were found either on their own, supported by a string, or in association with beads or other types of ornaments, but the piece was never duplicated and always consisted of the main component of the necklace (Suarez, 1977: 52). This terminology is based on present day interpretation of the utilitarian function of an artifact, and eliminates all other interpretations.



debated (Hammond, 1989: 111).

The main question which arises from a study of shell figurines from the Occidente is what meaning they held for the people of this area. Because we hardly have any written records from this area, implications of this question will probably never be known: Who made these figurines ? Who used them ? Whom do they describe ? And why were they made ? They offer little in the way of information about the society that produced them. We can only assume that they were made by skilled craftsmen in specialised workshops for an elite who valued them as symbolic items during their lifetime and after their death. The fact that they have been found in graves with other mortuary offerings refutes the idea that they were used as ornaments for decorative reasons only.

Supposing that they were worn by an elite only, we can still speculate whether they were male or female attributes. Unfortunately we do not know of any examples of solid or hollow pottery figurines wearing miniature figurines as a component of a necklace, headdress or any other type of ornaments. All the shell figurines included in the Classification are male representations, and one can therefore accept the view that they were used by men only. There is however a lack of emphasis on sexual features on these figurines and it is wrong to assume that the presence of nipples (Figs. 61-2, 64, 69, 72), even in the absence of breasts, is essentially a female trait, as the male chest also has nipples. We know through the illustrations on pottery figurines that women wore ornaments.

Some figurines represent individuals - dead or alive, we have no evidence to support either views - wearing clothing, headdresses and ornaments, like necklaces and bracelets (Table 13). These are shown in detail. These figurines could be identified as belonging to the religious or secular elite within a cultural group. Others lack all traces of decoration or features on the body. They do not have any body ornaments or clothing, and it is possible to assume that they represent individuals without any hierarchical function (Figs. 40, 69). However one should keep in mind that these figurines were originally painted, and that the lack of decoration in their present condition does not reflect the decorative features they probably displayed at the time they were used. In addition, some representations seem to have a more realistic body and facial features than others. They may not have been intended to represent individuals, but archetypal ideals.

Neither do we know whether figurines types were permitted only to certain individuals or groups of people by the elite of the hierarchy, or whether anyone could make use of them. The recognisable stylistic tradition of figurines from the Occidente, and the repetition of some stylistic motifs on many figurines, like the bird's motif, the helmets and the square-shaped pattern (Table 13) would seem to indicate that some sort of information was conveyed by and to the people of the area.

A further question which arises is whether they were used within a secular or religious context, although the distinction may have been irrelevant for those who wore them. The difference is pointed out because in Central Mexico during the Classic period some pottery figurines were made in the likeness of gods (Linné, 1934: 119/ Séjourné: 1966: 274-277), and were represented with their attributes, while others do not show characteristics of any specific deity, or simply consisted of a plain, non-decorated surface. The same argument applies to shell figurines. Because some of them were probably painted, and might have been originally portrayed with some specific attributes, i.e Fig. 69, it is impossible, under the present conditions, to assign to them the characteristics of any specific deity.

It is possible that certain types of figurines were associated with various groups within the community, or with neighbouring religious centres, but unfortunately we have no information to back this view. As Hammond suggests (1989: 112), they may reflect a cult of the ruler. The meaning or purpose of the figurines changed from culture to culture, but they seem, in general, to have functioned in household rather than public rituals, and to have been included in graves as funerary offerings.

Other cases of figurine function in Mesoamerica include curing and witchcraft, fertility rites, burial goods, cult images, toys and musical instruments. Some may have been broken intentionally (Lee, 1969), but no broken specimen made of shell has been found in the Occidente. It is likely that they had a variety of uses through time (ibid: 65).

Although the function of these pieces remains unknown, their shape, in some instances, seems to communicate a message. The specimen in Fig. 50 resembles the shape of the rasps illustrated in the polychrome pottery figurines from Nayarit (von Winning, 1974: Fig. 285), and may have been used as such. The top of the rasp was often

decorated with a child's head and torso, as on pottery figurines from Ixtlan, Nayarit (von Winning, 1974: Figs. 278-280). In some figurines, the rasp was replaced by a new born child. Furst (1985: 38) believes that there might be an association between the rasp and the child for an initiation ceremony and interprets these figurines holding a rasp/child as the Mother Goddess, who has given life and sustains all humankind. Lumholtz excavated a number of notched human femurs in the vicinity of Zacapú, Michoacán (Lumholtz, 1987: Vol. II, 428-429). He also observed Huichol Indians rubbing notched rear bones to accompany a deer hunting song (ibid: 155).

Clay and stone have also been used as a means of representing the human form in a miniature scale.

a. Small solid figurines, between 4.- and 19.- cm high, have been located in Jalisco, like the two specimens mentioned above (Fig. 273) and those illustrated by Kan & al. (1970: Fig. 93), and in Colima (ibid: Figs. 140-146). Most of them seem to be female. A nearly identical piece from Tala, Jalisco, is illustrated in Vaillant (1930: Pl. XXXII, bottom row, 5). There is however no indication in the literature referring to suspension holes on those figurines.

b. Several types of stones were also used for the manufacture of figurines. In Michoacán, two figurines made of pyrite and originally inlaid (Fig. 37) have been found around the neck of a skeleton in a burial in Apatzingán (Kelly, 1947: 176). They are stylistically identical to other specimens made of shell found in the same context (Fig. 36). Other stone figurines from Michoacán include: a stylistically similar piece to the ones mentioned above, with circular eyes inlaid with shell (Museo del Estado, Morelia, Mich., No. 311) and a three-dimensional figurine made of obsidian, presumably from El Otero (Centro de Estudio de la Revolución Mexicana, Jiquilpan, Mich.). Jade was used for the manufacture of figurines such as the seated male figurines from Colima (Sainsbury Collection, Norwich, No. UEA 711). All these pieces had holes for suspension.

**OTHER AREAS.** In the southwest United States, the human form carved in shell may be regarded as characteristically Hohokam. Other occurrences can be found in the Mimbres, where the similarity to specimens from the Citrus site near Gila Bend are specific (Cosgrove, 1932: Pl. 76/ Wasley & al, 1965: Fig. 77). Haury (1976: 313) believes that the Hohokam of southern Arizona and the Mimbrenos of southern New Mexico were in reasonably close contact. He suggests however that the Hohokam were not the originators of the human-form shell ornament because almost identical specimens

have been found in the vicinity of Guadalajara, Jalisco. The parallelisms between the Hohokam specimens of Snaketown and the one from Jalisco relate not only to shape but also to the method of production (Fig. 33/ Haury, 1976: Fig. 15.17 bb).

**II. HEAD REPRESENTATIONS.** These can be divided into two groups: masks (1) and skulls (2).

1. The use of lifesize pottery and stone masks was widespread in Mesoamerica and they occur from Olmec times to the Conquest. They were placed in mortuary deposits to accompany the deceased. The Formative inhabitants of the Basin of Mexico sometimes buried their dead with pottery masks, while the Maya, Zapotec and Mixtec interred lapidary masks, some of which may actually have been pectoral ornaments (von Winning, 1974: 41). Masks executed in a variety of styles and made of greenstone, obsidian and other lapidary stones have been found in Mexica caches. They probably functioned as insignia accompanying interred deity sculptures, much as they were buried with deceased individuals in pre-Mexican contexts (Nagau, 1985: 73).

Lifesize pottery masks are known from the Occidente, particularly in Colima. They are fashioned in a naturalistic way and are large enough to cover the face, but it is doubtful that they were used on the faces of living persons since the eyes are not perforated (von Winning, 1974: 41). Usually both ears are pierced. Since most of the specimens have a hole in the middle of the forehead, they may have been used as pectorals (Kan & al, 1970: Figs. 148, 150). Von Winning (1974: 41) suggests that clay masks were placed on the face of the dead at time of burial. M. Coe (1965: 54) believes that masks were used by men, but there is no archaeological evidence, at least in the Occidente, to support this view.

The miniature shell masks illustrated in Figs. 57-8, 77, from Michoacán and Jalisco, are decorated on the convex side only. As von Winning suggests (1974: 41), these could have been made for a particular individual. In spite of their simplicity, they appear to reveal individual characteristics. The hair is always covered by a headband and the eyes are sometimes closed, like in Fig. 57. In Fig. 77, the ears are perforated, as in most of the Colima masks (von Winning, 1974: Figs. 58-60). These perforations were probably used for the insertion of another material, but not for suspension.

They probably fulfilled the same utilitarian functions as the lifesize masks, i.e. for suspension, as they had either two holes on each side of the head (Figs. 57-8), or two connecting holes at the back (Fig.

77). In Central Mexico, miniature masks were worn on the chest as a pectoral, a custom which is clearly shown by Classic Teotihuacán figurines (von Winning, 1974: 41). They could have been worn as a component of a necklace, and were suspended either on a row of beads or to a string made of perishable material. A necklace consisting of an anthropomorphic mask and round beads of soft green stone, reputedly from Uspero, east of Apatzingán, is illustrated by Kelly (1947: Pl. 20 a). Pendants in the shape of a mask have been illustrated in the solid pottery figurines from Teotihuacán (Séjourné, 1966: Fig. 112).

In Colima, human heads, which could be interpreted as representing masks (von Winning, 1974: 42), are illustrated in different material. In pottery, they are modelled either in the form of spouted vessels (Kan & al, 1970: Fig. 123), in four and nine-faces vessels (ibid: Figs. 127, 128) and as body garments, suspended from shoulder straps on both sides of the belt (Eisleb, 1971: Fig. 1/ Nicholson & al, 1979: Fig. 42). In shell, they are carved on the nodules of shell trumpets (Fig. 15). In stone, human heads are illustrated on one of the edges of a metate from Michoacán (Kubler, 1954: ibid: Fig. 57).

**OTHER AREAS.** In the southeastern United States, shell masks, usually pear-shaped but also oval-shaped, have been reported in forty three different sites. They are all decorated on the convex side. Variability of shape and decoration indicates stylistic expressions of a similar theme. With the exception of one mask buried with a female, the majority have appeared in male contexts. The majority of these masks had two holes for suspension and were probably used as "gorgets", or pectorals, although some might have been used as death masks. The interpretation of the symbolism of the mask suggests that they functioned as a warfare and perhaps a hunting related role. It seems that they were used primarily in the sixteenth century, although they may have been used earlier and were definitely in use later (Smith, 1989).

2. Miniature skulls (Figs. 78-9) were probably also used as a component of a necklace, either on their own, worn on the chest, or with other similar pieces. They were very widespread in Mesoamerica during the Postclassic, i.e. the shell necklace representing eighteen skulls found inside a pottery jar near Texcoco (Lothrop, 1957: Fig 60). Pendants in the shape of a skull have been illustrated in the solid pottery figurines from Teotihuacán (Séjourné, 1966: Fig. 112). Similar death masks were also carved on skull-rack altars, or *tzompantli*, for sacrificial ceremonies, and were associated with death and sacrifice (Matos Moctezuma, 1988:

The Mesoamerican concept of dualism, usually associated with women, is illustrated in Western Mexican iconography through double-headed figurines (Fig. 60) and double heads representations (Figs. 59, 255). In these three examples, the sex is difficult to determine, because the body is too abstract or the heads only have been described. The earliest occurrences of double-headed pottery figurines, consisting of a single female body with two heads, come from Tlatilco during the middle Formative. These show females, often in an advanced state of pregnancy and were associated with principles of growth and fertility (von Winning, 1970). They are also known from a later period in Central Mexico, Veracruz and the West Coast. In the Occidente, the concept of dualism is evident in the anthropomorphic and zoomorphic figurines, particularly those from Colima and Nayarit. Double head bodies are illustrated in pottery figurines from Colima (von Winning, 1974: Fig. 112) and in males figurines holding a double-headed rasp from Nayarit (Gallagher, 1983: Fig. 143).

**Table 6. Anthropomorphic figurines from archaeological contexts in Western Mexico, other selected sites in Mesoamerica and the Southwest.**

**Key for Table 6**

w.f. = whole figurine      2 dim. = two-dimensional  
 S = surface collection      3 dim. = three-dimensional  
 c.f. = refers to the same Figure in the Classification

<u>No/Subject matter</u>	<u>Dimensions</u>	<u>Context</u>	<u>Dates</u>	<u>Observations</u>	<u>Ref. to Clas.</u>
<b>WESTERN MEXICO</b>					
<u>Apatzingán/ Las Delicias</u> , Mich. (Kelly, 1947: Pl. 17)					
2 w.f.	2 dim.	Burial 29	AD 450-650	1 2.1.A.1.a.	<u>Fig. 36 c.f.</u>
6 w.f.	2 dim.	-	"	2 2.1.A.1.a.	<u>Fig. 36</u>
1 head	3 dim.	Burial 36	"	3 2.1.B.2.	<u>Fig. 80 c.f.</u>
<u>Cerro del Huistle</u> , Jal. (Olguin, 1983: Fig. 14)					
1 w.f.	2 dim.	S	-	4 2.1.A.1.a.	-
<u>Chupícuaro</u> , Mich. (Porter Weaver, 1956: Fig. 25 I)					
1 w.f.	3 dim.	Burial 346	early Formative	5 2.1.B.1.	-
<u>Cuitzeo/ Huandacareo</u> , Mich. (Macias Goytia, pers. comm.)					
3 w.f.	2 dim.	Tomb 2, Burial 63	Classic	- 2.1.A.1.a.	<u>Fig. 38 c.f.</u>
<u>Guadalupe Mound</u> , Jal. (Breton, 1903: Fig. 5.12-14)					
3 w.f.	2 dim.	Burial	-	6 2.1.A.1.a.	<u>Fig. 41 c.f.</u>
<u>Tequesquite</u> , Los Altos, Jal. (Williams, 1974: 37)					
3 w.f.	-	S	-	7 -	-
<u>Zacoalco</u> , Jal. (von Winning, 1971: Fig. 1)					
4 w.f.	3 dim.	-	AD 300-700	8 2.1.B.1.	<u>Figs. 62 63, 64 c.f.</u>
<b>OTHER AREAS</b>					
<u>Copán</u> , Honduras (Thompson, 1939: Fig. 97 h, i)					
2 w.f.	3 dim.	Mound 4	late Classic	9 2.1.B.1.	<u>Fig. 69</u>
<u>El Infiernillo</u> , Gue. (Suarez, 1977: Pl. 79)					
1 w.f.	2 dim.	burial	AD 600-1200	10 2.1.A.1.a.	<u>Fig. 46</u>
<u>Hatzcap Ceel</u> , Mountain Cow, Belize (Thompson, 1931: Pls. XXXI, XXXV, XXXIX)					
17 w.f.	3 dim.	caches	Late Classic	11 2.1.B.1.	<u>Fig. 69</u>
<u>Kaminaljuyu</u> , Guatemala (Kidder & al, 1946: Fig. 163 a)					
1 w.f.	3 dim.	Burial A1	Middle Classic	12 2.1.B.1.	<u>Fig. 69</u>
<u>Nebaj</u> , Guatemala (Kidder & al, 1951, Fig. 19 c)					
1 w.f.	3 dim.	cache	Early Classic	13 2.1.B.1.	<u>Fig. 69</u>

<u>Piedras Negras, Guatemala (W. Coe, 1959: Figs. 51 c-h, o, 52 e-g)</u>						
10	w.f.	3 dim.	caches	late Classic	14	2.1.B.1. <u>Fig. 69</u>
1	head	2 dim.	"	"	"	2.1.A.2. -
<u>San José, Belize (Thompson, 1939: Fig. 97 b)</u>						
2	w.f.	3 dim.	Cache D1	AD 633-889	15	2.1.B.1. <u>Fig. 69</u>
<u>Tampico/ Las Flores, Gulf Coast (Ekholm, 1944: Fig. 52 b)</u>						
1	head	2 dim.	burial	Late Classic?	16	2.1.A.2. <u>Fig. 58</u>
<u>Teotihuacán, Tetitla/Yayahuala (Séjourné, 1966: Fig. 45;3rd. row from top,second to the right)</u>						
1	w.f.	-	-	Classic	-	-
<u>Tikal, Guatemala (Moholy-Nagy, 1985: Fig. 10.8 )</u>						
c. 291	w.f.	2/3 dim.	caches/	Classic	17	2.1.A.1.a./ -
			burials			2.1.B.1. <u>Fig. 69</u>
<u>Tlatilco, Central Mex.(Lorenzo, 1965: Fig. 84)</u>						
1	w.f.	2 dim?	burial	Formative	18	2.1.A.1.a. -
<u>Uaxactún, Guatemala (Ricketson &amp; al, 1937: Pls. 67 e5-6, 69 a/Kidder, 1947: Fig. 50)</u>						
3	w.f.	2 dim.	cache/Stela	-	19	2.1.A.1.a. -
3	w.f.	2 dim.	bowl in temple	-	"	-
1	w.f.	3 dim	-	-	"	2.1.B.1. -
1	head	2 dim.	Burial E8	-	"	2.1.A.2. -
SOUTHWEST						
<u>Snaketown, Arizona (Haury, 1976: Figs. 15.17 bb-cc)</u>						
1	w.f.	2 dim.	-	300 BC-AD 0	20	2.1.A.1.a. <u>Fig. 35</u>
1	w.f.	2 dim.	cache	AD 900-1100	"	2.1.A.1.a. -

## Observations

1. The shell effigies were found around the neck of the skeleton. The author believes that these were mounted originally as a necklace, the same as those in (2). The eyes, the mouth and the circular depressions (armpits and crotch) were formerly inlaid: a few remaining bits of inlay indicate that both shell and pyrite were used ( Kelly, 1947: 125, Fig. 71p). Height: 4.70 cm each. Two similar anthropomorphic figurines made out of pyrite and originally inlaid were found in the same burial, beneath the chin of the same skeleton (ibid: Pl. 17 c-d). Those are generally less detailed, but incisions and inlays are roughly the same. In addition, thirteen shell and eight pyrite figurines were also found in Burial 34, three in one side of the chin, four beneath the skull of a skeleton. The former were immediately adjacent to four strands of small shell and stone beads, from which they may have been pendants (ibid: 125).
2. According to the author, these figurines, from the Frich Collection, were originally inlaid. They are mounted as a necklace, interspersed with small animal effigies. Maximum height: 5.60 cm (ibid: Pl. 17 b). All the figurines in (1) and (2) have side to side perforations at both sides of the neck.
3. This piece comes from the waist (left side) of a skeleton (ibid: 119). The neck is perforated and the head was probably once affixed to a shaft (ibid: Pl. 17 a).
4. The outline of this figurine is very stylised. The head is only suggested, and could have been part of a (broken) hook (Olguin, 1983: 109). The arms and the legs are straight, and consist of four notches on the four corners of the body. This specimen has



no decoration. One hole has been cut through from the front to the back, next to the head (ibid: 109). Height: c.1 cm.

5. The figurine, found in a child burial, is slightly convex and its general outline is rather crude. The arms and the legs are straight, like in Fig. 65. An incised line indicates the belt. Traces of red paint are preserved on one arm. A nearly identical specimen of pumice has been found at Tlatilco (Porter Weaver, 1956: 564). Height: 5 cm.

6. The three very abstract figurines were found with one skeleton in a burial inside a mound, in association with pottery figurines and other shell objects, like bracelets and zoomorphic effigies (Breton, 1903: 131). One of them has the same stylistic characteristics as the specimen in Fig. 43, while the outline of the other two is very schematic. The decoration consists of incised lines and of circular depressions. The three specimens have a hole cut through the middle of the head. Height: average 1.90 to 2.50 cm.

7. The characteristic feature of these figurines is the nose, which dominates the face, with the eyes on either side of the nose. All the figurines have a perforation through the head.

8. These figurines are part of a collection reportedly found in one lot, west of Lake Chapala, and were donated to the Southwest Museum, Los Angeles. Two of the figurines (von Winning, 1971: Fig. 1 a, d/ Figs. 63, 64) have straight arms which project freely from the body. Two have folded arms: one has the forearms and the arms positioned at a right angle (ibid: Fig. 1 c/ Fig. 67), the other one is playing a flute with his left hand (ibid, Fig. 1 b/ Fig. 73). The legs are straight and, according to the author, the separation between the legs is comparable to the method used in Mezcala stone figures from Guerrero. The eyes-sockets and the mouth are large and deep and were probably inlaid. The figures have broad shoulders which are accentuated by a groove on the arm. Incised lines indicate fingers and toes. All the headdresses have lateral projections with vertical perforations. Fig. 64 has a horn, a feature which occurs frequently on the pottery figurines of the Occidente. A triangular incision indicates the loincloth and the individuals, all males, wear short pants, in one instance decorated with sets of incised parallel lines of squares. Height: average 5.50 to 7.- cm.

9. These specimens have a crude outline, the same as those from Hatzcap Heel, San José and Uaxactún. The forearms are crossed over the chest, like in Fig. 68, and the legs are straight.

10. The outline of the figure is rectangular-shaped and very stylised. Only the head and the straight legs are well defined. The eyes and the mouth consist of small circular depressions, and two notches illustrate the ears. Two holes have been cut through the upper part of the body. This specimen is made of *Strombus galeatus* (Suarez, 1977: 56). Height: 11.50 cm.

11. These figurines were found in caches 1, 2, 3, 9 and 10, often in association with similar jade figurines. All have a similar treatment for the nose, the eyes and have crossed arms. Their feet are pointing out. Some have holes for suspension, but others lack them (Thompson, 1931: 273).

12. This figurine was found next to the left hip of a young adult skeleton (No. 6), probably male, in association with other shell ornaments (Kidder & al, 1946: 46). This specimen is badly rotten and cut from a large heavy shell. The convex surface is carved. One ear is perforated. The hands are under the chin. Height: 15.50 cm (ibid: 149).

13. The head of this specimen is missing. Incised lines indicate the crossed arms, the fingers, the belt and the division of the legs on the concave surface (Kidder & al, 1951: 55). Height: (without head): 3.50 cm.

14. Three large figurines (W. Coe, 1959: 56 & Fig. 51 c-e) have a height varying between 3.40 and 4.10 cm. All the others, except one, have crossed forearms and a height varying between 1.80 to 2.50 cm (ibid: Figs. 51 f-h, o, 52 e-g). They are all made of *Spondylus*, and although they might be two-dimensional, they have the same stylistic characteristics as the figurines from Copán, Hatzcap Ceel, Kaminaljuyu, Nebaj and San José. The profile head (height: 3.20 cm), two-dimensional, consists of a large

nose and a foliated head ornament. The incisions are filled with red pigment (ibid: Fig. 51 a).

15. These two figurines were found in a cache, inside a vessel containing other pieces of worked shell, a small figurine of dark green polished stone with feet pointing outward and jade ornaments. The same type of figurines, called "Charlie Chaplin" by the author, have also been found, made of jade, in a more sophisticated form in the shaft of the High Priest's Grave at Chichen Itza (Thompson, 1939: Fig. 97 j). The form also occurs in the Nicoya Peninsula, Costa Rica (ibid: 192).

16. The features are incised on a flat piece of shell. This specimen was purchased at the Pavón site (Ekholm, 1944: 481).

17. Some figurines are quite realistic, like those illustrated by Moholy-Nagy (1985: Fig. 10.8). They are usually made of *Spondylus* shell, but sometimes also of a white a nacreous shell, with details added in incised lines or, rarely, in black paint. Maximum height: 3.40 cm (ibid: 154).

18. Although the author classifies this piece under the heading of "anthropomorphic" (Lorenzo, 1985: 53), the outline of the figure is too abstract to include it definitively in this category.

19. The two-dimensional figurines are very crude. The lines indicating the body features are scratched on one side. They all have crossed arms and the feet are pointing out. No facial features are indicated, as in most Maya figurines. The author suggests that they might have been made with *Strombus pugilis*. Height: 2.30 to 3.30 cm (Ricketson & al, 1937: 202).

The three-dimensional figurine is the central element of a necklace (Kidder, 1947: Fig. 86 c). The mouth somewhat suggests La Venta style. The body features are very stylised. A depression can be seen at the back of the head, as if to receive an inlay. Two holes open into a cup on each side of the head. The author suggests that inlays would have concealed the string. Height: 8.- cm (ibid: 63).

The death mask (Ricketson & al, 1937: 201, Pl. 69 a) is concavo-convex. When found, it was covered with red paint. At the back in one vertical rim are two small perforations. Height: 5.- cm. It has similar stylistic characteristics to the skull masks made out of a whole *Oliva* shell from Mayapán (Proskouriakof, 1962: Fig. 45 a) and Chiapa de Corzo (Lee, 1969: Fig. 135).

20. The first figurine (broken below the waist) has the hands resting over the hips. An elongated gap has been cut through the material between the arms and the body (Haury, 1976: Fig. 15.17 bb). The second one (head missing) has the left hand resting over the shoulder; the right arm is in a straight position. The position of the arms has been indicated with incised lines. The legs are straight and cut free from each others, the feet are pointing outward. The crotch is indicated by a circle cut through, like in Fig. 38 (ibid: Fig. 15.17 cc). They are made respectively of *Pteria* and *Halotis* sp., both pearly oysters (ibid: 313).

## **Chapter six**

# **Interpretation of Zoomorphic Figurines**

In the Occidente, shell zoomorphic figurines (2.2.) have been found in archaeological contexts in sites in Jalisco, Colima and Michoacán, but none in Nayarit. They have also been located in most geographical areas of Mesoamerica, e.g. Central Mexico, the Gulf Coast, Guerrero and the northwestern coast. Few shell zoomorphic figurines have been located in the Maya area. Unfortunately the data provided in the archaeological reports referring to these pieces, like those referring to the anthropomorphic figurines, are not consistent and the information is incomplete.

## SPECIES

The problems involved in identifying the species are identical for zoomorphic and anthropomorphic figurines, and have been dealt with in Ch. 5 (p: 172).

In the Occidente, archaeological reports do not provide any information on the species used for the manufacture of shell zoomorphic figurines. In other areas of Mesoamerica and the Southwest, however, we know that the following bivalves have been used: *Glycymeris gigantea* (Pacific) and *Pinctada mazatlanica* (Pacific) in Casas Grandes, *Anadara multicostata* (Pacific) in Chiapa de Corzo, *Chama frondosa* (Pacific) and *Spondylus* sp. in El Infiernillo, and *Glycymeris* and *Cardium* sp. in Los Muertos and the Seneca-Iroquois sites. If we take into account that all these species have also been included by Feldman in his list of Coliman molluscs (1972: Table 1), it is possible to assume not only that the same species (univalves and bivalves) have also been used in the Occidente for the manufacture of zoomorphic figurines, but that there was a preference for the use of bivalves, all from the Pacific. Some large specimens, like the *Glycymeris gigantea*, could reach a length of 10 cm (Keen, 1971: 55).

## MANUFACTURE

Similar criteria to those mentioned in the previous chapter also apply to the structure of the shell used for the manufacture of two-dimensional and three-dimensional zoomorphic figurines. The outer lip of univalves (in some instances juvenile specimens, e.g. *Pleuropoca* sp.), the umbo and the modified valve of bivalves, e.g. large *Glycymeris gigantea* and *Spondylus*, could have been used for the manufacture of both types of figurines. The columella of gastropods were only used for three-dimensional pieces.

**MANUFACTURING TECHNIQUES.** The techniques of manufacture are

similar to those used for the shell anthropomorphic figurines, dealt with in Ch. 5 under the same heading (p: 173).

**HOLES.** All the figurines, except those in Fig. 91, have one, two or more holes. These are either cut through the material, or drilled conically.

1. Cut through the material, a technique applied to most two-dimensional figurines. The placement of these holes varies according to the shape of the figurine (e.g. the neck, the eyes, the elbows, etc.), and probably was subject to the utilitarian function of the piece, i.e. whether they were a component of a necklace, for instance, or attached to a material. Pieces with one (Figs. 85, 99, 108, etc.) or two horizontal holes (Figs. 82, 92, 96, etc.) were probably meant for suspension, while those with two holes in a vertical position (Fig. 81), three (Fig. 104), or more holes (Lister, 1949: Fig. 35 b/ Suarez, 1977: Fig. 39 a), were sewn to a garment.

2. Drilled from one side of the figurine to the other, or connecting holes, a technique applied to most three-dimensional figurines. These holes were located:

- through various parts of the piece, like the head (Figs. 90, 121), the neck (Fig. 84), the body (Figs. 87-9, 93, etc.), or from the mouth to the tail of the animal (Fig. 107);
- at the back of the body, where they have been drilled horizontally and connect with each others (Figs. 121-131).

**DECORATION.** Similar comments to those mentioned in the previous chapter (p: 175) can be put forward for the decoration of shell zoomorphic figurines.

Anatomical features are generally shown by incised lines in all two-dimensional figurines. Eyes, for instance, sometimes consist of a small circular depression surrounded by a circular line (Figs. 90-1, 127-8). This feature, called "dotted-circle" by Haury (1976: 313), has been reported for the decoration of rectangular plates in Jalisco (Kelly, 1949: Fig. 88 p), of bracelets in Sinaloa (Ekholm, 1942: Fig. 21 r) and of zoomorphic figurines in the Wyoming Valley (Kent, 1970: Fig. 3 a-d). In Snaketown (Haury, 1976: Fig. 15.17 t) and Los Muertos (ibid, 1945: Fig. 94 f, i), "dotted-circles" have been used for the treatment of the eyes, like in the Occidente. Haury (1976: 313) suggests that the tool used to achieve this effect must have been a double-pointed stone engraver, with a sharp and pointed projecting end. Rotation as with a compass would produce the required results.

Incised lines have been used for three-dimensional figurines, with the addition of the carving in the round, used for the treatment of the animals' anatomical features. In both instances, eyes were

indicated by a circle cut through or by a circular depression, most likely used for the inlay of another material such as stone (Figs. 81-2). In this last specimen, a small circular depression has been carved in the middle of the stone inlay, resulting in a effect similar to the "dotted-circle" technique mentioned above.

Undoubtedly the painting of shell zoomorphic figurines was practised more than the available information would suggest. No traces of paint have been found on the specimens included in the classification, and no mention of it has been found in the archaeological reports from the Occidente or any other areas of Mesoamerica. In the Southwest, the only references found include, for instance, Los Muertos (Haury, 1945: 153), where remnants of blue and green pigments are visible on two pieces and the Wyoming Valley (Kent, 1970: 187), where the decorative incisions on the fish show a red pigment rubbed into them. An alternative decorative method would have consisted in covering the surface of the shell with small mosaic pieces, like in Chiapa de Corzo (Lee, 1969: 169).

## CONTEXT

As can be seen from Table 7, all the shell zoomorphic figurines from the Occidente belong to burial contexts. In two instances, El Otero and San Sebastian, they have been found in shaft tombs, as part of the mortuary offerings deposited with the deceased. In other areas of Mesoamerica, most of these figurines have been found in burials and caches, with the exception of Casas Grandes, where they have been located in ceremonial and domestic contexts.

Several types of animal representations could be deposited in the same tomb, like in Playa del Tesoro and San Sebastian. In the Templo Mayor, the figurines from Deposit No. 41 depict animals, often associated with water, i.e. fish, frogs, lizards, ducks and serpent-like creatures (Matos Moctezuma, 1988/ Paris: 1981: Pl. 36 b).

The relationship of these animal figurines with the skeleton of the deceased is little known. We know however that they could be placed below the left mandible (Tuxcacuesco-Zapotitlán) - although it might have been displaced -, around the neck (Tampico), or on the right handside of the skeleton (Monte Alban). A few specimens have been found mounted as a necklace, sometimes in association with other materials, such as jade and rock crystals, e.g. in El Otero and Playa del Tesoro, but no information referring to the placement of these pieces has been provided.

We hardly have any references related to the sex and the age of the skeleton associated with those figurines. In Tuxcacuesco-Zapotitlán, a dog figurine was found in an infant burial (Kelly, 1949: 132).

## **DATES**

In the Occidente, all the shell zoomorphic figurines date to the late Formative and the Classic periods, with the exception of Cojumatlán (early Postclassic).

We do not know how far back in time the use of shell zoomorphic figurines in this area goes, as we do not have any specimens dating before the late Formative (San Sebastian). On the evidence provided by other sites in Mesoamerica, like the Tehuacán Valley and Tlatilco, and by various occurrences of pottery zoomorphic figurines in Chupícuaro, we can assume that these figurines were also manufactured earlier during the Formative.

## **FUNCTION**

Zoomorphic figurines, like anthropomorphic ones, could have had a double function, utilitarian and symbolic, during the lifetime and after the death of the individual. As utilitarian items, they could be:

- a. attached through the suspension hole(s) to a necklace, e.g. El Otero (used in association with ornaments made of other materials, like copper rings), a headdress, e.g. Teotihuacán bird's figurine (Séjourné, 1966: Fig. 47), or a belt, i.e. all the pieces with one or two holes; some specimens have a suspension hole located in the lower part of the body, and were probably worn with the heads facing down (Figs. 86-7);
- b. sewn to another material, such as a headdress, i.e. all the pieces with several holes (Lister, 1949: Fig. 35 b);
- c. used as inlays and set into another material, such as wood, i.e. all the pieces with no holes (Fig. 91).

Their utilitarian function for the people who used these pieces is illustrated by the following sources.

- a. During lifetime. Pottery anthropomorphic figurines from Colima illustrate the way these zoomorphic ornaments were used a component of a necklace: in the shape of a bird (Piña Chan, 1960: Fig. 49) and of an unidentified animal, similar to the pisote in Fig. 110 (Gallagher, 1983: Fig. 30). In both instances, the heads are facing up and the figurines seem to be attached to the necklace by means of two suspension holes cut through the body.

We also know that zoomorphic forms have been used for the decoration of headdresses and other garments, i.e. figurines wearing a headdress and a belt with a canine head (Kan & al, 1970: Fig. 116), or a helmet flanked by a dog (Gallagher, 1983: Fig. 115) and a ballplayer figurine, from Xochipala, Guerrero, dated roughly between 1200-900 BC (Sainsbury Collection, Norwich, No. UEA 672), wearing an elaborate headdress in the shape of a bird (Jones, 1991: Fig. 1).

b. After death. Zoomorphic figurines, mounted as a necklace around the neck of the skeleton, accompanied the individual in the afterlife (Cerro del Huistle, El Otero).

The importance of the symbolic function attached to animals is reflected in the diversity of animal forms represented in various media, like clay, stone, paintings on pottery and murals, and codices. There are, in Mesoamerican art and archaeology, regional patterns of animal representations just as they were different regional cultures (Compton, 1964: 203).

In Michoacán, many zoomorphic pottery vessels, in the shape of birds and of unidentified mammals (Frierman, 1969: 72, 76), have been found in the burials of Chupícuaro, but the use of faunal motif in ceramic decoration is almost non-existent (Compton, 1964: 204). In the Tzintzuntzan area, we find many zoomorphic vessels, and many animal forms used as painted decoration. These vessels range from highly naturalistic representations to those which are barely recognisable as animal forms. Miniature objects, like vessels, are common, and frequently decorated with highly stylised grotesque animal forms. They were often buried with women (ibid: 205).

In Colima and Jalisco, we find a wide variety of pottery animal forms, probably meant to be used as vessels to contain liquid, and of animal motifs, like dogs and pisotes. Most of these are naturalistic representations, although some are so stylised that it is often difficult to decide whether or not they were intended to be animal forms (ibid). In addition, a diversity of animal designs is illustrated on pottery vessels, a tradition which is known since Amapa, Nayarit (Bell, 1971: 710).

In the Occidente as in other areas of Mesoamerica, we rarely get the life and death struggle between man and animal or between animals themselves, representing the constant conflict between both and the war of good and evil, which characterise the animal symbolism of the Old World (Compton, 1964: 203). On the contrary, it seems that more emphasis is placed upon the symbolic man-animal relationship, illustrated either directly or indirectly in various forms since the



1. Direct association

1.a. When men and animals are portrayed in their natural forms, i.e. in the pottery figurines and vessels from Colima portraying a man accompanied by a dog (Nicholson & al, 1979: Fig. 48/ Furst, 1965b: Figs. 17, 24, 27), riding a long-necked water bird (ibid: Fig. 14) or enclosed within an arch formed by a two-headed snake (Gallagher, 1983: Fig. 21/ Furst, 1970: Fig. 5).

1. b. In ceremonial contexts, the man-animal relationship is implied in the tradition of animal sacrifices. We do not have any direct references from the Occidente, but Noguera (1967: 210) suggests that the dog was, among all the animals, the one which was more often sacrificed. In addition, Landa refers to the sacrifice of several types of animals among the Maya, such as water birds, small mammals and fish. Their blood was then splashed over the statues of the idols to which they were sacrificed. They sometimes took the heart of the animal out, like in human sacrifices. According to the same author, it was usual among the Maya to substitute an animal for the sacrifice of a human being (Tozzer, 1941: 114, 163).

1. c. Through death, in ceremonial and burial contexts. Animal skeletal remains have been found in burial contexts in some sites in Mesoamerica either associated with human bones, on their own. Among faunal remains at San Lorenzo, for instance, a toad (*Bufo marinus*) was found, together with fish and human skeletal material (Furst, 1972a: 43). A bird bone was found in a grave in Chupícuaro, in the left hand of an adult skeleton, associated with pottery vessels (Frierman, 1969: 81, 84). Porter Weaver (1981: 120) reports that dogs were buried and that sometimes they were given offerings. In Chupícuaro, most of the skeletal remains believed to belong to forty nine dogs (a dog skeleton may be easily confused with that of a coyote) were found in pits, some of them mixed with human burials, in the El Rayo cemetery. Six dog skeletons were accompanied by offerings, e.g. obsidian, human figurines and pottery vessels. The earliest record of this custom to date is at Tlatilco, from which time the practice seems to have persisted up to the Conquest in sites such as Zinapécuaro, Monte Albán, Teotihuacán and Tenochtitlán (Porter Weaver, 1956: 537). In the Maya area, the skeletal remains of a small dog and thirteen human beings were found in Sartaneja, Belize, late Postclassic (Boxt, 1988: 33). It should also be added that animal figurines have been interpreted as food offerings placed with the body of the deceased in the tomb (Nicholson & al, 1979: 89) and on the altars, i.e. the images of those animals required for consumption. This tradition is well documented in historical and

2. Indirect association, with artifacts possibly related to men's activities within a ceremonial and religious context.

2. a. Through an instrument, by means of the following mediums:

2.a.a. musical instruments, i.e. whistles in the shape of a bird (Meighan, 1976: Pl. 55 e, Amapa/ Kelly, 1945a: Fig. 61 d-e, Culiacán/ Bell, 1971: Fig. 6 a-c, Amapa) or of a feline (Meighan, 1976: Pl. 55 f, Amapa); flutes with zoomorphic heads (Kelly, 1949, Apatzingán/ Lister, 1949, Cojumatlán/ Gallagher, 1983: Fig. 75, Colima); bird effigy rattles (Porter Weaver, 1956: Fig. 22 l-m, Chupícuaro, Late Phase/ Kelly, 1945a: Fig. 62 d, Culiacán);

2.a.b. vessels, either in the shape of dogs, birds, etc, or associated with animal forms, e.g. tripod vessels with legs in the shape of parrots (Nicholson & al, 1979: Fig. 77 a, Colima) or fish (ibid: Fig. 81);

2.a.c. pipes (Kelly, 1947: Fig. 67, Apatzingán);

2.a.d. figurines holding a bird-headed staff (Furst, 1965b: Fig. 21, from Colima);

2.a.e. others: man-lizard association (Fig. 130).

2. b. Through body ornaments and garments, like shell zoomorphic figurines, headdresses (both dealt with in the previous sections) and masks, possibly worn by priests during religious ceremonies dedicated to a specific god. Masks are an important element in the iconography of Western Mexico and can be found in two forms: a) zoomorphic figurines, i.e. birds, wearing human-like headdresses (Gallagher, 1983: Fig. 72) and dogs wearing anthropomorphic masks (ibid: Fig. 67), both from Colima; b) anthropomorphic figurines, like men wearing an animal mask, usually a bird (Furst, 1965b: Fig. 24/ von Winning, 1974: Fig. 42/ Piña Chan, 1960: Fig. 47), or a fish (Gallagher, 1983: Fig. 60).

Zoomorphic masks, with holes for suspension, have been found in Sinaloa, and were possibly used within a ceremonial context. They illustrate birds (Piña Chan, 1960: Ph. 58, Guasave) or dogs. A pottery mask depicting a coyote, or a dog (height: 16.50 cm), with remnants of a white slip, has been found in Culiacán (Kelly, 1945a: Pl. 4 d). The author believes that the row of perforations around the rim of the head, at the rear, were probably used to hold the mask. Animal masks, identified as deers have also been reported in Guasave (ibid: 141).

The association of two animals, e.g. bird-snake and frog-snake, etc., was also an important element in the iconography and religious context of the Occidente, and can be expressed in various ways.

1. As iconographic elements of a same artifact, either on pottery, e.g. the bird-snake association incised on the cloth of

pottery figurines (Nicholson & al, 1979: Fig. 44) and the two-headed birds with snake wings (Gallagher, 1983: Figs. 86, 104) or on shell, i.e. the frog-snake association carved on bracelets (Fig. 189/ Haury, 1945: Fig. 119 g).

2. As a component of a same necklace, i.e. a combination of bird-frog shell figurines in Playa del Tesoro, Burial 12 (Beltrán, pers. comm.) and of frog-snake-fish in the Templo Mayor, Chamber II, Stage IV (Matos Moctezuma, 1988: Pl. XVII).

The Mesoamerican concept of "paired animals" can also be found in most animal forms in the Occidente, made in pottery and in shell: ducks (Furst, 1970: Fig. 14, Colima), pigeons (?) (Gallagher, 1983: Fig. 22, Colima), frogs (ibid, Fig. 166, Colima), pisotes (Fig. 117), dogs, from Nayarit (Gallagher, 1983: 35/ Baus, 1988: Figs. 53, 54 ) and Chupícuaro (Porter Weaver, 1956: Fig. 14 v, u), snakes (Kan, 1970: Fig. 170/ Figs. 167, 189, Colima), etc. Trios and, more rarely, quartets of ducks are found in Colima tombs, as are representations of two ducks flanking a parrot or macaw, or pair of parrots escorting a duck (Furst, 1970: 118, Colima). The question why they occur together is however not explained (von Winning, 1969: 32).

#### SYMBOLISM OF ZOOMORPHIC FIGURINES ACCORDING TO SUBJECT MATTER

If we look at the total corpus of animal art in the Occidente, we realise that, far from having depicted all creatures in their environment, or particularly those which were important for food, the ancient West Mexicans were highly selective. Some animals are seen as "mediators" between different cosmic realms, because they are equally at home in different habitats, e.g. waterfowls or diving birds and crabs. Others embody the principle of transformation and/or rebirth, e.g. frogs and butterflies. In Central Mexico, for instance, Broda (1980: 46) has pointed out the watery associations of many zoomorphic figurines deposited in caches at the Templo Mayor, and suggested that they may have been offerings made to *Tlaloc*.

The subject matter of animal forms was probably predominantly locally derived. Frogs, snakes, birds and a variety of four-footed animals were creatures known to West Mexican people. But the stylistic details (Fig. 90) and the creatures represented cast some doubt on the hypothesis that everything was locally inspired. The intertwining of two serpents, the bird-snake partnership, the frog, etc., were not the monopoly of West Mexican people. They occur in more developed ways and often in materials other than shell in the art of Central Mexico and other areas.

The study of Huichol and Cora symbolism has proved particularly helpful in the interpretation of West Mexican animal art, and ethnographic analogies help to illuminate a few aspects of these multiple meanings. Furst (1978: 27) states that "virtually every creature depicted in the funerary art of the shaft tomb cultures repeats itself in Huichol symbolism". In the Huichol mythology, each god had his own animals (Lumholtz, 1900: 10), and each animal, like fish and snakes, could be related to several gods. The Huichol also believed that in the beginning of time, people were mostly animals, "gods, animals and ancient people being one in the Huichol conception" (ibid, 1987: Vol. II, 196). Some animals, like fish, snakes, iguanas and dogs, were sacrificed to certain gods (Zingg, 1982: Vol. I, 460, 573).

Undoubtedly, all animals portrayed in West Mexican art carried a variety of mythological and symbolic connotations. The present-day Cora, for instance, attribute supernatural powers to a number of small animals, i.e. grasshoppers, frogs and toads, which they revere as deities in their sacred songs (Preuss, 1912: 1-112). Most of these creatures are common motifs in West Mexican tomb art and in other Mesoamerican cultures as well, beginning with the Olmec. The same symbolism, e.g. that referring to ducks and frogs, also occurs in the mythology of the Hopi, Zuni and other Pueblo peoples (Furst, 1978: 27).

In shell figurines, the identification of the animals and species is sometimes difficult (Figs. 81, 89, 136-8 & figurines in Table 7) and it can be impossible to distinguish, for instance, between parrots and eagles (Fig. 90). The references to the figures in the Classification are only suggestions of the author.

## **Birds (2.2.A.)**

### **FIGURES IN CLASSIFICATION: 81 to 90.**

The Huichol believe that birds, especially those which fly highest, are able to "see and hear everything" (Lumholtz, 1987: Vol. II, 7). For this reason, they often are the messengers of the gods. They also possess mystic powers, which are inherent in their wing and tail feathers. Birds are often regarded as guardian spirits or even manifestations of specific psychoactive plants, especially tobacco (Furst, 1976:154).

In Central Mexico, a serpent-bird combination both represented and served as a disguise for *Quetzalcoatl* (Caso, 1947: 11). In the Gulf coast, where "palmas" decorated with a bird motif have been located ("El juego de pelota", 1986: Fig. 23), birds seem to have been

associated with the ballgame (Porter Weaver, 1981: 248). In the Classic Maya cosmology, the celestial bird is resting on the sacred tree of the centre of the earth (Schele & al, 1986: 56). The same myth is portrayed in a ceremonial dish from Colima (Nicholson & al, 1979: Fig. 77 a), in which four parrots are sitting at the four cardinal points of a tree.

### Ducks

FIGURES IN CLASSIFICATION: 86, 87.

The portraiture of ducks suggests their importance of this domesticated animal in the economy as a source of meat (von Winning, 1974: 44). Ducks, from different species, were killed for their meat and for their feathers, which were used for the manufacture of the *huipiles* (Aguilera, 1985: 69).

The Huichol have an important mythological character named Duck Boy, or Duck Man, who is connected in the origins traditions with *Nakawé*, the Great-grandmother, and who gave birth to the first Huichol (Zingg, 1982: Vol. I, 524, 544). These creatures were also considered as mediators between different cosmic realms as they lived on land, on water and in the air. They represented supernatural messengers to the gods and the form the gods sometimes assumed when travelling. They play an important mythological and ritual role both among the Cora-Huichol and in the Southwest (Furst, 1970: 118). Furst (1978: 27) notes that among the Huichol (as well as the Pueblo Indians of the American Southwest) "ducks are preeminently messengers of the gods, highly respected for their ability to seek out distant lands and dive beneath the waters into the Underworld". Both among the Huichol and the Pueblo Indians the gods may assume the shape of ducks when travelling from the interior to the waters of the West (the Pacific), and back (ibid: 25).

The numerous duck effigies from the tombs of Colima recall a familiar theme from Zuni and Pueblo culture in general: the ducks as messengers of the underworld (Furst, 1985: 40). In the Southwest, ducks are considered messengers to the rain clouds of the sacred directions. They are also "seed bearers", a concept that is acted out at Zuñi by filling the skin of a duck with seeds in agricultural fertility rituals (Furst, 1970: 118).

Ducks occur frequently in Colima pottery vessels, either on their own (Furst, 1978: Figs. 18, 19/ Lynton & al, 1986: Fig. 53), or as a group, e.g. three-ducks pottery vessels (Kan & al, 1970: Fig. 176). They also occur as heads (ibid: Fig. 173), in spite of the fact that animal head vessels are much rarer than human ones.

### Eagles

FIGURES IN CLASSIFICATION: 90 (?).

The eagle, or vulture, stands for the Aztec day sign *Quauhtli* (Porter Weaver, 1981: Fig. 11 p). These creatures play an important role in Huichol mythology and are associated with the sky and the sun (Zingg, 1982: Vol. I, 514). The royal eagle symbolises the female deity *Tate' Ve'llika Uima'li*, the Young Mother Eagle, and *Tate' vali*, the Grandfather Fire (Lumholtz, 1900:10). Eagles are the spirit helper, or the tutelary spirit, of the shaman and one of their functions is to warn the shaman of approaching danger, especially from sorcerers (Furst, 1965b: 68). Their feathers were used to cover the shaman's flat woven straw hat and ceremonial arrows (Lumholtz, 1987: Vol. II, 203) and enable him to see and hear everything, both above and below the earth (ibid: 7).

### Parrots

FIGURES IN CLASSIFICATION: 90 (?).

Among the Cora and the Huichol, the parrot was a sacred bird, symbolising the sprouting corn plant, perhaps an allusion to its bright green plumage (von Winning, 1974: 45). The Huichol related this bird to the sun (Zingg, 1982: Vol. I, 512) and the Cora to the Morning Star, one of their three tutelary gods (Preuss, 1912: 36). Parrot feathers were used by the Huichol for the decoration of hats in ceremonies, e.g. for making rain (Lumholtz, 1900: 74) and for the decoration of shields and of warriors dresses (Aguilera, 1985: 55).

The parrot must have possessed an important symbolic connotation, and Nicholson & al (1979: 85, Fig. 80) suggest that it is significant that the "reclinatorios" (spouted effigy vessels with a flat sloping surface) appear to have been essentially modelled on the parrot, implying some intimate connection with rulers and other high status individuals.

Parrots, identified as macaws by Furst (1985: 21), were also associated with the deified Sun not only by the Hohokam civilisation of Arizona, but by the more recent Pueblo Indians. The author mentions that over ninety per cent of all macaw remains found in Arizona and New Mexico, from 200-300 BC on, are tropical Mexican species whose closest natural range is Nayarit.

Parrot effigies pottery vessels were found in 20-25% of the Colima tombs, instead of the much more common dog effigies (: 84). They were either single representations of the animal (ibid: Fig. 77/ Lynton & al, 1986: Fig. 56) or up to four, in a ceremonial dish ( Nicholson & al, 1979: Fig. 77 a). The parrot also appears in Nayarit house models, usually sitting on a ledge at the corner of the building (von Winning, 1974: 45).

### Pigeons

FIGURES IN CLASSIFICATION: 88, 89.

The *centzontle*, or pigeons, were kept in the homes and praised for their singing. They were said to be able to imitate other sounds, such as those of other birds, of dogs and even of humans (Aguilera, 1985: 45). The symbolism attached to this bird is however unknown.

It is difficult to identify pigeons in pottery figurines, because they can be easily confused with sparrows. The tradition of representing pigeons seems to date back to the Formative, as can be seen from the stone specimen from Tlatilco (Niederberger, 1987: Fig. 249). Numerous shell representations, similar to that in Fig. 88, have been located in Zacatecas/Durango, the Valley of Mexico, Guerrero and southern Arizona (stone/ Los Muertos/ Haury, 1945: Fig. 85 c').

Birds representations were depicted in association with human or vegetal species: a spouted jar in the form of a bird with the body of a conch shell trumpet, as indicated by the added mouthpiece, has been reported in Tikal (Burial 10, late Manik ceramic complex). What might be a speech-scroll emerges from either side of the bird's beak (Moholy-Nagy, 1985: Fig. 10.9).

In the Occidente, stylised bird motifs are also associated with the decoration of petroglyphs (Meighan, 1976: Pl. 16) and painted pottery vessels, like in Amapa, Ixcuintla phase (ibid: Pl. 139 c), and of anthropomorphic figurines from Colima (Nicholson & al, 1979: Fig. 44). In this last example, one abstract representation of a bird has been incised on each side of the mantle worn by a pair of figurines. The two-headed aviform motif stands in the centre of a very stylised serpent with a triangular head. This combination suggests that a concept similar to the bird-serpent (*Quetzalcoatl*), widespread in other parts of Mesoamerica, might also have been present in the religious ideology of ancient Colima. Somewhat similar motifs, although more abstract, are found on Colima vessels (Gallagher, 1983: Fig. 104/ von Winning, 1974: Fig. 53/ Westheim, 1972: Pl. 88/ Dwyer & al, 1975: 58-59). According to Land (Nicholson & al, 1979: 65), the Huichol still use the same stylised bird design. The lozenge-shaped body is similar to the one in Fig. 82. The same bird/snake association, in which the bird is shown swallowing the snake, is also found at Los Muertos (Haury, 1945: 152, Fig. 94 e) and is quite common in the early Hohokam period in bone, shell and stone carving (ibid: 132).

### **Fish (2.2.B.)**

FIGURES IN CLASSIFICATION: 91 to 95.

In the Huichol mythology, the fish is associated, together with the

serpent, with the female deity *Tate Hau'tse Kupu'ri* , the Mother North-Water (Lumholtz, 1900: 10) and with *Nakawé* , the Great-grandmother, who created this animal (Zingg, 1982: Vol. I, 533). Fish can also be cave dwellers or nocturnal creatures of the Underworld (Furst, 1978: 25). In Central Mexico, fish are related to the myths of the creation. Men who lived under the sun of water which ended up in a flood changed into various types of fish, and *Opochtli* was the Aztec god of fishing (Aguilera, 1985: 82).

In the Templo Mayor, Umberger has suggested the comparison between the large quantities of miniature shell fish in cache No. 41 and the appearance of similar ones made in clay in the Tarascan area (Nagau, 1985: 77). In Michoacán, the Tarascans were famous for their production of luxury items, including lapidary works and gold and silver fish (Chadwick, 1971: 690-1). Fish was also the distinctive component of the glyph for Michoacán, the Tarascan capital, which roughly translates as the " Place of possessor of fish" (Macazaga Ordoño, 1979: 101).

The importance of fish in the iconography of Mesoamerica has been apparent since the Formative Period. Pottery vessels in the shape of a fish have been found in Las Bocas (M. Coe, 1965: Figs. 59, 60) and Tlatilco (Noguera, 1967: Fig. 1/ Piña Chan, 1989: Fig. 10). The same tradition might have been maintained in Colima, where single (Gallagher, 1983: Fig. 77) and multiple representations, i.e. four specimens supporting a long-spouted jar (Kan & al, 1970: Fig. 165) are portrayed in vessels.

## Scorpions (2.2.C.)

FIGURES IN CLASSIFICATION: 96 to 100.

In Central Mexico, the scorpion was the animal of the Fire God, and is often portrayed with him. It is also an emblem of the time when people mortify themselves (Seler, 1902-2: 226). It was considered as a god among the Huichol and was called " Elder Brother Scorpion", or *Tama'ts* (Lumholtz, 1900: 57). In Central Mexico, the scorpion was associated with the earth and the Underworld (Brambila & al, 1980: 27).

Its distinctive characteristics, as can be seen from the shell figurines in the classification, are the claws and the tail, usually pointing upward or to the right. Scorpions, however, could easily be confused with crayfish. According to Furst (1972b: 131), the "creator of the peyote" is *Naycuric* , who lives in the earth under the shape of a crayfish.

No illustrations of this animal have been found in pottery vessels or



stone in the Occidente. In Central Mexico, they are illustrated in codices (Codex Vaticanus. Seler, 1902-3: Pls 28, 32, 37) and murals, associated with Venus (Cacaxtla. Carlson, 1991). In Snaketown, scorpion motifs have been illustrated on pottery, Gila Butte phase, AD 550-700 (Haury, 1976: Fig. 12.82.p-q).

### **Crabs (2.2.D.)**

**FIGURE IN CLASSIFICATION: 101.**

The symbolism of the crab remains obscure, as there is no reference to it in the literature. Crabs, like other animals, were possibly seen as mediators between different cosmic realms because they are equally at home in two habitats, land and water. A kind of fresh water crab is common in the country of the Huichol, although it is not large enough to be eaten. This animal was considered to be beneficial in helping to make rain (Lumholtz, 1904: 308).

Pottery vessels in the shape of a crab, with ( Lynton & al, 1986: Fig. 50/ Kan & al, 1970: Fig. 163) or without a spout (Gallagher, 1983: Fig. 78/ von Winning, 1974: Fig. 98) are quite frequent in Colima. All the specimens are naturalistically represented. They usually stand on two of their eight legs and always extend their two claws in a menacing manner. They seem to be the only creatures depicted in the iconography of the Occidente which, instead of emphasising the man-animal relationship, are portrayed with the idea of conflict and struggle against men.

### **Frogs (2.2.E.)**

**FIGURES IN CLASSIFICATION: 102 to 107.**

Representations of frogs and toads are difficult to differentiate. It is never quite clear which of these related rain-associated creatures is meant by the artist. Tozzer and Allen (1910: 309), in a study of animal figures in the Maya codices, believe that no distinction in treatment is made between the two. Their common characteristics are a stout, tailless body, a flattened head and a toothless mouth.

In Mesoamerica, toads, or frogs, are widely represented in art, often with feline or other non-naturalistic attributes, including jaguar claws and fangs. They are also associated to the ballgame: a toad with jaguar characteristics is sometimes carved on the outer surface of yokes dating from the early Classic (Brambila & al, 1980: 39). References to frogs and toads are found in historical accounts. Motolinía, in his *Historia de los Indios de la Nueva España* (cited in Braden, 1930), mentions that the Indians of the New World had numerous idols, including "frogs and toads". Mackenzie (1924: 252)

refers to Aztec rites where priests and other dignitaries enter a lake and swallow live water-snakes and frogs; he mentions that the goddess *Chalchiuhtlicue* was sometimes depicted as a frog and that jadeite frogs were favourite amulets. The frog, whose meat was valued by the Aztec nobles, was also related to maize: during the feast of *Tozoztontli*, a cooked frog was offered to *Cintéotl*, the maize god (Aguilera, 1985: 78).

Furst (1972a: 37) suggests that effigy toads represent the Earth Mother in her toad form, and can be regarded as early prototypes of *Tlaltecuhтли*, as she appears on the underside of so many monumental Mexica stone sculptures. The toad is therefore related to the earth as animal manifestation of a dualistic Earth Mother goddess, at the same time destroyer and giver of life. As a symbol of the earth, the first food plants, i.e. maize, sprouted from her body (ibid, 1976: 158). The fact that the toad is very fertile and cannibalistic, often feeding on smaller members of the same or related species, including her own offspring, almost certainly reinforced her role as a metaphor for the earth, as the Great Mother who is at the same time giver and taker of life (ibid: 159).

In Huichol mythology, the frog was associated to the rain gods (Preuss, 1912: 85). Among the present-day Cora, the toad is considered a deity (*takwa*), playing the role of a divine messenger (von Winning, 1969: 31). Preuss (1912: 345) refers to a myth which was chanted by the Cora on the occasion of a feast celebrated at sowing time for the purpose of ensuring the coming and continuation of the rainy season:

*Takú*, the toad, was sent by the elders (i.e. the deified ancestors of the Cora Indians) to the eastern region at the end of the world to fetch the rain gods and bring them to the Cora region in the west... The toad tells them (her three sons) to croak as soon as the rain gods appear, whereupon they must hide at once so that the gods will do them no harm...

The horned toad (Gallagher, 1983: Fig. 20) is a commonly depicted animal which is sacred to contemporary Huichol. It is associated with the "old God of Fire and First Shaman" (or "animal of our grandfather"), with peyote and with the deer, which also has horns and is the most sacred of all the animals among the Cora and the Huichol. We know that toads have been used as hallucinogens in Mesoamerica. An early colonial account by the English Dominican friar Thomas Gage reports that the Pokoman Maya of Guatemala had the habit of adding not only tobacco to their fermented ritual drink, but also poisonous toads to give it a special potency (Thompson, 1970). This practice, which has survived into modern times, may explain the large quantity of skeletal remains of *Bufo marinus* found in San Lorenzo (Furst, 1972a: 43). Porter Weaver (1981: 137) refers

to the importance of those animals as a hallucinogenic medium in relation to the San Lorenzo inhabitants.

Stone mortars in the shape of stylised toads are relatively common, and might have served to macerate peyote (Furst, 1970: 120). The carved stones in the shape of a frog/toad from Amapa (Meighan, 1976: Pl. 87/ Bell, 1971: Fig. 6 I), Cojumatlán, Burial 9 (Lister, 1949: Fig. 34) and the Maya area (Porter Weaver, 1981: 138) may have been related to the grinding of hallucinogens.

For the Southwest, Di Peso (1974: 466) believes that the frog or toad shapes were a favourite of the northern frontiersmen, particularly those who occupied what today is the southern portion of the United States. This is backed by archaeological evidence provided in several sites, i.e. Los Muertos (Haury, 1945: Fig. 93 a-h), the Tusayan Pueblos sites (Fewkes, 1896: 362-364, Pl. 8/ 1904: Pl. 44), Pueblo Bonito (Pepper, 1905: 192) and Casas Grandes (Di Peso, 1956: 93, Pl. 16-1).

Pottery vessels in the shape of a frog/ toad are numerous, particularly in Colima. These are either single representations of the animal, who is often portrayed with a spout on its back (Kan & al, 1970: Fig. 168, Colima ), or dual representations (ibid: Fig. 166, Colima/ von Winning, 1969: Fig. 1, Nayarit). In Western Mexico, miniature frog figurines have also been made of stone, possibly to be used as components of a necklace, e.g. in Apatzingán (Brambila & al, 1980: Figs. 112, 114, 115), and of metal, e.g. in San Gregorio (ibid: Figs. 109, 111).

## **Pisotes (2.2.F.)**

**FIGURES IN CLASSIFICATION: 108 to 117.**

Pisotes are long-nosed, furry animals with a long and bushy tail pointing upward. They are also known as "tejón", or *coati* or *peçotli* in nahuatl terminology (von Winning, 1971: 22). They can be found along the coastal plains, in tropical environments, and in the wooden flat areas at high altitudes. They seem to be particularly abundant along the Bajo Rio Santiago, Nayarit (Starker, 1985: 492). They can be tamed, and kept as pets. Their long claws and tail, and their thin elongated snout, assist the pisotes in their diurnal habits of foraging on the ground and in climbing trees. Short rounded ears enable them to hear well (von Winning, 1971: 22). These features are usually carved in the shell figurines, but their most conspicuous characteristic are the forepaws covering the snout, a habit engaged in when sleeping or playing. It is this posture in which the pisote is commonly represented in the Occidente, and therefore identified as

such on shell and pottery vessels from Colima to Panama (Brand, 1964: 193-202).

Sahagún, in his description of four-footed animals, remarked that the pisote is so named "because its food is everything- maize, fruit; because it is a great eater. And anyone who is a great eater is called a *peçotli* " (Dibble & al, 1963: 10). Consequently, as the pisotes could damage the maize crops, people used to call on the *Tlalocs* before sowing for protecting the milpa (Aguilera, 1985: 44). In Huichol mythology, *Otuanáka* , who protected the maize, turned the men who were damaging these crops into pisotes (Zingg, 1982: Vol. I, 536).

Among the Cora-Huichol and in the Southwest, the pisotes were considered to be great shamans in ancient times and are still believed to be powerful curing shamans, and supernatural owners of medicinal roots (Furst, 1970: 120). Furst (ibid: Figs. 16, 17) believes that some pottery figurines from Colima depict what seems to be a pilgrimage and a shamanistic curing ritual involving a pisote.

In spouted pottery vessels, all from Colima, pisotes are identified because they are depicted nibbling on a stick, or stylised maize cob, with their forepaws (Kan & al, 1970: Fig. 155/ Messmacher, 1966: Pl. 71/ Eisleb, 1971: Fig. 48). Small monochrome pottery figurines, mounted as a necklace, might be representations of pisotes (Museo Regional, Guadalajara). They are similar to the chest ornament illustrated by Gallagher (1983: Fig. 30). For the Southwest, Haury (1976: 319) has reported several examples of pisotes in shell and a depiction of the same creature on a pottery vessel found near Tucson.

## **Bats (2.2.G.)**

**FIGURE IN CLASSIFICATION: 118.**

Bats, called *quimichpatlán* in nahuatl, are prominent, especially in the iconography of the Maya (von Winning & al, 1968: Fig. 398), the Veracruz cultures and in Monte Albán (ibid: Fig. 303). The symbolism attached to these creatures certainly dates back to the Formative period, as can be seen from the pottery figurine in the shape of a bat, from Tlatilco (Brambila & al, 1980: Fig. 69). In the Occidente, the only reference to bats is found among the Cora, who believed that this creature participated, together with the birds, in the myths of the beginning of the world (Lumholtz, 1987: Vol. 1, 513). They have not been illustrated in any material, except in shell (one figurine), in this area.

Bats fall into a whole series of "magical" categories. As nocturnal

creatures inhabiting dark caves (entrances to the Underworld), they were associated to deities of the interior of the earth (Furst, 1978: 28).

Hernando Ruiz de Alarcón, who worked in the nahua area of Guerrero, investigated on the myth of the origins of the bat, or the vampire, and tried to explain its relationship with *Quetzalcóatl*. One day this deity was washing he touched his male organ with his hands, and the seed which came out dropped on a stone. A bat was born from there, and he turned into the messenger of the gods (Aguilera, 1985: 38).

In the Zapotec mythology, bats were associated to *Tlaloc*, fertility and maize (Porter Weaver, 1981: 240). The head, with visible canines and prominent ears and/or horns, was generally the main component of bats representations, e.g. the horned jade mask from Monte Albán, Period II (Furst, 1965b: Fig. 31). Among the Maya, bats were usually depicted with a human body and some elements of the animal's head. Their most distinctive element could sometimes be defined by extended wings and claws (Brambila & al, 1980: 29), like in Fig. 118.

#### Dogs (2.2.H.)

FIGURES IN CLASSIFICATION: 119 to 122.

Dogs, the most commonly represented animals in the Occidente, carry a wide variety of connotations. They had a treble function, and were an important part of the domestic, economic and religious life of the ancient Mexicans. They were kept as pets and used for hunting; certain breeds were an important element in the diet because of their protein contents and were considered a delicacy; they were used for sacrifice in religious ceremonies and were closely related to the deceased in burial contexts (Baus, 1988: 21-25). The dog was, after the human being, the animal most frequently sacrificed to the gods, and his heart was often removed. His meat was then distributed among the participants of religious festivities (Tozzer, 1941: 114).

They seem to represent a special hairless breed which was deliberately fattened. Baus (1988: 19) suggests that most Colima hollow figurines of dogs describe the *xoloitzcuintli*. They are also referred to in the historical sources as *techichi* by Hernandez and *tlachichi* by Sahagún. It is however difficult to identify which species of dog has been illustrated on the shell figurines included in the Classification, as the representations are too schematic in most instances, and do not provide much information.

Their symbolic significance in Mesoamerica certainly goes back to the Formative, as can be seen from the evidence provided by several sites, such as the dog figurines from Tlapacoya (Niederberger, 1987: Fig. 368) and Tlatilco (Noguera, 1967: Fig. 1), the whistle in the shape of a dog from Tlatilco (M. Coe, 1965: Figs. 66, 67) and the painted vessels decorated with the whole body or the head of a dog from Chupícuaro (Porter Weaver, 1956: Figs. 7 a & b, 9 t).

Dogs symbolise nourishment for the living and the dead. In Mesoamerican mythology, the dog was the servant of the god of the heavenly fire, the lord of lightning and thunder, namely *Tlaloc* (von Winning, 1974: 43). It was also believed that they acted as guides for the dead to the Underworld and that they took part in the myth of the creation. Lumholtz (1987: Vol. II, 193) cites the following Cora myth:

The dog was considered to be an independently acting demon in the myths of the creation of the earth and mankind, particularly in the myths of the flood among the ancient inhabitants of Colima. According to this myth, the people followed the trail of a dog, leading to a high mountain, in order to escape from drowning in a rising flood. Meanwhile the dog beat a drum, the sound of which caused the water to swell up in waves, whereupon the people climbed to the summit. Most of them died of starvation while waiting for the water to recede. Those few who survived are believed to be the ancestors of mankind. The dog disappeared into a large lake where the wandering souls visit it on their way to their final resting place.

The existence of a Colima vessel which depicts a series of mountain peaks with what appears to be several houses at their base and a dog beside the highest peak supports the view that this myth was shared by the ancient Protoclassic inhabitants of Colima. It seems likely that this vessel represents an illustration of the flood myth, which suggests again that, to the ancient West Mexicans, the dog represented a very powerful being associated not only with the Underworld but with the creation of mankind as well (Gallagher, 1983: 35).

The Huichol believe that their common ancestor is a bitch, which is associated with *Kauymáli*, from whom she had a son (Zingg, 1982: Vol. II, 225). Every year in December they build two chests, in the shape of a dog and of the Huichol ancestor, where they deposit bags of pumpkins and maize, with the hope of attracting rain on the following year (Baus, 1988: 30). The bitch is also related to the myth of the deluge (Lumholtz, 1900: 169)

Dogs were also closely related to the deceased and to the subterranean world of the Aztec and probably of the West Mexican people too. They guided the dead on their journey to *Mictlan*, the "Land of the Dead". The god *Xólotl*, patron of lightning, deformities, the ball game and *Quetzalcóatl*'s twin brother (Gil Flores, 1986), is

represented with the shape of a dog, who guides the soul of the deceased through *Mictlan* to the underworld. A pottery head of a dog, from Veracruz (ca. AD 300-900), is related to *Xólotl* and associated with the ball game ("El Juego de Pelota", 1986: Fig. 31). *Xólotl* also leads the sun, from dawn to sunset, through the underworld (Tozzer, 1941: 114).

In addition, the dog appears in the calendar system, where he is one of the 20 day signs, *Itzcuintli* (Porter Weaver, 1981: 168). To be born on a day with this sign was very good omen (Durán, 1971: 401). The colour they were painted was also significant: a dog painted in red was sacrificed on the death of a person to accompany his soul to the *Chugnahuapan*, or nine rivers (Beyer, 1965), and in blue was part of the ceremonial dress of the dead warrior (Noguera, 1967: 200). Consequently, the author believes that dog figurines made of shell may have been painted as well.

In the Occidente and to a lesser extent in other areas of Mesoamerica, hollow clay figurines representing dogs were part of the funerary paraphernalia found in shaft tombs and other funerary contexts, and in ceremonial contexts. In Tingambato, for instance, a dog figurine was used as part of the mortuary offerings in Tomb I (Piña Chan, 1982: 63). In the Templo Mayor, a plumbate clay dog was found in Offering 44, Stage II (Matos Moctezuma, 1988: Fig. 125).

Nicholson & al (1979: 68) point out that canine insignia are frequently associated with Colima male figurines, and that they must have possessed important symbolic connotations, e.g. those figurines: a) wearing a shield and a helmet, flanked by a dog (Furst, 1965b: Fig. 17); b) accompanied by one (ibid: Fig. 24); c) wearing a headdress and a belt decorated with a canine head (Kan & al, 1970: Fig. 116), similar to the piece in Fig. 121; d) illustrating a dog with an anthropomorphic mask (von Winning, 1974: Fig. 72).

## Snakes/ Serpents (2.2.1.)

FIGURE IN CLASSIFICATION: 123.

In Central Mexico during the Classic period, the feathered serpent is a traditional figure associated with *Quetzalcóatl* and appears in the iconography of Teotihuacán, e.g. in the Temple of *Quetzalcóatl*, to whom it seems to have been dedicated (Sugiyama, 1989: 72). During the Postclassic, it continues to be described in similar forms until the Aztec period, although the meanings of that image in that period is still obscure (ibid: 68), and it becomes an important element of architecture in the form of the *coatepantli*, or serpent wall forming

part of sacred precincts, e.g. in Tenayuca. The serpent is also associated to other gods like *Xiuhcōatl*, *Mixcōatl* and *Cihuacōatl* (Brambila & al, 1980: 69), and to the fifth Aztec day sign *Coatl* (Porter Weaver, 1981: Fig. 11 e).

Among the Huichol, serpents of different colours were associated with female deities (Lumholtz, 1900: 193) and with the rain cult (Zingg, 1982: Vol. I, 336). Schondube (1972: 359) suggests that the snake was the first deity in Colima, and he associates it with fire or with fertility god and agriculture.

The Huichol used painted sticks (*varillas*) in ritual ceremonies which were decorated with figures in the shape of serpents/snakes (Lumholtz, 1987: Vol. II, 277) which were the symbol of "Grand Mother growth" (ibid, 1900: 50). Together with the Cora and the indians of the Southwest, they used wavy lines to symbolise snakes which, in turn, depict lightning and are related to rain (ibid: 214), a major concern of all agricultural people. In shell artifacts, the stylised body of snakes is often illustrated with a zigzag body (Figs. 20, 123, 167-8/ Haury, 1976: Fig. 15.28 d, f).

Spouted pottery vessels in the shape of a snake are usually coiled (Gallagher, 1983: Pl. 9) or curved (Meighan, 1976: Pl. 141 c), sometimes in a very abstract form (Gallagher, 1983: Fig. 106), and generally from Colima. Painted motifs representing snakes are also illustrated on cloths of pottery figurines (ibid: Figs. 145, 146) on shell trumpets (Figs. 20), and on bracelets (Fig. 189).

The motif of two-headed snakes occurs widely in Western Mexico, ranging from relatively naturalistic pottery effigies (Long, 1966 Fig. 67, San Sebastian/ von Winning, 1974: Fig. 93, Colima) to highly stylised representations on shell artifacts (Fig. 189) and modelled decorations on vessels. Lidded cylindrical vessels from Colima (Gallagher, 1983: Fig. 21/ von Winning & al, 1968: Fig. 108) depict a male figurine standing within a arch formed by a two-headed snake. In the Huichol mythology, the serpent, which encircles the world, has two heads, between which the sun must pass when setting (Lumholtz, 1900: 306).

## **Lizards (2.2.J.)**

**FIGURES IN CLASSIFICATION: 124 to 130.**

The lizard symbolises the earth (Noguera, 1967: 209) and is the fourth of the Aztec day signs, *Cuetzpallin* (Porter Weaver, 1981: Fig. 11 d). Because they are constantly on the move, lizards were related to the creation myths. Lizards, including iguanas, were associated with initiation ceremonies of young girls among the Huichol (Zingg,



1982: Vol.I: 257) and the blood of both creatures - and of fish - was offered to *Nakawé* during these rituals (ibid: 460). Lizards were usually depicted in codices with the whole body in order to avoid any confusion between both creatures (Aguilera, 1985: 75).

In the Occidente, lizards are often portrayed in pottery, stone, shell trumpets and bone.

a. Pottery illustrations, mostly from Colima, include whistles in the shape of a lizard (Kan & al, 1970: Fig. 159), similar to the one in Fig. 126, and spouted vessels, either with an iguana modelled on the surface (ibid: Fig. 169), or with a four-legged stylised animal incised on the top surface, which could possibly be lizards (Gallagher, 1983: Fig. 106), or iguanas (von Winning & al, 1968: Fig. 114). From Nayarit, we have painted lizard motifs, like the two abstract specimens depicted between the breasts of a female figurine (Baer, 1972: Fig. 76) and a polychrome pottery bowl from Peñitas (von Winning, 1956, Fig. 6 r).

b. In stone, the piece in Fig. 130, from Jalisco, describes possibly an iguana with a tail in the shape of a human head wearing a headdress, and is further evidence of the man-animal association. A broken representation of a horned lizard (or a toad) from Snaketown has been illustrated by Haury (1976: Fig. 11.27). It compares with two specimens recovered in 1934 in the same site (Gladwin & al, 1937: Pl. LXXV).

c. Stylised lizards, similar to those from Nayarit, mentioned above, were incised on the inner lip of a shell trumpet (Fig. 19).

d. An illustration of what seems to be a lizard, with a decoration on its back, can be seen on a bone atlatl from Michoacán (Solórzano, 1976: Fig. 23).

## **Crocodiles (2.2.K.)**

**FIGURES IN CLASSIFICATION: 131, 132.**

Crocodiles and alligators are also creatures associated with the water and earth elements and to the creation of the earth (Aguilera, 1985: 70). In Huichol mythology, *Nakawé*, the Great-grandmother, created crocodiles (Zingg, 1982: Vol. I, 533). Among the Cora, a myth refers to the alligator, who lived on land, and which was associated to the puma, who lived in the water. Once the alligator suggested to the puma to change place, which they did, and they lived happily ever after (Preuss, 1912: 286).

In Central Mexico, the *Cipactli*, a crocodile-like creature, appears in Aztec codices and is identified with the first Aztec day glyph (Porter Weaver, 1981: Fig. 11 a). They were possibly also associated with the ball game, as can be seen from the stone *palma* with a crocodile representation, from the Gulf Coast ("Art Précolombien du

Suarez (1981: 22) refers to some pendants in the shape of a crocodile, found by I. Kelly in Colima, but no further references, e.g. pottery or stone, has been found in the Occidente. Among Durango designs is what seems to be a crocodile. This motif is from the Schroeder site just outside the city of Durango (Compton, 1964: 204). Illustrations of crocodiles, called "alligator monsters", can be found on painted pottery vessels (Michilía Red-Filled Engraved) from the Chalchihuites Cultures, Alta Vista phase, c. AD 450-550 (Kelley & al, 1971: 30, Pl. 12 g).

Some animals, like birds, snakes, lizards, frogs and pisotes are illustrated in the decoration of univalves (Figs. 19, 20), of anthropomorphic figurines (Figs. 61, 62, 70) and of non-figurative pieces, i.e. bracelets (Figs. 189), crescent-shaped pieces (Figs. 167, 168) and finger loops (Figs 241, 242). These representations must have shared the same symbolic connotations as the zoomorphic figurines mentioned above and were certainly used by the same people, probably in the same religious context.

The shell effigies included in the Classification and in Table 7 do not depict all local fauna from the Occidente. Not all animal forms seem to have been reproduced in shell, like owls, lobsters, turtles, jaguars, monkeys, mice, deers, armadillos, butterflies and spiders. Most of these creatures are also important elements in Huichol mythology and have been illustrated in pottery figurines and vessels from this area. This lack of evidence can be attributed not only to the poor preservation of the material but also to the problems in identifying the species.

**Table 7. Zoomorphic figurines from archaeological contexts in Western Mexico, other selected sites of Mesoamerica and the Southwest.**

**Key for Table 7**

B = bird	Mo = monkey	h/b = broken head, body missing
D = dog	N.I. = non identified	l = incised decoration
F = fish	P = pisote	r = carved in the round
Fr = frog	R = reptile	s = surface collection
L = lizard	S = snake	w.f. = whole figurine
Mm = mammal	T = turtle	
c.f. = refers to the same Figure in the Classification		

<u>No.</u>	<u>Subject matter</u>	<u>Deco-ration</u>	<u>Context</u>	<u>Dates</u>	<u>Observations</u>	<u>Ref. to Clas.</u>
<b>WESTERN MEXICO</b>						
<u>Apatzingán, Mich.</u> (Kelly, 1947: Figs. 69 s-t, 71 o)						
1	B w.f.	-	-	Postclassic	1	<u>Fig. 87</u>
1	F w.f.	l	burial	AD 450-650	-	<u>Fig. 106</u>
1	Mm w.f.	l	"	"	1	<u>Figs. 115-6</u>
1	L w.f.	-	-	-	"	<u>Fig. 125 c.f.</u>
<u>Cerro del Huistle, Jal.</u> (Olguin, 1983: Fig. 7 h, j)						
2	B w.f.	l	Burial	AD 0-300	2	<u>Fig. 137</u>
<u>Cojumatlán, Mich.</u> (Lister, 1949: Fig. 35 b)						
1	B w.f.	-	burial	AD 1100-1300	3	-
<u>El Otero, Mich.</u> (Noguera, 1944: Fig. 20/ Schondube, 1979: 41)						
16	B w.f.	l/r	shaft-tomb	AD 500-800	4	-
<u>Guadalupe Mound, Jal.</u> (Breton, 1903: Fig. 5.11)						
1	Fr w.f.	l	burial	-	5	<u>Fig. 106</u>
<u>Playa del Tesoro /Las Hadas, Co.</u> (Beltrán, pers. comm.)						
25	B w.f.	-	Burial 12	AD 400-600	6	<u>Fig. 84 c.f.</u>
1	Fr w.f.	l	"	"	"	<u>Fig. 106 c.f.</u>
-	B w.f.	-	-	"	"	<u>Fig. 89 c.f.</u>
<u>San Sebastian, Jal.</u> (Long, 1966: 96, Figs. 97, 91, 98)						
1	B w.f.	l	shaft-tomb	400 BC-AD 100	7	<u>Fig. 75</u>
2	Fr w.f.	l	"	"	"	<u>Fig. 103</u>
11	Fr w.f.	l	"	"	"	<u>Fig. 106</u>
<u>Tuxcacuesco-Zapotitlán, Jal.</u> (Kelly, 1949: Fig. 88 l)						
1	P w.f.	l	Burial 26	AD 150-750	8	<u>Fig. 116</u>
1	Mm w.f.	l	Burial 29	"	"	-
<u>Zacoalco, Jal.</u> (von Winning, 1971: Figs. 2-3)						
3	P w.f.	l/r	-	AD 300-700	9	<u>Figs. 116</u>
3	B w.f.	l/r	-	"	"	<u>Fig. 86 c.f.</u>
2	B/L (?) h/b	l/r	-	"	"	<u>Fig. 134</u>
1	D w.f.	l/r	-	"	"	<u>Fig. 119 c.f.</u>
3	D head	r	-	"	"	<u>Fig. 121</u>
1	R w.f.	l/r	-	"	"	-

# OTHER AREAS

## Casas Grandes, Chi. (Di Peso, 1974: Figs. 513.6, Type V, 534.6, Type XI)

5	B	w.f.	-	floor rooms	AD 1260-1340	10	<u>Fig. 84</u>
4	Fr	w.f.	l	room fills, plazas	"	"	-

## Chiapa de Corzo, Chiapas (Lee, 1969: Figs. 127, 130 a)

2	S	w.f.	l	burial	late Formative	11	-
2	Fr	w.f.	l/r	"	"	"	-

## Culiacán, Sin. (Kelly, 1945a: Fig. 72 j)

1	Fr	w.f.	l	burial	AD 1300-1500	12	-
1	L	w.f.	-	-	-	"	-

## El Infiernillo, Gue. (Suarez, 1977: Pl. 39)

1	B	head	l	B 16	AD 600-1200	13	<u>Fig. 82</u>
1	B	h/b	l	B 10-4	"	"	-
1	B	h/b	l	B 10-2c	"	"	-
1	Fr	w.f.	-	B 10-1	"	"	<u>Fig. 106</u>
1	Mm	h/b	l	B 54	"	"	-

## Monte Albán, Tomb 7, Oax. (Caso, 1969: Fig. 149)

-	B	head	l	burial	AD 300-900	14	<u>Fig. 85</u>
1	Mo	head	-	"	"	"	-

## Sartaneja, Belize (Boxt, 1988: Fig. 9)

1	B	head	l	Tomb 1	late Postclassic	-	-
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## Tampico/ Las Flores, Gulf Coast (Ekholm, 1944: Figs. 51 g-h, 52 a)

44	B	head	l/r	Burial 16	early Postclassic	15	<u>Fig. 90</u>
1	B	head	r	-	-	"	-

## Tehuacán Valley (MacNeish, 1967: Fig. 125, upper right)

1	F	w.f.	-	s	Formative	16	-
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## Templo Mayor (Matos Moctezuma, 1988: Fig. 118 & Pl. XVII)

3	F	w.f.	l	Offering 41	late Postclassic	17	-
-	Fr/F/S	w.f.	l	Chamber II	"	"	<u>Fig. 102</u>

## Teotihuacán, Tetitla/Yayahuala (Séjourné, 1966: Fig. 45, 3rd. row from top, second to the right)

1	B	w.f./b	-	-	-	18	-
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## Teotenango (Piña Chan, 1972: Ph. 21)

1	Fr	w.f.	l	burial(house)	AD 750-1150	-	-
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## Tlatilco, Central Mex. (Lorenzo, 1965: Fig. 85)

1	B	w.f.	r	burial	Formative	19	<u>Fig. 88</u>
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## SOUTHWEST

## Las Canopas, Arizona (Haury, 1945: Fig. 121 f)

1	Mm	h/b	l	-	AD 550-1100	-	-
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<u>Los Guanacos, Arizona</u> (Haury, 1945: Fig. 114 a-c)							
1	L	w.f.	-	domestic	AD 550-1100	-	-
1	B	h/b	-	"	"	-	-
1	Mm	w.f.	l	"	"	-	-
<u>Los Hornos, Arizona</u> (Haury, 1945: Fig. 119 a-d, g)							
2	B	w.f.	l	mound	AD 550-1100	20	-
1	S	w.f.	l	"	"	"	-
1	B/S	w.f.	l	"	"	"	-
1	Fr	w.f.	-	"	"	"	-
<u>Los Muertos, Arizona</u> (Haury, 1945: Figs. 93-94)							
17	Fr	w.f.	l	burials	AD 1100-1450	21	-
2	L	w.f.	-	"	"	"	-
5	B	w.f.	-	"	"	"	-
2	B	h/b	l	"	"	"	-
1	D	w.f.	l	"	"	"	-
<u>Seneca-Iroquois sites</u> (Hayes, 1988: Figs. 1, 3, 5, 8, 11)							
1	S	w.f.	l	burial	AD 1640-1660	22	-
1	S	w.f.	-	"	AD 1575-1600	"	-
7	B	w.f.	l	"	AD 1640-1660	"	-
1	B	w.f.	l	"	AD 1670-1687	"	-
3	B	w.f.	l	"	AD 1640-1660	"	-
<u>Snaketown, Arizona</u> (Haury, 1976: Fig. 15.17 h-n, p, q, t-w, y, z, aa)							
7	B	w.f./b	-	-	AD 200-350	23	-
1	B	w.f.	l	-	AD 700-900	"	-
1	B	h/b	l	-	"	"	-
3	D	w.f.	l	-	-	"	-
1	D	h/b	l	-	-	"	-
1	S	w.f./b	l	-	-	"	-
<u>Wyoming Valley, Penn.</u> (Kent, 1970: Fig. 3 a-b, d-f)							
2	B	w.f.	l	cache	AD 1700-1760	24	-
2	T	w.f.	l	"	"	"	-
1	F	w.f.	l	"	"	"	-

## Observations

1. The bird (Kelly, 1947: Fig. 69 t) may represent a duck; according to the author, the eyes were once inlaid / The mammal, with a long snout and a tail pointing upward, could be identified as a pisote (ibid: Fig. 69 s). Although it is presumed to be of Delicias phase, it accompanied a burial without ceramic furniture. It is reminiscent of the small effigies of the Tuxcacuesco complex, with which it may be contemporaneous (ibid: 119). The lizard (ibid: Fig. 71 o) comes from the Frich Collection. The eyes were originally inlaid. Two holes have been cut through the mouth and the tail, from front to back. The author suggests that this specimen appears to be of stone rather than shell (ibid: 125). Length: 3.90 cm / The same collection includes a number of small elements, of about equal length and width, which presumably represent frogs. In Frich reconstruction, they form the same part of a necklace from which human effigies hang (ibid: Pl. 17 b) / A stylised bird representation made of pyrite, similar to that in Fig. 82, was found in Apatzingán around the neck of a skeleton, in Burial 36. Height: 6.60 cm. Delicias association (ibid: Pl. 18 c).

2. The two pieces, with incised lines along the wings and a long beak, probably

represent birds in a very abstract form. The decoration is incised and the holes have been drilled on both sides of the head (Olguin, 1983: 85).

3. This two-dimensional profile view of a bird cannot be identified, but it is probably a water bird. There are two holes for suspension along the back and a row of six smaller holes along the bottom from which other small ornaments may have hung. It is made of mother of pearl, probably from a species living in West Mexican waters (Lister, 1949: 79).

4. The bird figurines were found mounted as a necklace on a string, in association with other ornaments made of rock crystal and green stones (Noguera, 1944: 48). Two other necklaces, consisting of several stylised birds, were also found, in association with metal ornaments and copper rings.

5. In the same mound were found two ring-shaped ornaments decorated with frogs in low-relief (Figs. 189, 190 in Classification), together with pottery figurines and other shell ornaments (Breton, 1903).

6. The 25 birds and the frog figurines were found in the same burial ("Pozo" 8), mounted as a necklace. They all had abstract forms / The other birds, treated in a more naturalistic form, were also found in a burial as part of a necklace, in association with shell beads and bird representations, similar to those found in "Pozo" 8 (Beltrán, pers. comm.).

7. All the figurines are treated in a very stylised way. The bird (Long, 1966: Fig. 97) is formed by grooving and incision. The eyes are double drilled, indicating the eye and the pupil. The piece is biconically drilled for stringing. Length: 2.5 cm / The frogs (ibid: Figs. 91, 98) are designed by incision and grooving. The eyes and the biconical perforations are drilled. Average length: 0.40 to 1.40 cm (ibid: 210, 212).

8. Although the pieces have not been identified by the author, they are likely to represent a pisote and a mammal (dog?). They are both rendered in a naturalistic way. Both come from La Mezcalera, Chachahuatlán, on the river edge, and belong to the Tuxcacuesco horizon. The dog effigy comes from an infant burial, and was found below the left mandible. No reference to holes is found in the literature, but the author refers to those pieces as "pendants", which leads to the assumption that there were holes for suspension (Kelly, 1949: 132).

9. All these pieces are three-dimensional. They have been reportedly found in one lot at Zacoalco, west of Lake Chapala, and donated to the Southwest Museum, Los Angeles. Two of the crescentic ornaments (von Winning, 1971: Fig. 2 b-c) and one smaller specimen (ibid: Fig. 3 c) have been identified by the author as pisote. They represent a long-nosed animal with a long tail and forepaws covering the spout / Three birds have been identified by von Winning as ducks (ibid: 25, Fig. 3 b). The body of the two following birds are missing (ibid: Fig. 3 a). Although they have been identified by the author as birds, they might illustrate lizards. Their heads are flat and elongated and a double line runs along their head and body, a distinctive characteristic of the iguanas / Dogs are represented by a crescentic piece (ibid: Fig. 2 a), with long ears, short legs and a crest, and by three heads (ibid: Fig. 3 d). One of them has a tubular red shell inserted in the suspension hole / The crescentic piece identified by von Winning as a pisote, or a dog (ibid: Fig. 2 d), is more likely a reptile representation, probably a crocodile. The shape of the mouth is made of straight edges and the teeth are visible / All the pieces have one or several sets of conical perforations from front to back. Length: between 10.- and 13 cm (Fig. 2); from 2.- to 3.- cm (Fig. 3).

10. The abstract representations of birds (Di Peso, 1974: Fig. 513-6, Type V) are called "button-beads" by the author. They are made of *Spondylus* and are all part of a necklace. Average length: 0.7 to 0.8 cm (ibid: 431) / All the frogs (ibid: Fig. 534.6, Type XI) come from different contexts, either ceremonial or domestic. One was sawed and ground to shape, the others were carved. They are made of *G. gigantea* or *P. mazatlanica*. They all have single or multiple perforations. One of these specimens is incised and covered by a mosaic surface (Type XI B). Average length: 1.6 to 5.2 cm (ibid: 459).

11. The matched pair of snakes were used as earplugs. The figures, from a very thin shell, are carved all over the surface with incised lines (Lee, 1969: 171) / The two stylistic frog representations have been carved in the round into a pair of bivalves

(*Anadara multicostrata*) which, according to the author, seem to have been fastened together by a lace passing through opposing holes drilled near the hinge edges. It is questionable whether it was used as a pendant or a container, but two small holes suggest that it could have been hanging as part of a necklace. Dimensions: 7.2 x 8.- cm (Lee, 1969: 175). Two pairs of perforated similar bivalves (*Spondylus* sp.) have been reported in Tikal (Moholy-Nagy, 1963: 68).

12. The frog figurine, from Las Lomitas, is treated in a realistic way. It was accompanying an "olla" burial and associated with fluted vessel (Kelly, 1945a: 145). The lizard is treated in a very abstract form.

13. The first bird head (Suarez, 1977: Pl. 39 a) on the above list is very badly preserved, and consequently its identification is not certain. This specimen is made of *Chama frondosa*, a Pacific species, and has five suspension holes. The second piece (ibid: Pl. 39 d) shows the head and part of the body of the animal, the third piece only the head (ibid: Pl. 39 h). In these last two specimens, the eyes have been cut through (ibid: Pls. 43-44) / The treatment of the frog (ibid: Pl. 39 c) is very abstract. Two holes have been drilled through the upper edge / The author believes that the mammal could be identified with a rabbit. It is rendered in a naturalistic way (ibid: Pl. 44).

14. Several bird heads, identified as eagles according to the author, were mounted as a necklace, together with shell beads and a monkey head (Caso, 1969: 167). They were found in the upper part of Tomb 7, on the right hand side of a skeleton, associated with four obsidian knives used for human sacrifices (ibid: 223). They all had a hole for suspension underneath the eye.

15. The 44 identical bird heads were found around the neck of a skeleton in Burial 16, alternating with plain shell and jade beads. The heads are quite uniform in size. They have been carved from some portion of the shell which was somewhat the shape of the finished product, probably the umbo of a pelecypod. The hollow at the back is a natural concavity (Ekholm, 1944: 481). The eyes of the birds are treated in two different ways: either the eyes and the curving lines above them are protruding from the level of the face and carved in the round (ibid: Fig. 51 g), or the features are incised on the plain convexity of the face (ibid: Fig. 51 h). The long and rounded beaks protrude from the face. Although it is fairly obvious that some form of bird is represented, the species has not been identified. Each specimen has one hole on each side of the head, at the height of the eyes / The single head (ibid: Fig. 52 a) is decorated with two circular depressions showing the eyes and several incised lines. A natural concavity in the shell makes it hollow behind. There are two partially completed holes, the same as in Fig. 51 g-h. The author refers to other small carvings of heads of some mammals in a collection in Tampico.

16. The eyes of this specimen are indicated with a small circular depression and the mouth with a horizontal groove. There is no indication about holes, but the author refers to this piece as a pendant (MacNeish, 1967: 148).

17. The fish (Matos Moctezuma, 1988: Fig. 118) are three-dimensional and made of mother of pearl. The eyes are shown by a circular hole, surrounded by an incised circle. Each specimen has two holes for suspension, conically drilled, through the tail and the mouth or the fin. Length: 4 to 6 cm / The frog figurines (ibid: Pl. XVII) are part of a necklace including other motifs, i.e serpent heads and fish, all carved in mother-of-pearl. Length: c. 4.- cm / The above examples represent only a sample, as the shell material from the Templo Mayor has not been studied yet.

18. The piece is broken through the middle body, where two holes are visible. Séjourné (1966: 71) believes that this piece could have been part of the elaborate headdresses illustrated on the murals paintings and sculptures.

19. This specimen is decorated with several circular depressions on the head, the wings and the tail of the animal. There are three suspension holes, but the author does not mention their location (Lorenzo, 1965: 53).

20. Haury (1945: 182) believes that one of the birds (ibid: Fig. 119 c) might represent a pelican. The specimen in Fig. 119 g, from a bracelet, is a standard Hohokam way of combining a bird and a snake, similar to the one illustrated by Gladwin & al(1937: Fig. 56). Fig. 119a is a very abstract representation of a frog.

21. Some of these animal forms are very realistically portrayed (Haury, 1945: Fig. 93 g), others have been so stylised as to be unrecognisable. The frogs were uniformly made of *Glycymeris* shells. The anatomical features stressed more often are the eyes, the backbone and the rear legs which are folded in a realistic manner (ibid: 152) / Other reptilian forms (ibid: Fig. 93 i, j-p) were nearly always carved from flat pieces of *Cardium*. The identification of these pieces is less sure than in the case of frogs, as the distinguishing characteristics were never so carefully worked out / Bird representations with outstretched wings are common (ibid: Figs: 94 a-d). These vary from unmistakable birds to conventional figures which would hardly be recognised without the true copy. Numerous examples of birds have also been found in Salado ruins, in the Tonto Basin and in the Mimbres area (ibid: 152) / The bird heads (ibid: Figs. f, i) illustrate the typical method of depicting the eye, consisting of a dot within a circle.

22. All the pieces are treated in a very abstract form, and are representative of snake and bird representations of the Seneca Sequence (Hayes, 1988: 38). The specimens in Figs. 1, 5 and 11, decorated with small circular depressions, are part of different necklaces and have two holes, conically drilled on both sides of the neck. Figs. 1 and 11: Steele Site. Fig. 3: Cameron Site. Fig. 5: Power House Site. Fig. 8: Beele Site.

23. Abstract bird figurines (Haury, 1976: Fig. 15.17 h-n), with one or two holes for suspension, appear as early as the Sweetwater Phase, c. AD 200-350, and continue to later times (Gladwin & al, 1937: Pl. CXVI d). The author however doubts whether these conventional types actually represent birds (ibid: 313). More realistic representations (Haury, 1976: Fig. 15.17 p, t) are noted first in the Santa Cruz Phase, c. AD 700-900 / The snake in Fig. 15.17 aa is, according to the author, a bracelet fragment converted into a reptile / Haury (1976: 313) believes that the sample is too small to discern any typological changes through time and that similar abstract bird representations to those referred to above were widely diffused through the Southwest, mostly after AD 1000, in sites such as Pueblo Bonito (Judd, 1954: Fig. 15.1 p) and in the Mimbres valley (Cosgrove, 1932: Pl. 76 c) / All the material comes from burials or rubbish.

24. All the shell material found in this cache were packed in a piece of cloth made of fibrous material placed inside a leather container (Kent, 1970: 185) / The two stylised birds have an anthropomorphic body (ibid: 186, Fig. 3 a, b). The beaks and the folding wings are quite apparent. Each has a necklace and a belt of shallow drilled holes bordered by incised lines. The eyes are depicted by incised circles. According to the author, the leg-like projections probably represent the bifurcated tail of the shallow. The feet are stylistically portrayed by incised crosses on the bulbous protrusions below the belt. Heye and Pepper (1915: 38) illustrate a shell bird on which similar protrusions are much more obviously feet. Length: 0.76 and 0.97 cm / The two turtles (Kent, 1970: Fig. 3 d-f) are similar in size and design and the most obvious pair of objects in the cache. Many of the decorative holes and incised lines on all of these objects have grease worked in for the purpose of accentuating the decoration. Length: 0.44 cm (average).

The decorative incisions on the fish (ibid: 187, Fig. 3 e) all have a red pigment rubbed into them. Length: 0.81 cm.



## **Chapter seven**

### **Interpretation of Non-figurative Pieces**

Non-figurative representations (2.3.) incorporate a variety of shapes, either derived from geometric forms, like the disc, the crescent, the ring, the cylinder, etc, or from the natural structure of the shell, with little modification, such as the finger-loops, the spirals and the spoon-shaped ornaments. The species for the making of these artifacts are often difficult to identify, particularly when small elements "Size a" are concerned, and will be referred to individually under each individual shape. The techniques used for their manufacture, the holes and modifications, and the decoration will also be dealt with under separate headings, when information is available.

All the material from the Occidente belongs to burial contexts (Table 8: 242). In El Otero, Las Cebollas and San Sebastian it has been found in shaft tombs. The relationship of these pieces to the different parts of the skeleton, when available, is indicative of the way they were used. Unfortunately we have little information about the sex and the age of the people these artifacts were buried with. In Chupícuaro, for instance, of the twenty seven graves yielding shell artifacts, nineteen were of children and ten of adults, but their sex has not been determined (Porter Weaver, 1956: 565).

Worked shell artifacts, referred to as "pendants" \*, plus a bracelet dated 75 BC , have been reported at the Morett Site in the early levels, 300 BC to AD 100 (Meighan, 1972: 81). In Chupícuaro, shell objects were evenly distributed between early and late phases, i.e. the Formative and AD 500 (Porter Weaver, 1956: 565). In San Sebastian and Tomatlán, the shell material is also dated late Formative. The majority of shell pieces, however, belong to the early, middle and late Classic, although the tradition seems to continue until the late Postclassic, in sites like Amapa, Apatzingán, Cojumatlán, Huetamo and Tuxcacuesco-Zapotitlán.

The utilitarian function of non-figurative pieces can be defined with the help of the position of similar shaped ornaments not only on skeletons, in burial contexts, but also on pottery figurines and in historical records. It should be pointed that decorative elements displayed by male and female figurines were not necessarily made of shell, but of different materials as well, like stone or metal. Their function, however, is sometimes difficult to describe (Figs. 140,

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\* In archaeological reports, some pieces are mentioned under a different terminology, like "pendant", "pectoral" (see p. 178), "mosaic" (see p. 231), "bead" (see p. 239), etc. These words, based on a present day interpretation of the artifact, can be misleading. Hence the difficulties of classifying and interpreting them, unless illustrated in the publications.

In most instances, the symbolic function of shell objects is more difficult to evaluate, except for those pieces referred to in ethnoarchaeological or historical sources. Broadly speaking, artifacts can be divided into elements which had a symbolic connotation of their own, like the *epcololli* (Fig. 161), the *oyohualli* (Fig. 142) and the *ehececozcatl* (Fig. 247), and those whose symbolic function depended on their association with other elements, like most pieces included in 2.3.E. In addition, some specimens are associated with anthropomorphic, zoomorphic and non-figurative representations, which could be indicative of their symbolic function, e.g. ring-shaped pieces decorated with a serpent motif (Fig. 189) and finger-loops with a pisote (Fig. 241) or birds (Fig. 242).

#### DISCS (2.3.A./ Figs. 139 to 161)

Discs were manufactured from the valve of a bivalve, i.e. from the *Pectinidae* family, or from the outer lip or dorsum of a gastropod. The difficulty in determining their function is subject not only to the size of these pieces ("a" or "b"), but also to their shape and to the placement of the holes, if any. Unfortunately, little information is available in the Occidente referring to the association of similar specimens with the deceased in archaeological contexts. Discs might have been used for a variety of purposes as from the Formative (Tlatilco), e.g. for the decoration of belts, necklaces, armbands and headdresses, and as earplugs.

1. Small undecorated discs, "Size a" (Fig. 139), were probably part of a set and used on their own, by stringing together several similar elements, or to accompany the main components of an ornament, i.e. bracelets and necklaces (Furst, 1978: Fig. 18. Chinesco style). These discs probably had no symbolic meaning on their own, but only when used with other artifacts. These pieces are found in most sites in Mesoamerica from the Formative onwards, and are not diagnostic of any specific area or time span. They were also worn attached to an armband, e.g. the decorated piece in Fig. 143 (von Winning, 1974: Fig. 107).

2. Concave and flat discs, "Size b", with one or two holes (Figs. 141, 144, 147, 151) were used for suspension on a garment, for instance attached to a long cord, as a necklace, or as a belt, like those on the male figurines from Jalisco, Ameca style (Furst, 1978: Fig. 22), and from Colima, Tuxcacuesco type (von Winning, 1974: Fig.

107). In some instances, more than one hole has been drilled, e.g. the specimens from Guasave (Ekholm, 1942), with two sets of two holes cut through opposite edges of the circle. Materials other than shell were also used for the manufacture of these pieces, like pottery, with a hole in the middle, in Cerro del Huistle (Olguin, 1983: 102, Fig. 13 g), Amapa (Meighan, 1976: Pl. 52) and Tlapacoya (Niederberger, 1987: Fig. 564), or green stone, with one hole near the edge, in Amapa (Meighan, 1976: Pl. 81 e-g).

Decorated concave and flat discs with one hole drilled through the centre might have been used in pairs, as Beyer (1933: 170) suggests, because they are often found duplicated in the same context, with an identical pattern of decoration. The specimens from San Gregorio, Michoacán (Fig. 150), might have been used as adornments on a headdress or as earplugs, with a wooden or pottery disc glued to their reverse. Pairs of similar pieces have been found in the Huasteca (Beyer, 1933: Pls. II, IV, VI), with no suspension holes, and in Kaminaljuyu (Kidder & al, 1946: Fig. 183 c-f), with a central hole. These pieces often have incised decoration on their convex side or traces of red or green pigment. It has been suggested that these discs might have been fitted into the throat of some flares and used as earplug assemblages (ibid: 152).

Similar shaped specimens, also called "flower-like objects" or "rosettes", have been used as earplugs and are widespread in the Maya area. e.g. Altar de Sacrificios (Willey, 1972: Fig. 197 g), Barton Ramie (Willey & al, 1965: Fig. 310 b-c), Chiapa de Corzo (Lee, 1969: Fig. 126 f-g), Lubaantún (Joyce, 1926), Jaina (Piña Chan, 1968: Pl. 15/ Velazquez, 1988: Pl. 33 8-9), Tikal (Moholy-Nagy, 1985: Fig. 10.4), Uaxactún (Kidder, 1947: Figs. 53 c, 85 a 10-15), Southern Cayo District (Thompson, 1931: Pls. 46-47) and Corozal District (Gann & al, 1939: Pl. 9.1. a, c, f, g). Two similar pairs of flower-like pieces, with a circle cut through the middle, have been found at Cerro del Huistle. The author believes that these discs might have been sewn to a perishable material, but they could also have been attached to another ornament and used as earplugs (Olguin, 1983: 106, Fig. 14 a, b), like the examples illustrated on female pottery figurines from Jalisco (Furst, 1978: Fig. 32).

Further usages suggested for discs include:

1. with one hole in the middle, they could have been used as "guardapuas", an instrument made of a straight wooden stick attached to one to three shell or stone discs, fixed through their middle hole to one of their ends, e.g. Cueva de la Candelaria; their function is still not clear (Aveleyra & al, 1956: 147-149, Fig. 43).

A second function put forward is as spindle-whorls ("malacates"), e.g. Tomatlán (Mountjoy, 1982: 323). As mentioned previously paragraph, similar discs, made of clay, have been located at Amapa and Tlapacoya;

2. with no hole, they may have been used as 'gaming pieces' (Di Peso, 1974: 514).

Some disc-shaped pieces are associated with animal forms, like the fish (Fig. 156), the snake (Fig. 157) and the bird (Figs. 158-9), or both human and animal ones (Fig. 148), although their identification is difficult. The symbolic interpretation of these zoomorphic representations have been dealt with in the previous chapter. Ornaments resembling in shape the one in Fig. 157, with a geometric incised pattern, were found in Las Cebollas (Long, 1966: Fig. 102). The author (ibid: Fig. 150) suggests that fragments of the same type of ornaments (called "butterfly" by Long) were located in El Arenal. Similar objects, made of slate with pyrite polygons formerly encrusted, were also found in Las Cebollas (Furst, 1966: Pl. 36 a). These were probably used as a component of a garment, e. g. a necklace or a headdress.

The symbolic function of some types of disc-shaped elements found in the Occidente is illustrated in the Aztec historical accounts.

a. Pieces with a circle cut through the centre of the disc, called *oyohualli* in the literature (Suarez, 1989: 37). In Jalisco and other areas of Mesoamerica, most of the undecorated specimens have a nacre surface (Fig. 142/ Teotihuacán, El Infiernillo, Casas Grandes); other pieces are decorated with pyrite elements (Fig. 145) or dentate edges (Fig. 153/ Snaketown). Linné (1934: 141) refers to the same type of discs, from Burial 13 at Tlamimilolpa (below a house floor), where a red painted line surrounds the inner circle. They have two or more holes for suspension, in some instances so small that these pieces could only have been sewn to a material. Suarez (1987: 4) suggests that this element is worn hanging from a red ribbon on the chest.

In the Codex Borbónico this ornament is described as an attribute of several deities, e.g. *Tezcatlipoca* (Paso & Troncoso, 1988: Pls. 26, 31), *Mitlancuehli* and a bat dancer (ibid: Pl. 30), *Huitzilopochtli* (ibid: Pls. 24, 36), *Xipetotec* (ibid: Pl. 14), and *Tepeyollotl*, a god associated to *Tezcatlipoca* who wears the same type of disc-shaped element (ibid: Pl. 3). In the Codex Telleriano-Remensis, it is associated with *Tlahuizcalpantecuhtli*, the Venus deity (Nicholson, 1971: Fig. 41). Similar pieces are illustrated as chest ornaments on Teotihuacán pottery figurines

(Sejourné, 1966: Fig. 111, top row, right).

b. Drop-shaped ornaments (Fig. 160), described as chest ornaments of certain deities in the Codex Borbónico, e.g. *Huehucoyotl* (Paso & Troncoso, 1988: Pl. 4) and in the Codex Magliabecchiano, e.g. *Macuilxochitl*, patron of the *patolli* game (Nicholson, 1971: Fig. 24). Similar symbolic elements, with no decoration and a nacre surface, are found in Aztec iconography (Museo del Templo Mayor, Mexico D.F., No. 10.251268).

c. J-shaped ornaments, called *epcololli* in the historical sources, because of their spiral shape (Caso, 1969: 166), or *nacoztli* (Suarez, 1987: 5). The specimen in Fig. 161 is a stylised version of those found in several sites in Mesoamerica as from the Classic period, i.e. in Monte Albán, partly covered by turquoise mosaics (Caso, 1969: 166) and in the Templo Mayor. In Chiapa de Corzo, however, similar shaped pieces, "Size a", called "mosaic mask elements" by the author (Lee, 1969: 181, Fig. 141) were found in a burial context belonging to the late Formative/ early Classic. In historical accounts, these specimens are illustrated worn as an earring. In the Codex Borbónico, J-shaped ornaments are depicted as one of the attributes of several gods, e.g. *Quetzalcoatl*, *Xólotl* (Paso & Troncoso, 1988: Pls. 26, 27, 34, 36) and *Pahecatl* (Codex Telleriano-Remensis, from Nicholson, 1971: Fig. 26).

#### CRESCENT-SHAPED (2.3.B./ Figs. 162 to 168)

This type includes material belonging to "Size a" (1) and to "Size b" (2).

1. The author has come across one sample only (Fig. 162), from Apatzingán. This piece (with 3/4 holes), together with similar specimens, was probably sewn to a garment, as elements of decoration of *Tlazoltéotl*' headdress and skirt (Codex Borbónico/ Paso & Troncoso, 1988: Pl. 13). *Tlazoltéotl*, an earth-mother goddess, was particularly concerned with sexual sin (Nicholson, 1971: 420/ Fig. 28). In the same codex, similar shaped ornaments were also part of the headdress of *Toci* (Paso & Troncoso, 1988: Pls. 34, 36), the patron of earthquakes and fortune tellers.

This small crescent-shaped element should not be confused with the *yacaxihuitl*, or *yacametztl*, a nose ornament in the shape of a half-moon and one of the attributes of several deities, like

*Pahtecatli* and *Chalchiuhtlicue* (Nicholson, 1971: Figs. 16, 26). These symbolic ornaments have not been found in the Occidente.

2. Holes for suspension determine the way these pieces were used.
  - a. As chest ornaments (Figs. 164-8). In Ixtlán del Rio pottery figurines, these are worn by males and females (Kan & al, 1970: Figs. 14, 16, 17, 19/ Furst, 1978: Fig. 8/ Taube, 1988: Fig. II.16-7), either seated or standing, also wearing a nose ornament either crescent or ring-shaped. In Colima, crescent-shaped ornaments tend to be worn by males only (Gallagher, 1983: Figs. 25/ Eisleb, 1971, Fig. 9), usually sitting and wearing a helmet. Similar artifacts were also used in Teotihuacán as chest ornaments (Sejourné, 1966: Fig. 111, bottom row, left). These pieces were probably worn attached through the hole on their upper edges to a string made of "beads" or of fibres (Fearer Safer & al, 1982: 81). In Colima and Nayarit, crescent-shaped ornaments, with holes for suspension on the upper edge, were also made of clay (Kan & al, 1970: Fig. 48) and stone (ibid: 49), e.g. slate (Furst, 1966: Pl. 36 c-d), with two sets of drilled holes and pyrite mosaics. The motif illustrated on these specimens was anthropomorphic (Figs. 165-6), zoomorphic (double headed snake, e.g. Fig. 167) or non-figurative (encrusted with pyrite sets, e.g. Las Cebollas).
  - b. As nose ornament (Fig. 163), with the two upper edges facing upward. Only Nayarit male figurines wear this type of ornament (Kan & al, 1970: Figs. 16, 18/ Gallagher, 1983: Fig. 143/ Kubler, 1954: Fig. 77).
  - c. As earrings (Furst, 1978: Fig. 8).

#### RINGS (2.3.C./ Figs. 169-195)

Ring-shaped ornaments performed a variety of utilitarian functions, depending on their size ("a" and "b") and their shape.

1. Finger rings ("a"). Plain rings were made by cutting a section of the spire of a small univalve, i.e. *Conus* and *Oliva* sp., or of the outer edge of a bivalve, and by grinding off the interior surface. The edges of the rings can be either circular or cut at an angle (Fig. 169). In Monte Albán, a similar specimen, made of jade, was found surrounding the phalanx of a skeleton (Caso, 1969: 221). Rings might have been worn on all fingers of the deceased, alone or in pairs (Fewkes, 1896: 362). Rings are recurrent in many sites in the Occidente and Mesoamerica.

Ring ornaments with a main element of decoration cut vertical to the ring (Figs. 179, 180/ Tampico, Las Flores/ El Infiernillo) could

also be made of metal, e.g. copper, like the specimens from Amapa (Meighan, 1976: Pl. 103), Cojumatlán (Lister, 1949: 52), and Tizapan el Alto (Meighan & al, 1968: Pl. 22 a), or vesicular lava, e.g. Guasave (Ekholm, 1942: 98).

2. Nose rings (Fig. 170, "a"), similar in shape to the pieces mentioned in (1), with a slit cut through the circumference. They were manufactured with the same structure of the shell. The way these were used - inserted through the septum of the nose - is illustrated on pottery figurines from Jalisco and Nayarit. Nose rings were worn by males and females and consisted either of a single element (Long, 1966: Table 6, Fig. 192/ Taube, 1988: Figs. II.12-16 ) or of multiple ones (Eisleb, 1971: Pl. IV, Fig. 256). They may have been painted, like the rings found in San Sebastian, coated with a yellow-brown substance (Long, 1966: Figs. 103-4).

3. Ear ornaments ("a"). The same type of ornaments (Fig. 170) as in (2) are also depicted as earrings worn as single or multiple elements by males and females, e.g. in Jalisco (Long, 1966: Table 6, Figs. 14-5, 193, 195)

4. Earplugs ("a"). Two types were used, usually found in pairs.

a. Short cylinders with narrow parallel and concave edges (Figs. 171-2, 181), manufactured by cutting vertically a section of the siphonal canal of a gastropod, or the tip of its spire, i.e. Fig. 181, and then by polishing the edges. These pieces were inserted in the lobe of the ear, as can be seen in the male figurines from Jalisco (von Winning, 1974: Fig. 340, Zacatecas). The earliest examples in the Occidente, decorated with circular depressions around the rim, come from Chupícuaro, during the late Formative (Porter Weaver, 1956: Fig. 25 h-k). Kolb (1987: 101) suggests that these rings served as backing for jade earplugs. The same type of ring-shaped ornaments, used as earplugs, were also found of obsidian, rock crystal, bone or amber in Monte Albán (Caso, 1969: 224, 228).

b. Pipe-shaped ornaments (Fig. 173), made of the upper part of the columella of a gastropod. They have been located in Central Mexico from the Classic period, e.g. Teotihuacán, and are particularly frequent in the Maya area, i.e. Altar de Sacrificios (Willey, 1972: Fig. 197 a-b), Uaxactún (Kidder, 1947: Fig. 56), Piedras Negras, Copán, Barton Ramie (Willey & al, 1965: 509-10) and Jaina (Velazquez, 1988: Pls. 48.4-8, 49-50). Similar specimens were also made of wood, like those from the Sacred Cenote at Chichen Itza (Kidder, 1947: 64), of clay, like the two specimens from Jalisco, with human heads on one of the edges



(Museo Regional, Guadalajara) and those from Uaxactún, Bonaca and the Panuco region, Period V, or of copper, from Texmilincan, Gue. (ibid: 64-5). Some authors however refer to the use of these pieces in the lips or the cheeks ("labrets"). At Piedras Negras, a pair lay on both sides of the jaw of a skeleton (Kidder, 1947: 64), although this is no indication of their function as labrets.

5. Components of ornaments ("a"), associated with animal forms, like birds (Fig. 178/ El Infiernillo). In Chiapa de Corzo, the same type of element, with traces of paint, embraces the shape of a monkey (Lee, 1969:180).

6. Bracelets ("b"). These in turn can be divided into rings with a round or truncated edge, and those with a straight section. Rings, "Size b", will all be referred to here as "bracelets", and no distinction will be made between those and "armbands", as we have no available evidence to support such a differentiation. Most specimens have no holes, although there are a few exceptions (Figs. 175-6). These might have been used for inlays, and not for suspension. In Los Muertos, for instance, the naturally pierced holes of some specimens do not show any signs of wear, and Haury (1945: 154) does not believe that anything was attached to them.

Bracelets included in the first category are made from large bivalves, like *Glycymeris gigantea* (see Table 8, Observation 1) by abrading the centre (core) of the valve, probably on a grinding stone, and removing it, leaving the periphery, which was further ground to the desired thickness and later polished. The region of the shell near the umbo was either polished and removed (Figs. 174-5, 189, 190) or rounded (Fig. 177) and cut into a three-dimensional anthropomorphic (Figs. 182-3) or zoomorphic (Figs. 184-6) motif. All the bracelets included in the second category were made out of the transversely cut section of the body whorl of a gastropod (Figs. 191-5).

Bracelets were sometimes found in big numbers in the same context. In Las Cebollas, for instance, twenty six complete specimens and forty eight fragments were encountered in situ. Only one of these was decorated, with a triangular head, similar to those on the conch shell trumpets (Furst, 1966: Pl. 41). In addition, 20/30 complete specimens were also found by looters (ibid: 96).

Their association with the deceased in funerary contexts has made it possible to define the function of these items. In the Occidente, bracelets have been found associated with the wrists of the skeleton , e.g. Playa del Tesoro (Beltrán, pers. comm.) or with both

upper arms (straight section), e.g. Apatzingán (Kelly, 1947: 116). Further references in other areas include: El Infiernillo, located around the wrist of the skeleton (straight section/ Suarez, 1977: 46); Guasave, where nineteen bracelets were placed on the left humerus of a male skeleton (Ekholm, 1942: 43); Tusayan Pueblos, where nine bracelets, some of them perforated at the umbo, were found on the left arm of a single skeleton (Fewkes, 1896: 362). Haury (1945: 154) refers to this practice among the Mimbres cultures, and further north.

The evidence for the utilitarian use of bracelets is backed by three-dimensional or painted (Pihuamo Style) illustrations on pottery figurines from Jalisco, Colima and Nayarit, which show the different ways bracelets were used.

- a. One specimen on each upper arm, or humerus, worn either by females, in Nayarit (Eisleb, 1971: Pl. IV), or males, in Colima, Tuxcacuesco type (ibid: Fig. 74).
- b. Two on each upper arm and each wrist, displayed by males, in Colima, Tuxcacuesco type (ibid: Figs. 73, 75) and in Jalisco, El Arenal type (Gallagher, 1983: Fig. 130), or on one lower arm, used by a female in Jalisco, Guadalupe Mound (Breton, 1903: Fig. 2). Three bracelets were also be used in association (Long, 1966: Table 6, San Sebastian Red type, male).
- c. Multiple bracelets, worn on the left upper arm by males in Nayarit (von Winning, 1974: Fig. 234), or on both upper arms (Kan & al, 1970: Figs. 11, 65, 68) by males and females, in Colima (Meighan, 1972: Pl. 50 d), Nayarit and Jalisco. A humerus with 25 rings attached to it, unfortunately without provenance, illustrates this latter usage (von Winning, 1974: Fig. 308). Similar specimens are also depicted on pottery figurines from Teotihuacán (Séjourné, 1966: Fig. 67).

In the Occidente, bracelets were frequently decorated with anthropomorphic motifs, in the form of a human head (Figs. 182-3, Apatzingán) or of zoomorphic motifs, either carved into the umbo, or incised over the edge. Animal shapes include bird heads (Figs. 184-6/ Cojumatlán), frogs and a combination of frogs and snakes (Breton, 1903: Fig. 5.8-7). Pyrite or turquoise inlays were occasionally inserted in the circular depressions, e.g. Apatzingán (Kelly, 1947: 116, Fig. 69 b) and Tingambato (Piña Chan, 1982: object No. 81).

These ornaments, with or without decoration, have a wide distribution, and are common in most cultural areas of Mesoamerica: Jalisco (Autlán zone, Cerro del Huistle, Guadalupe Mound,

Tuxcacuesco-Zapotitlán), Colima (Morett Site, Playa del Tesoro), Nayarit (Amapa, Las Cebollas), Michoacán (Apatzingán, Cojumatlán, Tepaltepec Basin, Tingambato), Central Mexico (Teotihuacán), Oaxaca (Monte Albán), Guerrero (El Infiernillo, Placeres de Oro), Sinaloa (Culiacán, Guasave), the Trincheras Culture of Sonora (Villalpando, unpub.) and Chihuahua (Casas Grandes). Bracelets have also been located in the Chalchihuites Culture, sometimes with carved umbo (Lister, 1949: 126), and in the Gran Chichimeca, e.g. the Swarts Ruin (Cosgrove & al, 1932: Pl. 73) and San Cayetano (Di Peso, 1956: Pl. 17 a), but are less numerous in the Maya area (Chiapa de Corzo).

Bracelets have been found in archaeological contexts in the Occidente from the late Formative (Morett Site) up to the late Postclassic (Apatzingán).

7. Ankle or tibia ornaments ("b"). There is no archaeological evidence to bear out this particular usage of rings. However Colima male dancers display two similar ornaments on each leg to the one in Fig. 175 (Dwyer & al, 1975: Fig. 55).

8. Chest ornaments ("b"), also called "horse-collar" in the literature. They were made of the modified valve of a big bivalve, e.g. *Patella mexicana*, with the same technique used for the bracelets. Specimens with one hole were worn vertically, the thinner edge pointing downward, those with two or more holes (Figs. 176, 187/ Tuxcacuesco-Zapotitlán) horizontally, as chest ornaments suspended to a neck cord. This argument is supported by illustrations in the codices, as mentioned above when I referred to the drop-shaped ornaments (Fig. 160). Both elements probably had the same symbolic function.

Similar pieces have been reported in Teotihuacán (from a grave near the Pyramid of the Sun/ American Museum of Natural History, New York, No. 30.7014), Monte Albán, Tomb 7 (with incised decoration/ Caso, 1969: Fig. 131 a), Ojitlan, Oaxaca (Museo Nacional de Antropología, Mexico D.F.), Kaminaljuyu (with red paint on the concave surface/ Kidder & al, 1946: Fig. 162 e-h) and Uaxactún (Kidder, 1947: Fig. 52). Gold replicas have been reported in Chichen Itza by Tozzer (1957: Fig. 180).

Ekholm (1961: 287) refers to similar pieces, perhaps made of shell, on a number of figurines in Toltec reliefs at Chichen Itza. These pieces have the same oval form - slightly pointed at one end - as those we see in our specimens. Other occurrences attributed to the Toltec period include a fragment found at Xico, near Chalco (Valley

of Mexico), with one visible hole and a Toltec style incised design, representing five human figures involved in some kind of ceremony (ibid: 289), and a specimen with two holes from the Museum of Primitive Art, New York (No. 56.417), decorated with incised lines filled with black pigment. Based on the evidence provided by decorative motifs, i.e. speech scrolls, vine-like floral elements and human figures, de Borhegyi (1966: 364) believes that this type of rings can be dated early and middle Classic. It is probable that these ornaments were used in late Postclassic times as well, for objects of the same form are depicted on several figurines in Codex Vaticanus B (Ekholm, 1961: 292).

Some identical samples have no holes for suspension (Museo Regional, Guadalajara, No. 1.00956). These may have been used as frames for enclosing another material, such as wood. In Kaminaljuyu, the inner edge of one specimen contained a gummy substance, perhaps an adhesive to hold a plate of perishable material (Kidder & al, 1946: 149). Other pieces with no holes have an animal form, like a frog (Fig. 188).

#### CYLINDRICAL PIECES (2.3.D./ Figs. 196 to -201)

Cylindrical pieces, most of them without decoration, are found in most archaeological contexts in the Occidente and other areas of Mesoamerica, like San Sebastian (more than four hundred pieces), Tuxcacuesco- Zapotitlán, Zacoalco (zoomorphic representation), the Tepaltepec Basin, Tlapacoya, El Infiernillo and Placeres de Oro. They were made out of the outer lip of a univalve or the hinge of a bivalve, i.e. *Anadara grandis*.

These items were flat or slightly curved, hollow or plain. The outside of the tube was ground into a cylinder or a square. Some specimens were painted in red or had a yellow coating (Long, 1966: 207). A hole was either drilled from each end, meeting in the middle, or pierced through the surface. In some pieces, the outside of the tube was perforated, usually near the centre or at each extremity, which allowed stringing several specimens together in a horizontal or vertical position (Long, 1966: Figs. 82).

These pieces were used as components of a necklace (1) or of a belt (2). Some specimens (Fig. 197), might have been used as musical instruments, e.g. as a whistle for producing a soft sound accompanying a main instrument (F. Flores, pers. comm.). Similar specimens were also made of clay, like in Amapa (Meighan, 1976: Pl. 73) and in San Sebastian, painted in red (Long, 1966: Fig. 84).

1. Used in a necklace, cylindrical pieces were illustrated on female pottery figurines either in association with spherical elements, i.e. in Jalisco (Kan & al, 1970: Fig. 88), or in a two/three rows arrangement of several similar elements, some of them decorated, i.e. in Jalisco, San Sebastian type (Long, 1966: Table 6), Colima (Meighan, 1972: Pl. 57 f/ Morett Site) and Nayarit, Chinesco style (Kan & al, 1970: Fig. 7/ see also Long, 1966: 207, for alternative ways of assembling these elements). The same function (with one or two rows) is documented in Teotihuacán as chest ornaments (Sejourné, 1966: Fig. 111 a, second row from top ). An identical ornament was found in Cojumatlán, Burial 9, mounted as a necklace and alternating with small copper bells (Lister, 1949: 81). The plain specimens with anthropomorphic or zoomorphic motifs (Figs. 200, 201/ Zacoalco) were probably worn on their own, as the main component of an ornament.

2. Used in a belt, they were worn by females in association with spherical elements, i.e. in Nayarit, Chinesco style (Furst, 1978: Fig. 13).

#### OTHER GEOMETRIC SHAPES (2.3.E/ Figs. 202 to 235)

The material included under this heading embraces a variety of forms, quadrangles, triangles, ovals, crosses, V elements, pyramids, spheres, etc. They all have one or several holes, or no holes. With the exception of the decorated specimens, "Size b", none of these pieces were used on their own, but in association with other similar material, for instance by stringing or sewing several similar pieces together, or with the main(s) components of an ornament, i.e. bracelets and necklaces. These pieces all fulfilled a variety of functions. Most of them probably had no symbolic meaning of their own, but only when used with other artifacts.

This group incorporates many pieces ("Size a") with an average length of 1.50 cm or less and a thickness of less than 0.50 cm. These pieces usually have a flat surface and vary considerably in shape, i.e. anthropomorphic, zoomorphic, geometric or irregular, and can also be found in other parts of the classification (2.2.B.1. [Fig. 91], 2.3.G.2.c. [Figs. 237, 238, with holes]). They will be referred to in this text as "mosaics" and they are divided into two main categories, from which their utilitarian function derives:

- a. pieces with one or more holes, which were possibly sewn to a backing of perishable material;
- b. those with no holes (section 7, below), which were stuck to

wood, clay (Suarez, 1977: 57) or skin (Di Peso, 1974: 511), for instance. Specimens included within this latter category have one very polished surface which allows them to adhere to another material with the help of an adhesive (Kidder & al, 1946: 151). The Toltec bearded male head inside the mouth of an animal, all covered with oval-shaped "mosaics" illustrating the skin of the animal, is a fine example of the use of these pieces (Museo Nacional de Antropología, Mexico D.F., Toltec Room). Traces of adhesive are very difficult to find. The technique of using glue was however known in Central Mexico, and is mentioned by Sahagún for the manufacture of feather ornaments (Dibble & al, 1959: 93).

Specimens with holes are usually referred to in the literature as "appliqués" (Lister, 1949: 80), "sets" (Kelly, 1947:119), or "spangles" (Kidder & al, 1946: 151/ Di Peso, 1974: 511 ). Those with no perforation are called "mosaics" (Kelly, 1943: 123), "tesserae" (Di Peso, 1974: 511) or "inlays" (Kidder & al, 1946: 151 ). It is however difficult to differentiate between the "mosaic" pieces and some of the geometric elements ("Size a") mentioned below (sections 1 to 5). Some authors, like Olguin (1983: 153) and Lee (1969: 181), include under this heading all the small pieces with geometric shapes, like rings, circles, J-shaped elements, etc...

Mosaics are often of nacreous material, but their identification is very difficult, due to the size of the material.

As opposed to those pieces which functioned independently as ornaments, like anthropomorphic and zoomorphic pieces and finger-loops, mosaics were used to form composite sets. Consequently, they did not have any utilitarian or symbolic function of their own, but as part of an ensemble.

The archaeological records provide information on the way these specimens were found in burial contexts, and their probable use. This is sometimes supported by evidence supplied by decorative elements on pottery figurines, and in some instances by historical sources in Central Mexico.

1. Necklaces. Rectangular (Fig. 226) and triangular (Fig. 208) pieces, decorated with incised lines or small turquoise elements stuck to one of the surfaces, have been found mounted as a necklace around the neck of skeletons in Playa del Tesoro (Beltrán, pers. comm.) and Cerro del Huistle (Olguin, 1983: Figs. 4-6), and on the chest, in Tuxcacuesco-Zapotitlán (Kelly, 1949: 131). In Cueva de la

Candelaria, several rectangular-shaped pieces were found attached to a string (Aveleyra & al, 1956: Pl. VI). In Monte Albán, Tomb 7, spherical ornaments (Fig. 218) were mounted in two necklaces (Caso, 1969: 167). Shell components were mounted in association with other materials, like turquoise or gold elements (Beltrán, pers. comm.), copper rings (Museo del Estado, Morelia/ Culiacán, Kelly, 1945a: Fig. 73 g) and jade (Tikal, Moholy-Nagy, 1985:152). Red and yellow pigment is still visible on some pieces. e.g. Playa del Tesoro (Beltrán, pers. comm.).

Pottery figurines from the Occidente illustrate the way these different pieces were worn in a necklace by males and females: either by combining several identical elements together (Fig. 206/ Eisleb, 1971: Fig. 13, Colima/ Dwyer & al, 1975: Fig. 55, Jalisco) ), or different shapes, e.g. quadrangular and triangular ("Art Précolombien du Mexique", 1990: Fig. 118, Nayarit, Ixtlán del Rio style), or spherical and cylindrical (Sotheby Catalogue, London [November 1984, No. 94], Ixtlán del Rio/ Gallagher, 1983: Pl. 4, Colima/ Kan & al, 1970: Fig. 88, Jalisco).

2. Bracelets. In Apatzingán, quadrangular elements were found around the right wrist of a skeleton, suggesting that they might be part of a girdle (Kelly, 1947: 123-4). Similar pieces were also made of pyrite (ibid) and stone, e.g. shale (Spinden, 1911: 41). In Jalisco, spherical pieces were used by males and females as components of an armband or legband, probably sewn to another material, e.g. leather, in sets of one, two or three rows (Kan & al, 1970: Fig. 85/ Long, 1966: Table 6, Fig. 195, Ameca Gray / Dwyer & al, 1975: Fig. 55).

3. Earrings (Fig. 216). In Tuxcacuesco-Zapotitlán, the V-shaped ornament was found next to the left ear of a skeleton (Kelly, 1949: Fig. 88 o).

4. Components of a belt. Shell and pyrite elements, quadrangular and perforated at two opposite sides, were combined to form a belt in a child burial in Apatzingán (Kelly, 1947: 123-4). Goggin (1943: 55) mentions that in the Tepaltepec Basin these elements were occasionally found around the waist of the skeletons. This usage is illustrated in male pottery figurines from Tuxpan, Jalisco (Eisleb, 1971: Fig. 3) and females from Nayarit, Chinesco style (Furst, 1978: Fig. 13).

5. Components of a headband and other body garments. In Cerro del Huistle (Olguin, 1983: 93) and the Tepaltepec Basin (Goggin, 1943:

55), pieces varying from sets of squares or bars to interlocking designs were positioned around the head of the skeleton. Long (1966: Table 6, Fig. 193) refers to the use of headbands with spherical elements, which were made of shell, in female pottery figurines from Jalisco, Ameca Gray, and Weigand (1990: 8) suggests that crosses (Figs. 213-4) were worn on headdresses.

In archaeological contexts, other associations with various parts of the body include the mandible, in an adult burial, the skull, the jaw, the pelvis (Kelly, 1947: 123-4) and the back (ibid, 1949: 131), suggesting that these geometric-shaped pieces might have been used as ornaments on other body garments. The decoration on some pieces consists of an incised line along the serrated edge and a circular, eyelike motif, inlaid with shell (ibid: 123).

Square and lozenge-shaped motifs, difficult to differentiate, are illustrated on the clothes worn by male figurines from Colima (Kan & al, 1970: Fig. 124/ Nicholson & al, 1979: Fig. 48) and Tuxpan, Jalisco (Eisleb, 1971: Fig. 3). Triangles are used for the painted decoration of body garments, or dresses, in Nayarit female figurines (Eisleb, 1971: Pl. IV) and cup-like headdresses worn by males holding a painted rod, from El Arenal, Jalisco (Kan & al, 1970: Fig. 86)

6. Spindle whorls (Fig. 235). Similar clay specimens found in Amapa (Meighan, 1976: Pls. 60-5), El Arenal (Long, 1966: Fig. 184) and Apatzingán (Kelly, 1949: Fig. 67 j-z), with or without decoration, are believed to be spindle whorls.

7. Small pieces of shell, sometimes of irregular shapes (Figs. 203, 209, 220, 233), with no holes, were probably stuck or sewn to a perishable material and might have been used in the decoration of other ornaments, like components of a necklace, discs (Kelly, 1949: Fig. 88 r), earplugs and masks (Lee, 1969: 169, 181), sometimes in association with other materials, such as jade or coral. In Central Mexico, small pieces were used for the decoration of sacrificial knives (Matos Moctezuma, 1988: Pls. XXI-XXIII), of mosaic plaques and of masks, in association with jadeite, coral or obsidian mosaic elements (Carmichael, 1970), and of mouth and eyes inlays (ibid: Figs. 79, 80, 91, 92), but no evidence of similar pieces has been found in Western Mexico.

This technique of decoration, usually on wood artifacts, is well represented in the Southwest (Fewkes, 1896: 363). Haury (1976: 317) refers to disc-shaped elements as mosaics, and suggests that



the introduction of shells in mosaic assemblages among the Hohokam appears to have taken place as from AD 700, up to AD 1100.

Little is known about the symbolic function attached to these pieces. At this stage we can only speculate about their importance in the iconography when we refer to ethnohistorical and historical sources and we compare them to similar patterns illustrated as decorative elements on pottery bowls and figurines. In Huichol mythology, for instance, the symbol of a triangle (Figs. 208-210) means "cerro" (hill) and a cross (Figs. 213-4/ El Otero) means "cuatros rumbos del mundo" (four corners of the world). The four edges of the cross symbolise the four cardinal points, and the centre the sacred centre of the universe (Lumholtz, 1900: 215). A cross enclosed in a circle on the figure of a bird, or of a human, designates his heart (ibid: 29, 93).

In Central Mexico, stylistic variations of the cross, with wide outside edges, are called "cross of *Quetzalcoatl* " (Kurah & al, 1964: Figs. 133, 206). The cross motif also appears on a piece of cloth. In both instances, crosses could be used on their own or in association with similar figurines, like in Apatzingán. Cross motifs also appear in the pictorial codices of the Mixtecs of Oaxaca (Furst, 1978: 30). For the Maya, the *Kan* cross had several meanings, like "water", "precious", "blue" and "turquoise" (Kneberg, 1959: 5).

Some shapes, e.g. the quadrangle, the triangle and the cross, are recurrent as decorative elements of pottery vessels and figurines, either painted or incised, and must have had a symbolic meaning still unknown to us.

Geometric-shaped ornaments ("a" and "b") are sometimes associated with anthropomorphic (Figs. 221-2) and zoomorphic (Figs. 223-7) forms, illustrated by means of incised lines, like the abstract bird representations depicted in triangular pieces in Cerro del Huistle (Olguin, 1983: Figs. 7 f-j and 8 a-d) and in rectangular plates in Snaketown (Haury, 1976: 313, Fig. 15.17 l-m). The symbolism attached to these pieces probably refers to the motif (e.g. "birds"), and not to the shape of the ornament.

#### **FINGER-LOOPS** (2.3.F./ Figs. 237 to 246)

Finger-loops were made with a crescentic piece of shell, i.e. the siphonal canal, and tied with a cord to the wooden shaft of the *atlatl*, or spear-thrower, by means of a perforation (usually transversal, from the inside to the outside surface) at each end of the shell loop

(Fig. 236). In San Sebastian, a pair of finger-loops retains traces of fibre binding (Long, 1966: 216). Ekholm (1962: 182) suggests that the loops were fastened loosely, with the end of the shell remaining some distance from the wood, thus enabling the insertion of the fingers. Finger-loops often occur in pairs in archaeological sites, like in Apatzingán (Kelly, 1947: 119) and San Sebastian (Long, 1966: 216), but relatively few complete examples have been located.

A number of these pieces are reported from the Occidente (Table 8). Hrdlicka (1903: 385: Pl. 16) illustrates six specimens from Totoate (American Museum of Natural History, New York), from Ocotlán, Jal., and from San Nicolas, Chapala. They also have a wide distribution in other parts of Mesoamerica. Their temporal distribution ranges from late Formative (Chupícuaro) to the Spanish Conquest (Ekholm, 1962: 184). It seems that shell was the material most commonly used for the manufacture of these pieces. Other materials were also used, such as stone.

Historical records refer to the function of these pieces in Postclassic Central Mexico. Nuttall (1902: 171-4) mentions various gods, i.e. *Huitzilopochtli*, *Quetzalcoatl*, *Tezcatlipoca* and *Xiutecuhtli* who use *atlatls* with finger-loops similar to the specimens described in the Classification (Fig. 236). The use of spear-throwers in Colima is illustrated by a monochrome ceramic representation of an *atlatl*, possibly used as a flute (Fig. 274).

Finger-loops are sometimes referred to in the literature as nose or ear ornaments (Kelly, 1947: 119/ Ekholm, 1962: 181). Galván (per. comm.) believes that the shell specimens were probably reused as earplugs, due perhaps to the scarcity of the raw material.

### **Spirals** (2.3.G.1.a./ Figs. 247, 248)

Spirals (Fig. 247) were made by bisecting vertically the spire and part of the body whorl of a big univalve. The finished product, obtained from the structure of the univalve included between these two parts, retains the original nodules of the shell and shows the internal whorls. Most specimens have one or more holes for suspension. The species used for the manufacture of those pieces belong to mature gastropods, e.g. *Strombus*.

No such specimens have been found in archaeological contexts in the Occidente. The only exception consists of the pieces cut longitudinally along the spire and the columella (Fig. 248), whose function was probably different from those referred to as "spirals".

Information on this type of ornament is provided by the historical accounts, which refer to it as *ehēcacozcatl* (Codex Borbónico) or *ecailacatzcozcatl*, the "spirally voluted wind jewel" (Seler, 1902-3: 140). It functioned as a fertility symbol, as a wind jewel breast ornament, i.e. a wind shell symbol, and also stand for one of the attributes of some gods. In the Codex Borbónico (Paso & Troncoso, 1988: Pls. 3, 26, 27, 34), for instance, spirals are represented worn as a pectoral painted in red, or painted on a shield, as one of the symbols of *Quetzalcoatl*, in his association with *Ehecatl*, the Wind God (Suarez 1989: 36).

In the Occidente, stylised representations of spiral motifs, usually in the shape of concentric circles, are often illustrated on pottery and stones.

a. Painted on female pottery figurines over the following parts of the body: the chest, worn as a pectoral, e.g. Nayarit (Kan & al, 1970: Fig. 21); both breasts, e.g. Jalisco (Long, 1966: Fig. 192, Ameca Gray/ Gallagher, 1983: Fig. 127, San Juanito type) and Colima (Piña Chan, 1960: Fig. 45); the buttocks, e.g. Nayarit (Eisleb, 1971: Fig. 255 b/ Krutt, 1975: Fig. 109); the nostril and both upper legs, e.g. Nayarit, San Sebastian Red (Dwyer & al, 1975: Fig. 25). In this context, spirals probably acted as a fertility symbol.

b. Engraved on petroglyphs, e.g. San Blas, Nay., La Peña Pintada and Tomatlán, Jal., where 141 of these motifs have been reported (Mountjoy, 1987: Table 18, Figs. 20, 26, 28, etc.) as from AD 600 up to Conquest times (ibid: 37). Ayon (1968) mentions that this symbol can also be found in San Ignacio, Sinaloa.

The spiral design has an important significance for the Huichols. Lumholtz believes that this motif is related to the "enriscada" snake, as seems quite obvious from two petroglyphs from Nayarit, which were possibly related to *Quetzalcoatl*, and to water and maize (ibid: 47).

#### **Spoon-shaped ornaments (2.3.G.1.b., 2.3.G.2.b./ Figs. 249, 255)**

These pieces were made of the dorsum of a big univalve. The valve of a big bivalve, e.g. *Spondylus princeps* was also used, as in Casas Grandes (Di Peso, 1974: 441). Spoon-shaped ornaments are also called "gorgets" in the literature, and have sometimes been

classified under the heading "triangular pectorals" (Olguin, 1983: 142). They all have two or more suspension holes along their upper edge, and were probably used as breast ornaments.

Two spoon-shaped ornaments from archaeological context have been located in the Occidente: one specimen without decoration (Fig. 249), from Cerro del Huistle, found on the chest of a skeleton (ibid) and another example from Amapa, carved with incised lines and circles on one of its surfaces. The interior bears a black adhesive, suggesting that the object was attached to something (Meighan, 1976: 123). Ekholm (1944: 482) suggests that the pieces without decoration could be a blank, or unfinished material, for the manufacture of a carved specimen similar to those described by Beyer (1933).

In other areas of Mesoamerica, these pieces were sometimes elaborately decorated on their concave surface with incised lines and cut through decoration, illustrating mythological figures and symbolic elements. Spoon-shaped ornaments belong to a Huastec tradition which spread through the Gulf Coast during the Toltec Period (Beyer, 1933: Pls. I, III/ Saville, 1900, from Tuxpan, with a human figure in profile). Other similar specimens have been found in San Luis Potosí (British Museum, London, Nos. 1936.L.91, 1936.L.92). In Casas Grandes and Cueva de la Candelaria, these pieces were decorated with a geometric pattern, consisting of incised horizontal lines and concave circles (Di Peso, 1974: 456) or small incised lines (Aveleyra & al, 1956: 123).

Similar pieces are illustrated on male pottery figurines, used either as components of a necklace, by inserting several identical specimens on a string (Eisleb, 1971: Pl. III, Mich.-Col./ Kan & al, 1970: Fig. 107, Colima), or as a belt ornament, in association with a small univalve, in Nayarit (ibid: Fig. 16). Beyer (1933: 169-170) suggests that spoon-shaped ornaments formed sets of three pieces, one spoon-shaped element with two discoidal ones, and that they were suspended from a red strap, probably made of leather, hanging down over the chest.

In the Codex Borgia 13, there are a number of representations, painted with blue bands, which show a shell pectoral worn by *Pahtecatl*, the God of Pulque (Seler, 1902-3: Fig. 277a), *Tlazolteotl* (Beyer, 1933: Figs. 3, 4, 5, 6), both considered of Huastec origin, and some Huastec deities (ibid: Fig. 2).

### **Columella pieces (2.3.G.1.c.(1)/ Figs. 250 to 252)**

These are made of the twisted columella of a big univalve, i.e. *Strombus galeatus*, and usually have no decoration on their surface. The hole(s) for suspension, if any, were drilled either through one of the surfaces of the columella (Fig. 250), or through one of the ends.

No such specimens have been reported from an archaeological context in the Occidente. Further occurrences include the Templo Mayor (Nagau, 1985: Fig. 33 a), Casas Grandes (Di Peso, 1974: 460), Matas del Muerto, Taumalipas (Museo Nacional de Antropología, Mexico D.F., No. 12. 2795) and the Maya area (ibid, No. 1063.5.1833). A similar piece from Sartaneja, Belize (Boxt, 1988: Fig. 8), is associated with the snake.

Because of their spiral and twisted shape, these elements are called *epcololli* in the historical sources, the same terminology as for the J-shaped ornaments mentioned above. Their shape resembles that of the twisted bar, or lightning staff, held by *Tlaloc* in his right arm, depicted in the Codex Borbónico (Paso & Troncoso, 1988: Pls. 24, 25). In the Codex Magliabechiano, *epcololli* are also associated with *Ehecatl* (Caso, 1958: 21).

Specimens with no holes were possibly used as burins, like the one from El Infiernillo (Suarez, 1977, Pl. 94 a), or for the manufacture of other artifacts. Traces of wear, however, are difficult to detect on shells.

### **Beads**

The terminology "beads" has not been used in the Classification and needs some clarification. These are miniature pieces of shell, frequently less than 0.50 cm in length/diameter. Beads were ground on an abrasive stone to the required shapes, e.g. a disc, a ring, a cylinder, a square or a sphere (not found in the Occidente) and were cut from a variety of univalves, e.g. *Strombus* (the columella, the spire or any other structure of the shell), or bivalves, e.g. *Pecten* sp. or from the red parts of *Spondylus* (the hinge margin or any other structure), a favourite material for bead making in Mesoamerica.

Beads are found in most sites in Mesoamerica as from the Formative onward, and therefore not diagnostic of any specific area or time span. The specimens are too small to have any element of decoration and are included in the Classification, according to their shape,

under the following headings (Size "a").

1. Disc beads (2.3.A.1.), with one hole for suspension pierced through the middle, either biconical or cylindrical. Occurrences have been reported in the following sites in the Occidente: Amapa (Meighan, 1976: 123), Cerro del Huistle (Olguin, 1983: Fig. 16 a-q), El Arenal (Long, 1966: Fig. 145), San Sebastian (Long, 1966: Fig. 89), Playa del Tesoro (Beltrán 1986:71), Apatzingán (Kelly, 1947: Fig. 70 a-b), Chupícuaro (Porter Weaver, 1956: 564; other shapes of beads have not been specified) and Cojumatlán (Lister, 1949: Fig. 35 n).

2. Ring-shaped beads (2.3.C.1.), with a circular central perforation. These can be easily confused, because of their small size, with the disc beads, and have only be reported in Playa del Tesoro (Beltrán 1988:71).

3. Cylindrical beads (2.3.D.1.), conically drilled. These specimens have been reported in the following sites: Las Cebollas (Furst, 1966: 96), Cerro del Huistle (Olguin, 1983: Figs. 15, 16 s-u, with a square inner section), El Arenal (Long, 1966: Fig. 146), San Sebastian (Long, 1966: Fig. 88), Tuxcacuesco- Zapotitlán (Kelly, 1949: Fig. 88 a-b), Playa del Tesoro (Beltrán 1988:71), Apatzingán (Kelly, 1947: Fig. 70 c-e; sometimes with rounded edges [ibid: f-g]) and Cojumatlán (Lister, 1949: Fig. 35 p).

4. Quadrangular beads (2.3.E.1.a.), either rectangular or square-shaped, with one or two holes cut through the material: Amapa (Meighan, 1976: 123) and Cerro del Huistle (Olguin, 1983: Fig. 16 r).

Other varieties of bead shapes include, for instance, tooth or drop-shaped, and "tricycle" beads (x1; Long, 1966: Fig. 105). References to the type of beads is ignored in some excavation reports, such as in the Morett Site (Meighan, 1972: 82) and the Tepaltepec Basin (Goggin, 1943: 55). In spite of the great number of beads which were certainly in use, only traces of them are sometimes found in excavations. Due to decay, beads have failed to resist time, and this probably accounts for the scarcity or absence of such objects in sites like Apatzingán (Kelly, 1947: 118), Autlán-Tuxcacuesco area (ibid, 1945 b) and Tuxcacuesco-Zapotitlán, particularly during the Tolimán complex, AD 1200-1500 (ibid, 1949: 132). In addition, their small size explains the fact that beads might have been lost in the process of excavations.

The utilitarian function of these beads, and the way they were used,

is illustrated through two different sources: the archaeological context in which they were found and the representation of such pieces on pottery figurines.

Beads fulfil different functions, depending upon their associations with the skeleton of the deceased in burial contexts, and were placed as follows:

1. around the neck, used as necklaces attached to a string, like in Playa del Tesoro (Beltrán, pers. comm.), Chupícuaro (x19 necklaces found; Porter Weaver, 1956: 564), and Cojumatlán (x170, mounted as one necklace; Lister, 1949: Fig. 35 p);
2. associated with both ankles, and used as bands attached to a string, as in Playa del Tesoro (Beltrán, pers. comm.) and Guasave (in parallel rows and forming a solid layer, Skeleton 28; Ekholm, 1942: 109);
3. over different parts of the body, like the head and the shoulders, e.g. Guasave, where a five meter long string made of beads has been found (Ekholm, 1942: 109);
4. for the decoration of skirts, like in Cerro del Huistle, probably  
sewn to cloth (Olguin, 1983: 111);
5. in the shaft-tomb of Las Cebollas, forty six specimens were found in the soil inside one of the trumpets (Furst, 1966: 96).

Further uses of beads include: the decoration of other ornaments, such as pipe-shaped pieces, as suggested by Willey (1972: 225), of basketry and different types of garments, like belts or clothes (Di Peso, 1974: Fig. 509.6) and the manufacture of "flores", an ornamental piece made of vegetal fibre with beads of various shapes inserted in the strings, which was possibly used as earrings, e.i. Cueva de la Candelaria (Aveleyra & al, 1956: 123-4 , 127, Fig. 23).

The painted and three-dimensional decoration on pottery figurines also illustrates further ways these beads were used: either several rows of beads mounted as a necklace around the neck of a female pottery figurine, Chinesco style, Nayarit (Kan & al, 1970: Fig. 1) or used in association with other ornaments, like cylindrical beads, worn as a belt by Nayarit female figurines (Eisleb, 1971: Fig. 255).

**Table 8. Non-figurative Pieces from archaeological contexts and surface collection in Western Mexico.**

**Key for Tables 8, 9 and 10**

1/2 = half disc	I = incised
a = size "a"	Ic = irregular cylindrical piece
ant = anthropomorphic representation	J = J-shaped
B = burial	l = longitudinal cut
b = size "b"	mo = monkey representation
bc = ball court	Ms = mosaic
bd = bird representation	o = <i>oyohualli</i>
br = broken piece	P = platform
c = central perforation	Pa = painted decoration
Cb = cylindrical bead	pl = plaza
cd = circular depression	Py = pyramidal piece
c.f. = refers to same Fig. in the Classific.	Qu = quadrangular piece
Cl = columella piece	R = ring
cr = crocodile representation	Rcp = rectangular convex plate
Cr = cross-shaped	rm = room
Os = crescent-shaped	S = surface collection
ct = cut through decoration	Sb = shell bar
D = disc	sn = snake representation
3 dim. = three-dimensional	Sp = spherical piece
dt = dentate edge	Spo = spoon-shaped
Fl = finger-loop	Sr = spiral-shaped
fl = floor	Tr = triangular
fr = frog representation	V = V-shaped
hc = "horse-collar"	z = zoomorphic representation
hr = high relief decoration	

<u>No/Subject</u>	<u>Holes</u>	<u>Deco-</u>	<u>Context</u>	<u>Dates</u>	<u>Observa-</u>	<u>Fig.</u>	<u>Fig. In</u>
<u>Matter</u>		<u>ration</u>			<u>tions</u>	<u>In Clas.</u>	<u>Liter.</u>
<u>Amapa, Nay. (Meighan, 1976)</u>							
17 R (b)	none	none	burials	AD 486-1508	1	<u>174</u>	Pl. 110
1 Spo	2 (?)	I	cemetery	-	2	<u>249</u>	Pl. 111
<u>Apatzingán, Mich. (Kelly, 1947)</u>							
2 D (a)	1/2	none	burial	-	-	<u>139</u>	Fig. 69 k-l
1 Os	2	-	"	AD 250-650	-	<u>162 c.f.</u>	Fig. 69 u
1 R (b)	none	none	"	late Postclassic	-	<u>175</u>	Fig. 69 a
2 R (b)	none	I (ant)	"	AD 450-650	3	<u>191</u>	Fig. 69 b
6 Qu	2	none	B. 34	"	4	<u>202</u>	Fig. 71 a-f
5 Qu	2	none	B. 36	"	"	<u>204</u>	Fig. 71 h-k
2 Tr	1	none	burial	-	-	<u>208 c.f.</u>	Fig. 69 n
- Ms	1	I	B. 34, 36	AD 450-650	5	<u>220</u>	Fig. 71 a-n
2 Fl	2	none	burial	middle Classic	6	<u>238 c.f.</u>	Fig. 69 p-q
1 Fl	2	I	-	and Postclassic	-	<u>246 c.f.</u>	Fig. 69 r
12 Sr (l)	-	-	burial	-	-	<u>248 c.f.</u>	Fig. 69 m
<u>Autlán Zone, Jal. (Kelly, 1945b: 72)</u>							
2 R (b)	-	-	S	-	7	<u>174</u>	-



Cerro del Huistle, Jal. (Olguin, 1983)

1	D (a)	none	none	B.13	AD 450-650	-	<u>139</u>	Fig. 13 a-d
1	D (a)	none	dt	-	AD 300-500	8	<u>146</u>	Fig. 21 e
1	D (a)	1	dt	B. 15.25	AD 0-300	-	<u>154</u>	Fig. 13 f
1	R (a)	none	slit	-	AD 500-650	-	<u>170</u>	Fig. 21 a
3	R (b)	none	none	burial	AD 0 -300	-	<u>174</u>	Fig. 20 b
6	R (b)	none	none	"	"	-	<u>175</u>	Fig. 20 a
1	R (b)	none	none	-	-	-	<u>177</u>	Fig. 19 a
1	R (b)	none	l (z?)	S	-	-	<u>189</u>	Fig. 20 c
-	Qu	none/1	none/l	burials	AD 0-300	-	-	Figs. 9-10
25	Tr	1	none/l	S/ burial	"	9	<u>208</u>	Figs. 5-6
5	Tr	1	l (bd)	-	AD 0-500	10	-	Figs. 7-8
1	Fl	2	l	-	-	-	<u>243</u>	Fig. 22
1	Spo	2	none	B. 51a	-	11	<u>249 c.f.</u>	Fig. 18 a

Chupicuaro, Mich. (Porter Weaver, 1956)

3	R (a)	1 (c)	l	B. 107	300 BC-AD 100	-	<u>181</u>	Fig. 25 h-k
3	V	1	none	B. 104	"	-	<u>215 c.f.</u>	Fig. 25 b
2	Fl	2	none	B.194	"	-	<u>239</u>	Fig. 25 d-e

Coimatlán, Mich. (Lister, 1949)

1	D (b)	1 (c)	none	burial	AD 1100-1300	-	<u>141</u>	Fig. 35 f
1	R (b)	none	l (bd)	"	"	-	<u>185</u>	Fig. 35 a
-	Cb (b)	-	none	"	"	12	<u>196</u>	Fig. 35 n-o
1	Qu	2	none	"	"	-	<u>204</u>	Fig. 35 s
3	Ms	2 (?)	-	"	"	-	-	Fig. 35 r-t

Cuitzeo/ Huandacareo, Mich. (Macias Goytia, pers. comm.)

1	D (b)	1	l (ant/br)	debris	Classic	-	<u>147 c.f.</u>	-
1	R (b)	none	none	P 1, B 48	"	-	<u>175</u>	-
1	R (a)	1 (c)	l	-	"	-	<u>181</u>	-

El Otero, Mich. (Noguera, 1944)

-	Cr	1	none	shaft-tomb	AD 500-800	-	<u>213</u>	Fig. 18
-	Ms	none	none	"	"	-	<u>220 c.f.</u>	Fig. 27

Guadalupe Mound, Jal. (Breton, 1903)

2	R (b)	none	hr (fr/sn)	burial	-	13	<u>189 c.f.</u> <u>190 c.f.</u>	Fig. 5.7-8
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Huetamo, Mich. (Museo del Estado, Morelia, Mich., No. 5076- window)

2	Rcp	4	l	-	Postclassic	-	<u>256</u>	-
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Las Cebollas, Nay. (Furst, 1966: 96)

26	R (b)	none	none/l	shaft-tomb	early Classic	14	-	-
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Morett Site, Co. (Meighan, 1972)

7	R (b)	none	none(br)	burials	75 BC-5th cent. AD	-	<u>174</u>	Pl. 70 a-f
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Playa del Tesoro (Las Hadas), Co. (Beltrán, 1988: 71/pers. comm.)

-	D (a)	none	slit	burial	AD 400-600	-	<u>140 c.f.</u>	-
-	D (a)	none	notches	"	"	-	<u>146 c.f.</u>	-
-	D (1/2) 1		l/ dt	"	"	15	<u>158-9 c.f.</u>	-
-	R (a)	1(c)	l	"	"	-	<u>181</u>	-
-	R (b)	none	none	"	"	16	<u>175-6</u>	-
-	Qu	none	none	'Pozo' 1	"	-	<u>203 c.f.</u>	-
-	Tr	1	none	"	"	17	<u>210 c.f.</u>	-

-	Qu	1-3	I (z?)	B. 21	"	18	<u>226 c.f.</u>	-
-	Fl	-	-	-	-	-	-	-
-	Sb	-	none	-	AD 400-600	-	<u>253</u>	-
<u>San Nicolas, Chapala area (Ekholm, 1962)</u>								
1	Fl	2	I (Sn)	-	-	-	<u>241</u>	Fig. 1 e
<u>San Sebastian, Jal. (Long, 1966)</u>								
1	D (a)	none	tricycle	-	-	-	-	Fig. 105
4	D (1/2) 1		I/Pa	shaft-tomb	400 BC-AD 100	19	<u>157</u>	Fig. 102
-	R (a)	none	none	looters	-	-	<u>169</u>	Fig. 78
14	R (a)	none	slit/Pa	-	-	19	<u>170</u>	Figs 103-4
443	Cb	1	none	sh.t./looters	-	20	<u>196</u>	Fig. 80
1	Cb	2	cd	shaft-tomb	400 BC-AD 100 "	-	<u>197</u>	Fig. 82
2	Fl	2	none	"	"	21	<u>239</u>	Fig. 109
2	Fl	2	I	-	-	"	<u>244</u>	Fig. 109
34	Sb	2	I	shaft-tomb	400 BC- AD 100	22	<u>253</u>	Fig. 101
<u>Tepaltepec Basin, Mich. (Goggin, 1943: 48, 55)</u>								
-	R (b)	-	-	burial	-	-	-	-
-	Cb	-	-	"	-	-	-	-
-	Ms	1/2	I	"	-	23	<u>220</u>	Fig. 4 g
<u>Tingambato, Mich. (Piña Chan, 1982)</u>								
2	R (a)	none	none	burial	AD 400-950	-	<u>169</u>	Fig. 26 g
1	R (a)	none	dt	"	"	-	-	Fig. 26 f
1	R (b)	none	cd (br)	"	"	24	-	Fig. 26 c
1	Fl	2	none	"	"	-	<u>237</u>	Fig. 26 e
<u>Tizapan, Mich. (Meighan &amp; al, 1968)</u>								
1	Qu	none	none	B. 9	-	-	<u>203</u>	Fig. 43 e
1	Fl	2	3 dim.	"	-	-	<u>246</u>	Fig. 43 l
<u>Totoate (Ekholm, 1962/ also in Hrdlicka, 1903: Figs. 1, 3, 4, 6; Pl. 41)</u>								
1	Fl	2	none	-	-	-	<u>237</u>	Fig. 1 c
1	Fl	2	none	-	-	-	<u>239</u>	Fig. 1 d
1	Fl	2	3 dim.	-	-	-	<u>246</u>	Fig. 1 b
<u>Tomatlán, Jal. (Mountjoy, 1982: 323)</u>								
1	D (a)	1	none	Tom-21	late Formative	25	<u>139</u>	-
-	R (b)	-	- (br)	Tom -5	"	-	-	-
<u>Tuxcacuesco-Zapotitlán, Jal. (Kelly, 1949)</u>								
1	R (b)	none	none	B. 34	AD 1200-1500	-	<u>175</u>	Fig. 87 c
1	R (hc)	2	none	B. 31	AD 200-950	-	<u>176</u>	Fig. 87 d
1	R (b)	none	none	purchased	-	-	<u>177</u>	Fig. 87 b
1	R (b)	none	I	"	-	-	<u>185</u>	Fig. 87 a
-	Cb	1	none	B. 31	AD 200-950	-	<u>196</u>	Fig. 88 e-f
1	Qu	1 (c)	none	B. 27	AD 950-1200	26	<u>202</u>	Fig. 88 n
1	Qu	none	none	B. 16	" " "	-	<u>203</u>	Fig. 88 j
1	Tr	1	none	B. 31	AD 200-950	-	<u>210</u>	Fig. 88 d
1	V	1	none	B.25	-	27	<u>216 c.f.</u>	Fig. 88 o
-	Ms	none	-	unknown	unknown	28	-	Fig. 88r
1	Fl	2	none	purchased	-	29	<u>237</u>	Fig. 88 h

# Zacoalco, Jal. (von Winning, 1971)

1	R (a)	1 (c)	none	-	AD 300-700	-	<u>172</u>	Fig. 3 e
1	Ob	2	l (cr?)	-	"	-	<u>200</u>	Fig. 2 d
1	Py	1	none	-	"	-	<u>217</u>	Fig. 3 f

## Observations

1. These specimens are referred to in the literature as "bracelets". The pieces from Amapa, all broken, were made of *Glycymeris gigantea*, but several other types of bivalves have also been used for their manufacture, such as *Dosinia ponderosa*, *Anadara grandis*, *Megapitaria aurantiaca* (Meighan, 1976: 82), *Macrocallista aurantiaca*, *Chione gnida* and *Arca grandis* (Kelly, 1945: 144). One bracelet fragment from the Morett Site has been dated 75 BC (Meighan, 1972: 82). Shell bracelets are common in Hohokam sites of Arizona (ibid, 1976:122).
2. Its exterior surface is much eroded and carved with incised lines and circles. The interior bears a black adhesive, suggesting that the object was attached to something (ibid: 123).
3. The two bracelets were found on either upper arm of a Delicias phase burial. Each bracelet is divided into panels, decorated with an "8" motif, by pairs of incised lines. Within each panel, a small inlay (mostly pyrite) element can be seen (Kelly, 1947: 116).
4. The small square and rectangular elements were made of pyrite, and could be combined to form bracelets (ibid: 123). Similar rectangular pieces were also made of stone, e.g. shale (Placeres de Oro; Spinden, 1911: 41)
5. The mosaic pieces have an incised line along the serrated edge and a circular, eyelike motif, inlaid with shell (Kelly, 1947: 123).
6. One pair of finger-loops (also referred to as earrings by Kelly) was found in a burial (ibid: 119).
7. According to Kelly (1945b: 72), worked and unworked shells are extremely rare. The author also mentions a core, or blank of a bracelet, resulting from bracelet manufacture, from Las Paredes, surface collection.
8. A similar disc-shaped ornament, with dentate edges, was made of clay (Olguin, 1983: 102/ Fig. 13 g).
9. These pieces could have been mounted as a necklace, in association with beads, as in skeleton 25-1 (ibid: Figs. 4-6). One of the decorated pieces (ibid: 83/ Fig. 5 a) is decorated with turquoise mosaics.
10. All the trapezoidal-shaped pieces (ibid: Figs. 7 f-j and 8 a-d) look like abstract bird representations.
11. Found on the chest of the skeleton (ibid: 142).
12. The cylindrical bead was found in Burial 9, mounted as a necklace and alternating with small copper bells (Lister, 1949: 81).
13. One of the bracelets is decorated with four two-headed serpents, with triangular faces, and four frogs alternately. Circular depressions mark the eyes of the serpents and of the frogs. The motifs on the other piece include identical representations of frogs all around the outside edge of the bracelet (Breton, 1903: Fig. 5 8-7).
14. Apart from these pieces, 48 fragments were encountered in situ. Only one of those was decorated, with a triangular head, similar to those on the conch shell trumpets (Furst, 1966: Pl. 41). In addition, 20/30 complete specimens were also found by looters (ibid: 96).
15. One of these ornaments (Fig. 158) was found in "Pozo" 8, Burial 24, next to the right hand of the deceased (Beltrán, pers. comm.).
16. All the bracelets were associated with the right hands and the wrists of the deceased (ibid).
17. Found mounted as a necklace (ibid).
18. The four rectangular pieces, with one to three holes for suspension, were found

around the neck of the deceased. They are all decorated with incised lines, but the design is too damaged to identify any specific motif (ibid).

Necklaces were found around the necks of the skeletons, and beads were associated with the ankles (ibid).

All the material comes essentially from burials of adults and children; their sex had not been determined by the time this information was provided. Red pigment is still visible on some

pieces, made of *Pinctada mazatlanica*, and yellow pigment on some beads. Two samples, not specified by the author, were associated with turquoise beads, another one with a gold pendant (ibid).

19. The five rings and the half circle ornaments ("butterfly") were coated with a yellow-brown substance (Long, 1966: 214-5). Long (ibid: Fig. 150) believes that fragments of the same type of ornaments have been found in El Arenal. Similar objects, made of slate with pyrite polygons formerly encrusted, were found in Las Cebollas (Furst, 1966: Pl. 36 a).

20. The non-decorated cylindrical beads (*Chama* sp?) varied in size from 0.50 to 2.-cm. Some specimens were painted in red or had a yellow coating (Long, 1966: 207). One flat cylindrical bead has several circular depressions all along its length and a two-hole central perforation. A long perforation has been drilled from both ends of the tube. Genus: *Anadara grandis* (ibid: 208).

21. The finger-loops have been found in pairs. Some specimens are decorated with incised lines and shallow drilled holes. Both pairs are coated with a yellow-brown substance, and one of the incised pairs retains traces of fibre binding (ibid: 216).

22. The "shell bars", with both ends perforated, have a wide incised line at the centre of the bar. The exterior surface is coated with a yellow-brown layer. Species: *Anadara grandis* (ibid: 214).

23. These pieces vary from sets of squares or bars to interlocking designs. Their position when found in burials indicates that they were used as diadem around the head. The author mentions that occasionally they are found around the waist (Goggin, 1943: 55).

24. Only a fragment of the bracelet has been found, similar in section to the one in Fig. 174. Its surface is decorated with circular depressions, where pieces of turquoise were inlaid. One has been found in situ, next to the bracelet (Piña Chan, 1982: object No. 81).

25. The disc has a hole in the middle and Mountjoy (1982: 323) believes that it might have been used as a "malacate" (spindle-whorl).

26. The square-shaped ornaments were found under the skeleton and on the chest of the deceased respectively (Kelly, 1949: 131).

27. The V-shaped ornament was found next to the left ear of a skeleton (ibid).

28. The rim of fragments of what appears to have been a circular plate is covered by insets of shell and bone (ibid: 133).

29. Kelly (ibid: 132) reports finger-loops made of stone.

**Table 9. Non-figurative Pieces from selected archaeological contexts and surface collection in other areas of Mesoamerica.**

<u>No/Subject</u> <u>Matter</u>	<u>Holes</u>	<u>Deco-</u> <u>ration</u>	<u>Context</u>	<u>Dates</u>	<u>Observa-</u> <u>tions</u>	<u>Fig.</u> <u>In Clas.</u>	<u>Fig. In</u> <u>Liter.</u>
<b>CENTRAL MEXICO</b>							
<u>Templo Mayor</u> (Nagau, 1985)							
- D (J)	2	-	cache	Postclassic	-	<u>161</u>	Fig. 35 c
- Sr	-	none	"	"	-	<u>248</u>	Fig. 35 d
- Cl	-	none	-	"	-	<u>250</u>	Fig. 33 a
<u>Teotenango</u> (Piña Chan, 1972)							
2 R (b)	-	none	burial	AD 750-1150	-	-	Ph. 30
10 Tr	1	none	"	"	-	<u>210</u>	Lam. 9
2 Sp	2	none	"	"	-	-	Lam. 7
- Rcp	4	none	"	"	1	<u>256</u>	Phs. 27-9
<u>Teotihuacán</u> , Tetitla/Yayahuala (Séjourné (S), 1966 / Linné (L), 1942 )							
2 D (b/o)	1/2/c	none	-	-	2	<u>142</u> (S) Fig. 45	
1 D (b)	2	dt	-	-	-	<u>154</u> (L) Figs. 16-17	
1 Fl	2	l	-	-	-	<u>238</u> (L) Fig. 18	
<u>Tlapacoya</u> , Central Mexico (Niederberger, 1987)							
- D (b)	none	none	-	?	-	<u>174</u>	Fig. 564
- Cb	1	none	-	?	-	<u>196</u>	Fig. 629
<u>Tlatilco</u> , Central Mex. (Lorenzo, 1965)							
2 D (b)	1 br	l	'calas'	Formative	-	<u>147</u>	Fig. 83
2 D	-	none	"	"	-	-	-
1 V	2	none	"	"	-	<u>216</u>	Fig. 87
<b>MAYA AREA</b>							
<u>Altar de Sacrificios</u> (Willey, 1972)							
2 R (a)	2	Pa	B. 88	Classic	3	<u>173</u>	Fig. 197 a-b
<u>Barton Ramie</u> (Willey & al, 1965)							
1 Tr	1 (d)	l	-	700-300 BC	4	<u>210</u>	Fig. 304. 23
<u>Chetumal</u> (Proskouriakof, 1962)							
2 Spo	none	none	-	-	-	<u>249</u>	Fig. 53 x-y
<u>Chiapa de Corzo</u> , Chiapas (Lee, 1969 [Fig. 141 top two rows])							
6 D (b)	1	l	-	450 BC-AD 950	5	<u>150</u>	Fig. 126 f-k
1 D (a/J)	-	-	Tomb 1	125 BC - AD 450	6	<u>161</u>	Fig. 141
- D (a)	none	none	fill	125 BC-AD 0	-	-	Fig. 142 a
1 R (a)	-	slit	"	"	6	<u>170</u>	Fig. 141
1 R (a)	none	l (mo)	-	-	7	<u>178</u>	Fig. 140 a
- R (b)	-	none (br)	burial	late Postclassic	-	<u>174</u>	Fig. 138
1 Qu	none	l	-	before AD 450	-	-	Fig. 142 f
<u>Chichen Itza</u> , Yuc. (Proskouriakoff, 1962)							
1 Sr	-	-	-	-	-	<u>247</u>	Fig. 53 p

Kaminaliúyu, Gua. (Kidder & al, 1946)

4	D (b)	1 (c)	Pa	burial (A-1) -	8	<u>150</u>	Fig. 183 c-f
2	R (hc)	3/4	none	burials AD 300-600	9	<u>176</u>	Fig. 162 e-h

Sartaneja, Belize (Boxt, 1988)

1	D (b)	?	I (br)	S	late Postclassic	-	<u>151</u>	Fig. 3
2	Cl (sn)	1	I	Tomb I	"	-	<u>250</u>	Fig. 8

Tikal, Gua. (Moholy-Nagy, 1985)

8	Qu	2	none	B.121	late Formative	10	<u>205</u>	Fig. 10.5
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Uaxactún, Guat. (Ricketson & al, 1937 (R)/Kidder, 1947 (K))

1	D (b)	1	dt	-	-	-	<u>153</u>	(R) Fig. 132 a
5	R (a)	none	I	burial	AD 250-600	3	<u>173</u>	(K) Fig. 56
2	R (hc)	2	none	-	-	-	<u>176</u>	(K) Fig. 52
-	Fl	1	none	-	-	-	<u>218</u>	(K) Fig. 86 a
3	Qu/ br	-	none	-	Formative	11	<u>228</u>	(K) Fig. 85 b.2
1	Fl	2	-	-	-	-	<u>238</u>	(K) Fig. 85 c.2
1	Spo	-	none	-	-	-	<u>249</u>	(K) Fig. 86 d7-9

## OTHER AREAS

Casas Grandes, Chi. (Di Peso, 1974)

-	D (a)	1	none/I	rm/pl/fl	AD 1260-1340	12	<u>139</u>	Fig. 534.6. 17
1	D (b/o)	1/c	none	rm /fill	"	-	<u>142</u>	Fig. 534.6. 14
1	D (b/c)	1	dt	"	"	-	<u>153</u>	Fig. 534.6. 18
1	R (a)	none	Ms	rm	"	13	<u>169</u>	Fig. 508.6.2
14	R (b)	none	none	rm/pl	"	-	<u>174</u>	Fig. 596.6.T.
Idl								
45	R (b)	none	none	rm/pl/bc	"	-	<u>175</u>	Fig. 596.6.T. II
7	R (b)	none	I	rm/pl	"	-	<u>177</u>	Fig. 596.6.T. Ic
10	Qu	1	none	rm/pl	"	-	<u>206</u>	Fig. 534.6.23-4
12	Spo	1/many	none/I	rm/pl	"	14	<u>249</u>	Fig. 534.6.25
	Cl	1	none	pl	"	-	<u>250</u>	Fig. 534.6.T. XIII
-	Ms	none	-	burials	"	-	<u>252</u>	Fig. 534.6.30

Cueva de la Candelaria, Dur. (Aveleyra & al, 1956)

-	Qu	2/3	none	burials	-	10	<u>205</u>	Figs. 8-9
1	Spo	3	I	"	-	16	<u>249</u>	Fig. 16

Culiacán, Sin. (Kelly, 1945a)

1	R (b)	none	none	burial	AD 1300-1500	17	<u>159</u>	Fig. 72 a
2	Qu	2	none	"	"	-	<u>182</u>	Fig. 72 o-p
1	Sb	1	none	-	-	-	<u>253</u>	Fig. 72 e

El Infiernillo, Gue. (Suarez, 1977)

-	D (a)	1	none	-	AD 1200-1600	-	<u>139</u>	Pl. 36 b-c
1	D (b/o)	3/c	none	-	"	-	<u>142</u>	Pl. 37 b
2	D (a)	1	I	-	"	-	<u>143</u>	Pl. 34 d
1	D (b)	1	I	-	"	-	<u>151</u>	Pl. 40 h
-	R (a)	none	none	-	"	18	<u>169</u>	Pl. 72 a-b
2	R (a)	none	none	-	"	-	<u>171</u>	Pl. 86 a-b
-	R (b)	none	none	-	"	-	<u>175</u>	Pls. 48-9
-	R (b)	none	none	-	"	-	<u>177</u>	Pls. 56-8
1	R (a)	kook	I (bd)	B 73	-	-	<u>178</u>	Pl. 39 g

1	R (a)	none	l (ant)	-	-	-	<u>179</u>	Pl. 72 e
6	R (b)	none	l (ant)	-	-	-	<u>183</u>	Pls. 66-8
-	R (b)	none	3 dim (z)-	-	-	-	<u>184</u>	Pl. 60
-	R (b)	none	ct (z)	-	-	-	<u>186</u>	Pls. 61-5
-	R (hc)	none	l/ dt	-	-	-	<u>187</u>	Pl. 50
3	R (b)	none	l	-	-	-	<u>191</u>	Pls. 46-7
1	R (b)	none	l (z)	-	-	-	<u>192</u>	Pl. 45
1	R (b)	none	l/ ct	-	-	-	<u>193</u>	Pl. 44
1	Ob	1	none	-	-	-	<u>196</u>	Pl. 11
-	Qu	2	none	-	-	-	<u>202</u>	Pl. 33 j-l
-	Qu	1/2	none	-	-	-	<u>204-5</u>	Pls. 29-31
-	Tr	1	none	-	-	-	<u>210</u>	Pl. 27 e-o
86	Sp	1	none	-	-	-	<u>219</u>	Pl. 12
-	Ms	none/2	none/l	-	-	-	<u>220</u>	Pl. 82
118	Sp	3/4	l	-	-	-	<u>234</u>	Pl. 13
3	Fl	2	none/l	-	-	-	<u>237</u>	Pl. 90 d
-	Fl	2	none	-	-	-	<u>238</u>	Pl. 89 a-b-d
-	Fl	2	none	-	-	-	<u>239</u>	Pl. 90 a-b
1	Fl	2	3 dim (z?) -	-	-	-	<u>241</u>	Pl. 89 c
3	Fl	2	l	-	-	-	<u>245</u>	Pl. 90 e
2	Fl	2	3 dim	-	-	-	<u>246</u>	Pl. 90 c
1	Cl	none	none	-	-	-	<u>250</u>	Pl. 94 a
1	Rcp	4	ct	-	-	19	<u>256</u>	Pl. 77
<u>El Prisco/ Panuco, Gulf Coast (Ekholm, 1944: 482/ 1962)</u>								
2	Fl	2	l	-	late Postclassic	-	<u>246</u>	Fig. 1 a
<u>Guasave, Sin. (Ekholm, 1942)</u>								
50	D (b)	4	none	-	-	20	-	Fig. 21 o
1	R (b)	none	l	S	-	21	<u>182</u>	Fig. 21 q
3	Ob	1	none	-	-	22	<u>196</u>	Fig. 21 c
-	Sb	1	none	burial	-	23	<u>253</u>	Fig. 21 c
<u>Monte Albán, Tomb 7, Oax. (Caso, 1969)</u>								
2	D (b/J) 2	-	burial	AD 300-900	24	<u>161</u>	Fig. 252	
-	R (a)	1 (c)	-	"	25	<u>171</u>	Figs. 133-7	
9	R (b)	none	none	"	-	<u>174</u>	Fig. 132	
1	R (hc)	several	l	"	-	-	Fig. 131a	
2	Sp	2	none	"	26	<u>218</u>	Fig. 146	
<u>Placeres de Oro, Gue. (Spinden, 1911)</u>								
2	R (b)	none	l (mo)	burial	-	27	<u>192</u>	Fig. 11 a-d
4	Ob	1	none	"	-	-	<u>196</u>	Pl. VI c-e
26	Qu	2	none	"	-	-	<u>202</u>	Pl. VI m-r
31	Qu	2	none	"	-	-	<u>204</u>	Pl. VI h-l
<u>Tampico/ Las Flores, Gulf Coast (Ekholm, 1944)</u>								
1	R (a)	none	none	burial	early Postclassic	28	<u>169</u>	Fig. 52 e
2	R (a)	none	l	"	"	-	<u>179</u>	Fig. 51 f
2	Fl	2	none	"	"	-	<u>239</u>	Fig. 52 z
1	Fl	2	l	"	"	29	<u>245</u>	Fig. 52 y
2	Sr	-	none	-	"	30	<u>247</u>	Fig. 52 h-i
2	Spo	-	none	Test 3	"	31	<u>249</u>	Fig. 52 a'-b'

## Observations

1. Eleven rectangular convex plates were found (Piña Chan, 1972: 342-46), all with one hole on each corner. They were found in different burials and were part of several lots of bracelets: one with three plates, two with four and one with one only. The last one was decorated with parallel incised lines (ibid: Ph. 29). The author believes they were bracelets because long bones belonging to the forearm were found inside one lot. Maximum lengths: 8.30 x 7.70 cm.
2. Linné (1942: 141) refers to the same type of discs, from Burial 13 at Tlamimilolpa (below a house floor), where a red painted line surrounds the inner circle.
3. These two pipe-shaped ornaments were probably used as earplugs, although some authors refer to their use in the cheeks or the lips ("labrets"). The disc end of each one has a central hole, connecting with another drilled in from the side of the cylindrical area just below the rim. The author suggests that beads, feathers or other items might have been suspended from these holes. Red pigment had been applied to the disc surface (Willey, 1972: 225). Four similar specimens were found in Uaxactún: one with nine small depressions on its outer rim and a circle cut through its cylindrical area (Ricketson & al, 1937: 201); a fourth one was reported by Kidder (1947: 64). One pair accompanied a female skeleton in Burial B-2. Other occurrences: Piedras Negras, Copán, Barton Ramie (Willey & al, 1965: 509-10), Jaina (Velazquez, 1988: Pls. 48 4-8, 49-50), and specimens in wood (Sacred Cenote at Chichen Itza), pottery (x2, Jalisco/ Museo Regional, Guadalajara), Uaxactún, Bonaca and the Panuca region, Period V, and copper, from Texmilincan, Central Mexico (ibid: 64-5).
4. Flat and thin specimen cut from a *Spondylus* shell. The incised motif consists of an X-mark framed by a horizontal line below. One of the transversely drilled hole connects with two further ones drilled on the reverse side (Willey & al, 1965: 508).
5. These discs, or "flower-like objects", are either concave or have a flat surface, with bevelled sides. The author believes that they could have been fitted into the throat of some flares, and used as earplugs. Traces of red pigment appear on the back of some of these discs. They all have a central hole. Similar objects have been found in Uaxactún (Kidder, 1947: Figs. 53 c, 85 a.10-15), Southern Cayo District (Thompson, 1931, Pls. 46-47) and Corozal District (Gann & al, 1939: Pl. 9.1. a, c, f, g).
6. The disc (J-shaped ornament) and the ring are referred to by the author as "mosaic mask element" (Lee, 1969: 181).
7. The forehead of the monkey effigy is painted. The eye is a small drilled dot and striations, as of hair, are visible along the back (ibid: 180).
8. They all had incised decoration of their convex side. Two of the four concave discs are identical, with a central perforation and traces of green paint on the concave side. The author believes that they might have been used as earplug assemblages (Kidder & al, 1946: 152, Fig. 183 f).
9. The concave surface of one of the specimens, Fig. 162 h, was painted in red. In Fig. 162 e, the inner edge contained a gummy substance, perhaps an adhesive to hold a plate of perishable material. They may have been used as frames. Similar pieces have been reported in Teotihuacán, from a grave near the Pyramid of the Sun, Mayapán (broken specimens with incised glyphs/ Proskouriakoff, 1962: Fig. 42 s-t, w-x) and in Ojitlan, Oaxaca (Kidder & al, 1946: 149).
10. These rectangular-shaped pieces, measuring up to 4.40 cm in length, were found mounted as a necklace: a) in association either with three jade beads, with the skeleton of an adolescent (Moholy-Nagy, 1985:152), from Tikal; b) as the main component of a necklace, with small shell beads (Aveleyra & al, 1956: Fig. 9), or several specimens together mounted on a string (ibid: Pl. VI), both from Cueva de la Candelaria.
11. The trapezoidal-shaped ornaments (two are made of fresh-water clams) have a spatulate end worked out to a sharp edge, but they show no sign of wear. Consequently, it seems improbable that they served as tools (Kidder, 1947: 63).



12. Small discs were also found during the Viejo Period, i.e. before AD 1205 (Di Peso, 1974: 401).
13. This piece is covered by rectangular copper and turquoise mosaic pieces. Similar objects were found with the deceased in San Cayetano and in the Gika-Salt area in its Classic history (ibid: 511).
14. Some of these specimens were decorated with incised horizontal lines and concave circles (ibid: 456). They were made of *Spondylus princeps* or with univalves (ibid: 441).
15. All mosaic elements are referred to by the author as "spangles", with one hole, or "tesserae", with no holes (ibid: 488, 511). These pieces, often with a shiny surface, were probably pasted onto wood or on skin, as noted in Paquimé, where a leather covering for a *Strombus* was found. They were found in sacred and profane architecture (ibid: 511).
16. The spoon-shaped ornament has small incised lines all along the concave edge (Aveleyra & al, 1956: 123).
17. Seventeen other specimens were found, most of them from Early I association (c. AD 1000-1300), but Kelly (1945a: 144) does not provide any further information.
18. The edges of the rings (size "a") can be either circular or cut at an angle (Suarez, 1977: 51).
19. The four holes of the rectangular convex piece are located on each corner. Six other holes have been cut through, and could have consisted of elements of decoration (ibid: 55).
20. Two sets of two holes have been cut through opposite edges of the circle (Ekholm, 1942: 111).
21. The author suggests that the carved human face is suggestive of Hohokam shell carving. In Burial 29 (male skeleton, probably that of an important person), two thousand large beads were found around the upper portion of the body and on the left ankle and nineteen bracelets were placed on the left humerus (ibid: 43).
22. One piece has been carved from the columella of a gastropod. The other two consist of sections of *Vermetus* (ibid: 109).
23. The whole lot of small columella pieces was found about the ankle of a skeleton (ibid: 109).
24. One of these J-shaped ornaments (2.3.A.2.b. in Classification) is partly covered by turquoise mosaics (Caso, 1969: 166). Both pieces were located next to the north wall of the tomb (ibid: 228).
25. The same type of ring-shaped ornaments, used as earplugs, were also found of jade and gold (ibid: 162).
26. The spherical ornaments were mounted in two necklaces (ibid: 167).
27. Only one specimen is complete. The main element of the incised design consists of a panel with the representation of four monkeys in profile (Spinden, 1911: 37).
28. A fourth ring, apparently unfinished and with a crudely scratched face, was purchased. Several similar specimens have been found at the Pavón site (Ekholm, 1944: 181).
29. The incised finger-loop is decorated with transverse grooves all along the convex surface (ibid: 482).
30. The spiral-shaped ornament has been identified as *Strombus gallus*, a Caribbean species (ibid: 481).
31. Ekholm (ibid: 482) suggests that the spoon-shaped ornament could be a blank, or unfinished material, for the manufacture of a carved specimen similar to those described by Beyer (1933: Pls. I, III).

**Table 10. Non-figurative Pieces from selected archaeological contexts and surface collection in the Southwest.**

<u>No/Subject</u> <u>Matter</u>	<u>Holes</u>	<u>Deco-</u> <u>ration</u>	<u>Context</u>	<u>Dates</u>	<u>Observa-</u> <u>tions</u>	<u>Fig.</u> <u>In Clas.</u>	<u>Fig. In</u> <u>Liter.</u>
<u>Las Acequias, Arizona (Haury, 1945)</u>							
- R (b)	-	I	-	AD 1100-1450	- -		Fig. 108 b-c
- Ob	none	none	-	"	1	<u>196</u>	Fig. 108 d
<u>Los Guanacos, Arizona (Haury, 1945)</u>							
- R (a)	-(br)	I/Pa	domestic	AD 550-1100	- -		Fig. 114 g
- R (b)	-(br)	I/Pa	"	"	- -		Fig. 114 d-f
<u>Los Hornos, Arizona (Haury, 1945)</u>							
1 R (b)	-	I (sn)	mound	AD 550-1100	-	<u>189</u>	Fig. 182 e
<u>Los Muertos, Arizona (Haury, 1945)</u>							
- D (a)	none	none	burials	AD 1100-1450	- -		Fig. 97 a-d
4 D (a)	1	none	"	"	-	<u>139</u>	Fig. 92 a-d
2 D (b)	1	dt	"	"	-	<u>154</u>	Fig. 92 e-f
5 R (a)	none	none	"	"	-	<u>169</u>	Pl. 72 b
- R (b)	none/1	none/I(br)	"	"	2	<u>189</u>	Fig. 96
		(fr/sn)					
- R (b)	none	none	"	"	-	<u>193</u>	Pl. 72 g
- Q <sub>1</sub>	none/1	none	"	"	3	<u>202</u>	Fig. 92 j
6 Q <sub>1</sub>	1	none	"	"	-	<u>204</u>	Fig. 92 i
1 Ov	none	none	"	"	-	<u>211</u>	Fig. 97 l
<u>Snaketown, Arizona (Haury, 1976)</u>							
- D (a)	none	none	-	AD 900-1100	4 -		Fig. 15.25 a-b
- D (b/o)	1/c	none	-	"	5	<u>142</u>	Fig. 15.17 b
- D (b/o)	1/c	none/dt	-	AD 700-1100	-	<u>153</u>	Fig. 15.17 c
- R (a)	1	none/I	-	"	6 -		Fig. 15.22
- R (b)	none/br	none/I	-	AD 550-1100	7	<u>189</u>	
Fig. 15.20							
		(br/fr/ sn)					
- Q <sub>1</sub>	4	none	-	-	-	<u>202</u>	
Fig. 15.17 g							
- Q <sub>1</sub>	2	none	-	-	-	<u>204</u>	
Fig. 15.17 f							
- Q <sub>1</sub>	1	none (bd)	-	-	8	<u>205</u>	Fig. 15.17 l-m
<u>Wyoming Valley, Penn. (Kent, 1970)</u>							
5 D (b)	2/3	I	cache	AD 1700-1760	-	'runtees'	Fig. 3 g-k

### Observations

1. The cylindrical bead was made from the casing of a marine worm, *Vermetus* (Haury, 1945: 169).
2. Broken decorated rings ("b") rise into the hundreds. The naturally pierced holes of some specimens do not show any signs of wear, and the author does not believe that anything was attached to them. The engraved lines in some pieces were usually filled with pigments (see also Fewkes, 1912: 143). One specimen was decorated with turquoise inlays, like one ring ("a") found in Los Guanacos (Haury, 1945: 154-7,

178).

3. The square-shaped pieces have one hole for suspension, either in the middle (ibid: Fig. 97 k) or near one of the apices (ibid: Fig. 92 j). Some pieces have no holes (ibid: Fig. 97 k-j, l).

4. Haury (1976: 317) refers to those pieces as "mosaics", and suggests that the introduction of shells in mosaic assemblages appears to have taken place as from AD 700, up to AD 1100.

5. Similar pieces were found at Los Muertos (ibid, 1945: Fig. 97 a-d).

6. All the rings ("a") were made of *Glycymeris*, *Oliva* and *Conus* sp. The carving was a delicate treatment of geometric or life-form motifs, usually snakes (ibid, 1937: Fig.

57 D). After

AD 1000, carving and inlaying were combined in the decoration. In Los Guanacos, in the Salt River Valley, a complete ring with turquoise inlays was found (ibid, 1945: 178).

7. Decorated rings ("b") only represented 3% of the total collection (ibid, 1976: 314). It included a pattern of geometric (which may represent an abstraction of the reptilian body) and zoomorphic designs on the band or the umbo, either incised or in high relief (later phases). Zoomorphic shapes included snakes with a zigzag body (ibid: Fig. 15.20 d-o), similar to the one in Fig. 189, or in the act of swallowing another snake, and a combination of bird and snake (ibid: Figs. 15.20 p-s, 15.28 f), paired birds and snakes and frogs (ibid: 15.20 t-y).

8. The author believes that the rectangular plates (ibid: 313, Fig. 15.17 l-m) are abstract bird representations.

## **Chapter eight**

### **Stylistic Analysis**

The previous classification (Ch. 2) was primarily concerned with morphology, i.e. the shape, or "representation elements" and form of the artifact. In this chapter, the object of analysis will be the style, i.e. the way the subject matter of each object is treated or the way shape, decoration and other materials and behaviour are combined.

Style can be used for two purposes: 1) to define regional groupings of artifacts; 2) to provide for sociological information, given the nature of the sample concentrated in these groupings.

1. In archaeological research, style is particularly used as an analytical tool that can be described as a formal statement of the particular ways in which different artifacts are similar to each others (Conkey & al, 1990: 2). All artifacts can be brought under a stylistic description of some kind, but a purely stylistic description of artifacts is an unwieldy affair unless and until it is structured by cross-cutting information, particularly about sequence and distribution (Whitney, 1990: 22, 23).

When projected into the realm of archaeology, style is the perfect complement of function regarded in an equally general sense, and the two share equal responsibility for determining the nature of variability among artifacts, which in themselves are inherently dualistic, i.e. they can present a functional and a stylistic aspect (Sackett, 1977: 370-1).

2. Style is also often used in a passive way to serve as a mirror that reflects to us certain ideas or characteristics about the past and can provide information on the identity, status or wealth of the group and of the individual within well defined territories. It has been defined as a form of non-verbal communication through doing something in a certain way, or perhaps more appropriately a "way of doing" (Weissner, 1990: 107).

Style can therefore be studied at the level of the individual, group or society, and concerns a highly specific and characteristic manner of doing something: it is inherently rooted in both time and space, and constitutes a cultural achievement that is intrinsically interesting and valuable (Sackett, 1977: 375). Emphasis has been given to the social significance of style, which cannot be separated from the social contexts that give the cultural materials in question their social values (Conkey & al, 1990: 1).

Style has also been linked to information exchange, implying the assumption that symbolic communication between people is needed

for them to interact, and cooperation is necessary for survival (Hodder, 1982: 191). Aside from the use to reconstruct a chronological framework, its application to obtain information on cultural groups, on boundaries and on interactions has been the most common use of style in archaeology.

In the context of this work, only the first purpose mentioned above (1) can be achieved, i.e. a stylistic description of the artifacts. Because of the lack of information of the bulk of the material - on its social context, for instance - , none of the objectives mentioned in (2) are achievable.

In order to achieve a stylistic grouping of these artifacts, the manipulation of attributes, or patterns, related to these materials is an essential step towards measures of certain cultural phenomena that we want the style to "reveal" to us (Conkey & al, 1990: 3). The objective of this classification is to try to find the stylistic attributes, selected according to the shape and the decoration of the object, for each group of artifacts.

A stylistic attribute is one for which a match or similar can be found elsewhere in the group, and which can serve as a base for group awareness and identity (Sackett, 1977: 377). It should be diagnostic of historical relationships among artifacts assemblages over space and time (ibid: 374). Although some attributes remain unmatched or unassociated, all artifacts should be brought under a stylistic description of some kind. The problem arises when selecting attributes, because all attributes of an artifact are potentially stylistic, such as the line, the colour, or the surface texture.

At this stage, it is important to take into account that we are faced with a methodological need to collect large enough samples to discover whether iconographic and stylistic details characterising some pieces and differentiating them from others really recur with sufficient regularity to justify regarding them as markers for interpretation and cross-cultural comparison. In analysing details such as body features, leg or hand position, headdress, clothing or body ornaments; individual creativity as well as local fashion and tradition have to be taken into account. It is necessary to learn to differentiate between accidental resemblances, or resemblances based on local fashion, and those characteristics which may be considered as determinants of the meaning of the entire class of objects (Furst, 1965b: 33).

For the reasons mentioned above, this chapter of the thesis

concentrates on the following objectives: a) the recognition of stylistic similarities and characteristics for different groups of objects, i.e. to establish stylistic groups within a geographical area; b) a suggested chronological framework; c) distinctive aspects of formal variation characteristic of culture-historical traditions within the Occidente. This stylistic classification should lead to the definition of regional and temporal units within the shell assemblages of the Occidente.

## **I. Description of styles and stylistic groups**

The recognition that certain features not only repeat themselves in a number of artifacts, but that some of these characteristics seem to be patterned in meaningful ways is essential for the interpretation of this classification.

The assessment of stylistic criteria which will lead to the definition of a specific stylistic groups will be conditioned by one or more main attributes, or key feature, which will in turn define the style of this group (Table 12). In this particular context, the way each object is treated - and the way the decoration is used for expressing a particular theme, like an anthropomorphic or zoomorphic figurine - will be considered as the "key feature", i.e. the contour of the artifact, which conditions its shape.

Once the key features for each group of shell material are defined, we can see whether the same attributes can be matched in style groups already established for other media such as pottery (von Winning, 1974) and stonework (Williams, 1992). If so, we would have defined regional "art styles" which cross-cut all media. The chronology of these art styles can be established by reference to material from controlled excavations in the Occidente and by comparison with dated materials elsewhere.

It is important, at this stage, to refer to the problems which have restricted the objectives mentioned above.

a. The sample of artifacts we have to deal with is heterogeneous (Table 12). This great diversity of shapes makes it difficult to find common stylistic attributes within any group of artifacts. Consequently, some stylistic groups may include few artifacts only.

b. In some instances, the way the object is treated becomes so abstract that diagnostic stylistic traits are difficult to identify (Fig. 46).

c. The poor condition of preservation of many artifacts - the absence of decoration , e.g. paint or incised lines, broken specimens, etc. - reduces the information provided by the artifact, which is often insufficient for interpretation.

d. The lack of provenance of most pieces.

e. The scarcity of comparative material from archaeological reports from the Occidente.

e. Many pieces are not diagnostic stylistically and are not included in this classification, i.e. those which cannot convey any useful stylistic information because of their simple shape and/or their lack of decoration. When these are eliminated, the "usable" sample consists of 188 pieces (out of a corpus of 357 items). Most of these are figurines of some sort.

Despite these limitations, four different regional and stylistic groups could be identified in the Occidente, based on four different main attributes, or ways of expressing a same theme:

**Style A:** curvilinear shapes.

**Style B:** straight, elongated shapes.

**Style C:** contours cutting at a right angle.

**Style D:** the triangle becomes the distinctive and abstract way of expressing a specific illustration.

These four different styles have been used for expressing the same themes, or shapes, through different ways. It can therefore be suggested that each category may represent a distinct cultural group. Each style can in turn be sub-divided into sub-styles, or local variants.

**Style A.** The basic pattern used is the round shape and the outline of the pieces is curvilinear. Pieces are treated in a naturalistic way.

Anthropomorphic representations have realistic and normal body proportions and facial details, with variations among both but many repetitions of each variety. The flanks are always straight edges and the shoulders wide. The necks are thick and short, which give the bodies a sturdy appearance, characteristic of Colima. The heads are round or oval, sometimes with full cheeks. This approach for rendering the human body is similar to the one defined by von Winning (1974: 31) as " Art Style from Colima". Figurines with more elongated bodies (Figs. 61, 65) are similar to the solid small figurines of the Tuxcacuesco-Ortices (von Winning, 1974: Fig. 103). The rounded shape used for the outline of the heads is similar to that of some stone figurines (Williams, 1992: 100, Style A).



Most of the figurines are treated in three dimensions. The few two-dimensional ones are very abstract, and could belong to sub-styles (Figs. 49, 165). All are full representations of the human body, except from those which are part of another ornament, e.g. trumpet, ring, etc. (not underlined in following list of figures).

Figures in text\*: 15, 32, 49, 61, 62, 63, 64, 65, 67, 71, 72, 73, 165, 180 .

Zoomorphic representations tend to follow the same pattern as the anthropomorphic figurines, with naturalistic facial and body features. In the absence of any common attributes, only the following pieces will be included under this heading: a) those whose style is similar that of the zoomorphic pottery figurines from Colima, like ducks (Fig. 86/ von Winning, 1974: Fig. 80); b) those which share a common feature with the anthropomorphic figurines (Figs. 61, 62), like the bird representations (Figs. 89, 148, 160, 242).

Figures in text: 86, 89, 148, 160, 242.

Geographical area : Colima and southern Jalisco, including the Zacoalco area.

Chronology : 200 BC to AD 900 (approximate).

**Style B.** The straight and elongated shape, still with an element of curvilinear outline, is the basic characteristic of this style. The pieces are treated in a semi-naturalistic way. They sometimes become more abstract, or less representative of the figure they depict.

The bodies of anthropomorphic representations are elongated, the flanks are straight and the shoulders, narrower than in Style A, tend to be square-shaped and to follow the same line as the arms (Figs. 33, 35, 66, 69). Heads are also elongated, occasionally square-shaped and usually are not flanked by a headdress. Some of these body features are reminiscent of those displayed by the pottery figurines from Jalisco (von Winning, 1974: 49). The chin is sometimes triangular-shaped (Figs. 66, 69). Most of the figurines are treated in two dimensions. The features are dealt with in an abstract and stylised form. Their treatment may become very schematic and sometimes lacks all details (Fig. 76).

Figures in text: 33, 34, 35 , 47, 48, 66, 69, 76, 77 , 255.

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\* Figures: underlined = whole figurines/ in italic = heads.

**Style C.** The shapes tend to cut at a right angle. Pieces are treated in a semi-naturalistic way and tend to become more abstract, or less representative of the figure they depict. The following two variations can be taken into consideration.

1. The treatment of the human body is sometimes similar to that in Style B, with straight flanks and narrow shoulders, but the outline is less elongated. They tend to be more naturalistic and show more facial and body details than in Style B. The foreheads and the contour of the body are usually square-shaped, but the contour of the chins is sometimes triangular (Figs. 36, 38). Both styles, B and C, seem to share similar stylistic characteristics. Most of the figurines are treated two-dimensionally. The square faces with a shape in the form of a "T" forming the nose (Table 13) and eyebrows are reminiscent of those portrayed in the stone figurines (Williams, 1992: 100: Style B).

Figures in text: 17, 28, 36, 38, 39, 44, 45, 46, 52, 53, 54, 57, 58, 68, 80, 183, 186, 191.

Some non-figurative pieces are included in this style because they share common stylistic patterns: a) with anthropomorphic representations included in this group, e.g. the inverted T-motif (Figs. 17, 193, 194) and the double scroll motif (Figs. 191, 234); b) with pottery motifs, like the scroll motif (Fig. 29), also recurrent in Chila polychrome vessels from Apatzingán (Kelly, 1949: Figs. 11 c, 12, 14) and on pottery figurines from Ixtlán del Rio (Gifford, 1950: Pl. 10). Similar inverted T-motifs are illustrated in a pottery bowl from Cojumatlán, considered to be a trade piece (Lister, 1949: Fig. 22 f).

Figures in text: 17, 29, 191, 193, 194, 234.

2. The human features are angular, with straight lines predominating over round ones. The figurines are three-dimensional and more realistic. Similar stone sculptures are found in Michoacán during the Tarascan period (Williams, 1992: 101: Style E and Fig. 142). A similar skull to the ones illustrated in Figs. 78 and 79 has been incised on the inner lip of a univalve, of unknown provenance, dating AD 1325-1521 ("Les Aztèques", 1987: Fig. 181).

Figures in text: 70, 78, 79.

Geographical area : (1) north Michoacán / (2) Tarascan area.  
Chronology : (1) AD 450-900/ (2) AD 1200 to Conquest  
time (Porter Weaver, 1981): approximate

**Style D.** The basic form represented is the triangle, which is used for the illustration of the heads in anthropomorphic and zoomorphic figurines (Figs. 167, 168). Pieces are treated in an abstract way and are all two-dimensional.

Human bodies are either absent or have abstract, non-human forms. The heads, when visible, are triangular-shaped. Hardly any body feature is illustrated as an element of decoration.

Figures in text: 40, 41, 42, 43, 59, 60, 74, 182.

Most pieces do not depict the animal form on its own, but incorporate it within the shape of another artifact, e.g. rings (size "b"), crescent-shaped and cylindrical pieces. All the animals are treated two-dimensionally. In some instances, one (Fig. 20) or two lines (Fig. 123), sometimes interrupted by a small circular depression (Figs. 118, 167), run along the body of the animal. Although the style of some pieces does not show any triangular features, the way some features are illustrated associates the piece to this particular style, i.e. the frogs in Figs. 189 and 190 and the incised lines with circular depressions in Figs. 118 and 167.

Figures in text: 20, 118, 123, 167, 189, 190.

The zigzag line ("Z" in Table 12), or "wavy line", illustrating the body of a snake with a triangular face (Figs. 20, 123, 164, 167, 168, 189, 201) is only found in this style. Very similar stylised motifs are illustrated on shell bracelets and pottery in Arizona - Snaketown, during the Sacaton and Santa Cruz phases, AD 700-1100 (Hauray, 1976: Figs. 12.86, 15.20 g-o), Los Hornos, AD 550-1100 (ibid, 1945: Fig. 119 d-e) and Los Muertos, AD 1100-1450 (ibid: Fig. 96 b) - and painted in an abstract form on pottery vessels from the following sites: Amapa, Gavilán polychrome, 496 BC-AD 417 (Meighan, 1976: Pl. 5 e-l), the Morett Site (ibid, 1972: Figs. 7, 8), Tuxcacuesco-Zapotitlán, Coralillo complex, c. AD 950-1200 (Kelly, 1949: Pl. 16 e), the Chalchihuites Culture (Mercado Red-on-Cream), Ayala phase, AD 550-700 (Kelley & al, 1971: Pl. 25 b, 27 b) and Arizona (Los Muertos/ Hauray, 1945: Fig. 45 b). Stylised zigzag lines are also illustrated in Colima on the decoration of belts on pottery figurines (Fig. 268) and vessels (Fig. 267).

Figures in text: 19, 20, 100, 118, 123, 124, 156, 164, 167, 168, 169, 190, 201. Also reported in Guadalupe Mound (Breton, 1903: Fig. 5 11).

Triangles on their own, or joined at the apex (Fig. 26), are not diagnostic of any specific style (see Appendix I: 287).

Geographical area : Colima and Jalisco .

Chronology : 400 BC to AD 900 (approximate).

Style A	Style B	Style C	Style D
Round/oval faces	Elongated faces	Square-shaped faces	Triangular faces
Wide shoulders	Elongated mouth	Legs: straight	Legs:knees outward
Circular motifs	Circular motifs	Coffee bean eyes	
Ears: bird's motif	Triangular loincloths	T-shaped nose	
Flat-based nose		Circular motifs	
Triangular loincloth			
Pants			
Square-shaped pattern			

**Table 11. Stylistic features of anthropomorphic figurines** (see Tables 13 & 14, Appendix I).

The four styles identified above refer particularly to anthropomorphic figurines, which share several common stylistic features (see Table 11). At this stage, no further distinct styles could be defined. Due to the diversity of the material, it has been difficult to find common stylistic features for most of the other material. A different way of classification had therefore to be defined.

## **II. Description of "traditions" and "patterns of decoration"** (see Table 12)

Although zoomorphic figurines and non-figurative pieces make up a heterogeneous group, some of these pieces share common characteristics which are not defined by any stylistic features. These characteristics can be defined: a) by the volume of the artifact, i.e. two or three-dimensional; b) by the geographical area; c) by technological attributes, referring to the techniques of decoration, e.g. incised decoration and dentate edges. These features are consistent enough to be able to group certain artifacts under specific headings, which will be called " traditions" (a & b) and "patterns of decoration" (c). Each group shares common characteristics, e.g. a same way of illustrating a specific shape, sometimes related to the technique of manufacture, or to a specific area.

Consequently, three "traditions" and two "patterns of decoration" have been identified, which include most of the pieces unclassified under the above mentioned stylistic groups. Most of them cannot be placed geographically or chronologically.

Within each of the following groups, sub-groups have sometimes been recognised, which might correspond to different styles, but no attempt to identify them has been done, due to the lack of information.

## **1. Traditions**

**A. Three-dimensional zoomorphic representation ("3D" in Table 12).** They include all the figurines with a curvilinear outline which could not be included in Style A. They also show naturalistic facial and body features. Sometimes only the head and some features of the animal, like the front and back legs, are treated in a naturalistic way, the body being subject to the shape of the raw material (Figs. 119, 127, 132, etc.).

Figures in text: 87, 88, 90 (also in Guerrero and in Tampico/ Las Flores), 92, 93, 97, 98, 99, 103 (also in San Sebastian), 107, 110, 111, 113, 114, 115 (also in Tuxcacuesco-Zapotitlán), 116 (also in Zacoalco), 117, 119, 120, 121 (also in Zacoalco), 122, 126, 127, 128, 129, 132, 134, 137, 200, 241.

Also reported in the following sites: Tuxcacuesco-Zapotitlán (Kelly, 1949: Fig. 88 k), Apatzingán (ibid, 1947: Fig. 69 s) and Culiacán (ibid, 1945a: Fig. 72 j).

**B. Two-dimensional zoomorphic representations ("2D" in Table 12).** They includes whole figurines and a few animal forms incorporated into a non-figurative piece. They tend to be more stylised, with abstract forms and few anatomical details, or none. The body features of the animals, although described with realism, are kept to a minimum. Most of the creatures are depicted in profile.

Figures in text: 81, 91, 96, 101, 102, 105, 108, 109, 112, 125, 131, 133, 135, 136, 178.

Also reported in Cojumatlán (Lister, 1949: Fig. 35 b).

Within these two traditions, several local stylistic variations can be identified, e.g. those including more abstract forms (Fig. 85). Due to the scarcity of comparative material, it would be speculative to attempt to classify them within any of the above stylistic groups.

**c. The Playa del Tesoro Tradition.** These pieces do not show enough stylistic details to be considered part of a "style". All,

however, seem to correspond to a same pattern, and have only been found in Playa del Tesoro burials, c. AD 400-600 (Beltrán, pers. comm.). This tradition consists of stylised abstract motifs, whether anthropomorphic (Fig. 226), zoomorphic (Fig. 158) or non-figurative (Fig. 146), surrounded by a dentate edge, or a derivative from it.

Figures in text: 146, 158, 159, 226.

## 2. "Patterns of decoration"

**A. The incised or painted line.** Within this tradition, the line, either straight or curved, represents the only common attribute shared by all the pieces. The line defines the space to be described within a certain form and the motif illustrated. Most of these representations tend to be abstract. All the pieces are two-dimensional.

The human and animal forms are usually not shown by the contour of the piece, as in the styles mentioned above, but by the design. The representations can be very abstract or naturalistic. Some of the motifs represented, e.g. *Tlaloc* (Fig. 16), are similar to those illustrated in the "*Tlaloc* censers" (Cojumatlán, middle Classic period/ Lister, 1949: Fig. 24) and in Central Mexico during the Postclassic period.

Figures in text: anthropomorphic : 16, 55, 147, 221.

zoomorphic : 18, 94, 95, 106, 157, 192, 223 (also in San Sebastian), 224, 225, 232 (also in Cerro del Huistle).

A variety of motifs are illustrated on non-figurative pieces. They include the single (Fig. 143), double (Figs. 22, 30) or multiple circles (Figs. 144, 145), the semi-circle (Fig. 25), the quadrangular motif (Figs. 23, 24, 27) and the straight line, either single (Figs. 228, 231, 256), or multiple and parallel (Figs. 195, 233, 245). The decoration on the ceramic univalve illustrated in Fig. 265, making up a pattern of semi-circles and curves outlining rectangular motif, can be related to this tradition.

Figures in text: 22, 23, 24, 25, 27, 30, 143, 144, 145, 195, 228, 231, 233, 245, 256.

One word should be said about the pattern consisting one or several circles. Single circles occur not only as non-figurative elements (Fig. 143), but also as an element of decoration encircling the eyes, both in anthropomorphic and in zoomorphic representations. Double circles occur in anthropomorphic representations (Figs. 16, 28, 179,

180) and on univalves, either incised (Fig. 22) or painted (Fig. 30) around the nodules and on the body whorl univalves. This motif is also recurrent in several sites all over Mesoamerica (see Ch. 2, Fig. 22). It is probably not diagnostic of any particular style.

Figures in text: 16, 18, 22, 25, 28, 30, 143, 144, 145.

The incised lines in Fig. 233 are similar to the grooved decoration on pottery bowls from Snaketown, Sweetwater phase, AD 200-350 (Haury, 1976: Fig. 12.49).

Although all the pieces included in this group show common characteristics, it is difficult to talk of a style representative of a particular area over a specific period of time. Some pieces, because of the subject matter they illustrate, e.g. the *Tlaloc* (Fig. 16) and the snake representations (Figs. 157, 192), can be placed chronologically during the Postclassic period, but it is difficult to locate their area of provenance. They could have been trade goods.

The abstract representations of human faces, made of one, or two circles, with round depressions indicating the eyes and the mouth - occasionally a vertical slit - can be placed under this "tradition". It is however difficult to place this tradition chronologically, but it could have been contemporary to Style A, because the outline of the face is also curvilinear.

Figures in text: 166, 198, 240.

**B. The dentate edges** ("DE" in Table 12). It is difficult to talk of dentate edges as a stylistic trait when they consist in the only element of decoration of some pieces (Figs. 155, 187). These elements have been used in several areas, i.e. Colima (Playa del Tesoro/ Figs. 146, 158), Nayarit and Jalisco. The dentate edge of the specimen in Fig. 187 is similar to the contour of the rim of bowls from Jalisco (Furst, 1978: Figs. 37, 38). In one instance, the dentate elements are shaped like stylised birds (Fig. 154).

Figures in text: 58, 146, 153, 154, 155, 156, 158, 179, 187, 229, 230, 235.

Some pieces are difficult to place within a stylistic group or a tradition, because they do not show any stylistic characteristics: they have been made out of the natural shape of the shell, with few alterations (Figs. 133, 259) or lack diagnostic decoration (Figs. 227, 257, 258). In some instance, the motifs they illustrate do not correspond to any stylistic pattern or tradition mentioned above (Figs. 26, 150). One should not reject the possibility that some of these artifacts could have been trade pieces. It must also be pointed

out that one should be aware of the fact that the way of rendering certain features, like the nose, depends on the thickness of the material used, and not on the style alone. A same style can include a three-dimensional nose when described on the umbo (Fig. 32) or a flat surface with incised lines (Fig. 61) when illustrated on the modified valve of a pelecypod .

Unclassified figures in text: 26, 50, 75, 82, 84, 85, 104, 133, 138, 149, 150, 151, 152, 185, 186, 188, 199, 222, 227, 257, 258, 259.

## Conclusion

At this stage, and in spite of the problems encountered, it can be said that one of the purposes of this analysis has been achieved: to establish stylistic similarities and characteristics for different groups of objects, i.e. stylistic groups. The four stylistic groups, the "traditions" and the "patterns of decoration" referred to above have revealed information about different ways of treating a same phenomenon, i.e. a human or animal figure, etc. It has provided a background on how people, in a certain area and within a suggested length of time, have interpreted certain aspects of their environment. However, in the absence of more information from historical and ethnological sources, these groups have not provided any information on the cultural background and on the behaviour of the individual and the groups within these societies.

Stylistically, anthropomorphic and zoomorphic shell figurines and representations seem to follow the same tradition as the hollow and solid clay figurines from Jalisco and Colima. Many pieces are described in a figurative way, and one could talk of a pictographic way of expression, particularly in Styles A, B and C and in Traditions A and B. It is unfortunately impossible to give a clear evolution and continuity of figurine styles because of the lack of chronological data. Figurines resembling one another in style and craftsmanship so closely could only have come from the same local tradition, if not actually the same hands. One should also take into consideration, when interpreting the distinctive styles of these pieces, the personal interpretation and the skill of the individual craftsmen who probably had a limited choice of raw material.

From the information provided above, it can be said that there are four visible differentiated styles, A, B, C and D. Broadly speaking, they are geographically located in Colima, Jalisco and Michoacán . No particular style can be defined for Nayarit, due to the scarcity of the material in that area. Looking at the total sample of the material within each style, it could be right to assume that each style



includes sub-styles, which might be explained by the fact that each locality, or workshop, had its own local stylistic traditions and characteristics. It is also important to take into account the individuality and style of the individual craftsman. Style D is more difficult to place geographically, and could be a local manifestation of any of the previous styles.

In general terms, these pieces have been placed within a timespan ranging approximately from 400 BC to the late Postclassic. Except from the anthropomorphic figurine found in Chupicuáro (Porter Weaver, 1956: Fig. 25), no artifacts dating to the early or middle Formative period have been located. In some instances, for instance in Style C, a stylistic development within a same stylistic criterion, i.e. shapes cutting at right angles, can be noticed: anthropomorphic figurines are first treated in an abstract form, then tend to be rendered in a more naturalistic way.

**Table 12. Common stylistic features and attributes of worked shell artifacts**  
**from Western Mexico.**

**Key for Table 12**

AB	= abstract representation	Fr	= frog
B	= bird	H	= head
BM	= bird motif	HF	= hole figurine
Bt	= bat	L	= lizard
Ob	= crab	LI	= defined by line
OD	= circular depression	NA	= naturalistic representation
OM	= circle motif	NF	= non-figurative representation
Cr	= crocodile	NI	= non-identified
CS	= curvilinear shapes	P	= pisote
D	= dog	R	= anthrop/zoom. representation included in the decoration
DE	= dentate edge	RA	= cutting at right angle
2D	= two-dimensional	S	= snake
3D	= three-dimensional	Sc	= scorpion
ES	= elongated shapes	TS	= triangular-shaped
F	= fish	Tm	= inverted T-shaped motif
Fe	= feline		
Z	= zigzag body		

	nr	n	k	nr	n	k
15			*			*
16			*		*	*
17			*		*	*
18				NI	*	*
19				L	*	*
20				S	*	*
21						*
22						*
23						*
24						*
25						*
26						*
27						*
28		*			*	*
29						*
30						*
32		*			*	*
33	*				*	*
34	*				*	*
35	*				*	*
36	*				*	*
38	*				*	*
39	*				*	*
40	*				*	*
41	*				*	*
42	*				*	*
43	*				*	*
44	*				*	*
45	*				*	*
46	*				*	*
47	*				*	*
48	*				*	*
49	*				*	*
50	*				*	*
52	*				*	*
53	*				*	*
54	*				*	*
55	*				*	*
57		*			*	*
58		*			*	*
59	*				*	*
60	*				*	*
61	*				*	*
62	*				*	*
63	*				*	*
64					*	*
65	*				*	*
66	*				*	*
67	*				*	*
68	*				*	*
69	*				*	*
70	*				*	*
71	*				*	*
72	*				*	*

[illegible]

HF	H	K	NI	H	K
128			L	*	*
129			L	*	*
131			Cr	*	*
132			Cr	*	*
133			NI	*	*
134			NI	*	*
135			Fe	*	*
136			NI	*	*
137			NI	*	*
138			NI	*	*
143				*	*
144				*	*
145				*	*
146				*	*
147	*			*	*
148	*		B	*	*
149			B	*	*
150				*	*
151				*	*
152				*	*
153				*	*
154				*	*
155				*	*
156			NI	*	*
157			S/F	*	*
158			NI	*	*
159			NI	*	*
160			B	*	*
164			S	*	*
165	*			*	*
166	*			*	*
167			S	*	*
168			S	*	*
178			B	*	*
179	*			*	*
180	*			*	*
181				*	*
182				*	*
183	*			*	*
185			NI	*	*
186			B	*	*
187				*	*
188				*	*
189			S, Fr	*	*
190			Fr	*	*
191	*			*	*
192			S	*	*
193				*	*



## **Chapter nine**

### **Summary and Conclusions**

The main objective of this research was the reconstruction of the human behaviour behind the corpus of shell artifacts from the Occidente, in other words an attempt to assess what the pieces were intended to represent, why and when they were made, and what they meant for the people who made them.

The main target of this investigation embraced the functional interpretation of the artifact, both utilitarian and symbolic, within the social, economic and religious sphere of the Occidente. Each object individually was probably part of a ritual related to social and/or religious practices. The task in this thesis has been to try and identify, whenever possible, the context within which each group of artifacts was used. In most instances, the utilitarian function, or the different ways these pieces were used, has been illustrated with the help of comparative material, for instance from archaeological sites and by comparisons with pottery figurines.

The religious context within which these artifacts were used is more difficult to interpret. An attempt has been made to provide evidence for the symbolic function of each group of artifacts and their religious significance with the aid of various means, including ethnohistorical and ethnographic evidence from the Occidente and historical sources from Central Mexico. This symbolic interpretation however should be taken with caution, not only because of the lack of reliability of the ethnohistorical and ethnographic information, but also because some of the sources used refer to areas outside the Occidente.

Some shell objects served primarily as vehicles by means of which values, ideas and social relations were expressed, though the symbolism attached to these pieces is still little known to us. The snake, the bird-shaped ears and the representation of *Tlaloc*, for instance, are examples of pieces which transmit symbolic messages. In some instances, the emphasis seems to lie more upon the meaning than upon the physical reality of the object. However, as Furst points out (1965: 30, 31)

we are utterly ignorant of the artist's motivations ... or the manner in which a particular piece of shell artifact related to the values and beliefs of its creator's society and time ... The moment we seek to go into the realm of interpretation and abstract, we are on very insecure ground. We have no way of knowing its creator motivation or intent.

It has come out from this research that the use of marine shells in inland sites has nothing to do directly with the food quest. The nature of the shell itself, selected by species best suited for



conversion into preconceived products - but not noted for food values - turns the shell into a raw material to be converted into manufactured goods. The evidence from burial contexts in the Occidente supports the view that shells were considered as middle-range prestige goods in terms of "quality", probably after jade and before other stones, like pyrite or green stone. Univalves were found in the same tomb together with hollow pottery figurines, e.g. Cerro Encantado, San Marco, San Sebastian, and shell ornaments were mounted in association with jade and rock crystal beads, e.g. El Otero, and turquoise "mosaics", e.g. Tingambato, or copper bells and rings, e.g. Cojumatlán. This evidence seems to sustain the fact that there was a high demand for the raw material, which could be found locally on the nearby coasts but sometimes reached the Occidente, through trade or exchange, from such remote areas as the Caribbean.

Since most of the pieces in the Classification do not come from any archaeological context, their age had to be determined by stylistic comparisons with analogous dated specimens from other sites in the Occidente. With few exceptions, all the shell material has been found in contexts dating from the late Formative to the early Postclassic periods. It is therefore possible to assume that the bulk of the material included in this research probably dates to the same period. However, based on the evidence provided by other sites in Mesoamerica, shell pieces were probably used at an earlier date, and historical accounts suggest that they were used up to Conquest time, and probably later.

The identification of stylistic characteristics has been dealt with in the last part of this work. This process opened the way to the definition of four stylistic cultural groups within the Occidente and to the geographical distribution of certain types of objects. An attempt to establish a chronological framework for these groups was made, but due to lack of information, this proved difficult.

A comparison between shell artifacts from the Occidente and other areas of Mesoamerica shows a certain standard level of uniformity. Many categories of shell artifacts from the Occidente are also found in other areas of Mesoamerica (see Ch. 2), sometimes with different stylistic characteristics. Pieces like the *oyohualli* (Fig. 142), the drop-shaped ornaments (Fig. 160), the *epcololli* (Fig. 161), the cross (Fig. 213), the columella pieces (Fig. 250) and the spiral-shaped ornaments (Fig. 247) have been located in other areas as attributes of specific gods, and possibly belonged to the paraphernalia of similar deities in the Occidente. In addition, several iconographic

motifs illustrated in the shell artifacts from the Occidente are also recurrent in other areas. These include representations of deities, e.g. *Tlaloc*, zoomorphic motifs, e.g. birds, snakes, frogs, bats and dogs, and non-figurative motifs, e.g. the inverted T-shaped and the circle surrounding the nodules of the univalves. These elements support the idea that the Occidente was participating in the Mesoamerican tradition, but probably at different levels of intensity during different time periods, at least since the Classic period. It can also be suggested that some artifacts and iconographic elements used in the Occidente probably had a direct association with Central Mexican deities during the Classic and Postclassic periods. It can be supposed that these contacts started originally through trade.

It would be premature, on the basis of the Central Mexican Postclassic codices, to attempt to interpret the iconography of the Occidente. The fact that similar pieces are illustrated in these sources does not mean that there were used in the Occidente during the same period of time with a same utilitarian and symbolic function.

There is however a distinctive kind of shell work in the Occidente, which is differentiated by a pictographic and naturalistic art. Most figurines, particularly the zoomorphic ones, are portrayed in a naturalistic way, as opposed to representations illustrated with incised lines, more common in other areas, e.g. the Maya area. Compared to other areas, the iconography in the Occidente is relatively simple and does not include many symbolic motifs. Illustrations of animals, either portrayed on univalves, bracelets and finger-loops, or on their own, e.g. figurines, seem to prevail, and are diagnostic of the Occidente. Some animals, like the lizard, the pisote and the crab, illustrated on shell and pottery, are only rarely portrayed in other parts of Mesoamerica. It seems, therefore, that the Occidente was very Mesoamerican, but that it developed at the same time a distinctive "art" and ideology.

There is still much uncertainty about the identity of the people, either men or women, who used these shell artifacts in prehispanic Occidente, why they used them and in what circumstances. We know very little about the function of these artifacts in mortuary contexts, and why they have been found in burials accompanying the remains of the deceased. The fact that individuals were buried with ornaments, e.g. figurines, and utilitarian objects, e.g. trumpets, both with a symbolic connotation (which may have changed through time), is indicative of the deceased's status and shows a religiously

orientated society. We can only assume that these pieces were considered as status emblems and that they were prestige goods belonging to the paraphernalia of priests or high dignitaries in a religious and ceremonial context.

These societies must have been characterised by some significant degree of social stratification, with an elite group performing some well defined functions. A considerable degree of social differentiation is indicated by the fact that some skeletons are accompanied by shell artifacts, while others are not. However, on the basis of fragmentary archaeological and contextual information available at present, the significance of some pieces remains obscure.

## **Appendix I**

### **Tabulation of Anthropomorphic and Zoomorphic Figurines**

I. Anthropomorphic figurines include all the pieces listed in the Classification, Ch. 2, i.e. all the pieces whose outline relates to the human form, and all the human representations illustrated in other pieces, i.e. univalves, bivalves and non-figurative pieces. The treatment of the body and the head seems to be the most indicative elements for defining their stylistic differences. Except from the treatment of the heads, all the variations in body features, in garments and ornaments do not appear representative of any regional style in particular, but appear in several cultural areas and styles.

The sample of body features, garments and ornaments listed in Tables 13 and 14 is not 100% representative, not only because the corpus is inevitably incomplete, but also because some stylistic elements, like the features of the noses and the ears, are missing, due to erosion and the effects of time.

The figurines are all standing. There are no examples of seated figurines, comparable to those in pottery or stone. This is probably due to the thinness of the material, which makes some three-dimensional features difficult to reproduce on shell. All the figurines - except the flute players (Figs. 53-4, 71-3) and Figs. 52 and 147 - are in a rather static position and do not show any movement, as opposed to the variety of movements illustrated on the pottery figurines from Jalisco and Colima. Most of the figurines in styles A, B and D share the same characteristic: they are all frontal views of the human body.

The treatment of the bodies can be either realistic or abstract. Most of the figurines, particularly the three-dimensional ones, have realistic bodies, while the abstract treatments of the body applies to two-dimensional figurines. In some instances, the body becomes so abstract that the human features are lost, as in the figurine in Figs. 46, 50. Similar types of solid pottery figurines, with the same stylistic characteristics, have been located in Cofradía de Juárez, on the coastal plain of Colima. The heads are also quadrangular in shape, with sharp elongated noses. The bodies are flat and rectangular, painted all over in red over white (Fish, 1974: 212).

#### A. Anatomical features (Tables 13 & 14)

**Heads.** There are four different stylistic variations.

- a. Elongated (Figs. 34-5, 68, 77, 255), similar to those of the Ameca style figurines (Gallagher, 1983: Fig. 110).
- b. Round, with full cheeks, or oval (Figs. 61-5, 67, 71, 73),

characteristic of the Colima hollow figurines (von Winning, 1974: 31/ Eisleb, 1971: Fig. 1).

- c. Triangular-shaped (Figs. 40, 42, 59, 60 74). The same triangular faces are characteristic of Chinesco figurines, Type C (von Winning, 1974: Figs. 315-318) and of the Lake Chapala area (Taube, 1988: Figs. II-23, II-24).
- d. Square-shaped, sometimes with a triangular-shaped chin (Figs. 33, 36, 38, 44, 50, 66), similar stylistically to figurines from Los Altos, Jal. (Williams, 1974 : Fig. 6) and Zacatecas (Gallagher, 1983: Pl. 6). The same contour of the faces is recurrent in Apatzingán (Kelly, 1949: Figs. 62, 64, Pl. 16). The outline of the head and body of Fig. 44 is very similar to some figurines from Amapa, Type L (Meighan, 1976: Fig. 32 a).

**Shoulders.** Some three-dimensional figurines have exceptionally wide shoulders (Figs. 61-5, 67), the same as the pottery figurines from Jalisco, Ameca style (von Winning, 1974: Figs. 128-139) and Colima (ibid: Figs. 46-48).

**Arms.** These are either straight and longitudinal to the body, folded or in an upward position. In two-dimensional figurines, arms are always straight or in an upward position. In Jalisco, these tend to be short and thick.

Straight arms are treated in three different ways.

- a. A straight longitudinal slit (Figs. 33-4, 61) or a circular gap (Fig. 35) cut through the material. A similar treatment for the arms has been used in the shell figurines from Snaketown (Haury, 1976: Fig. 15.17 bb).
- b. The division between the arm and the flank is shown by an incised line (Figs. 36, 38, 65).
- c. The arms are free from the body (Figs. 62-4). This position of the arms is similar to that of the Tuxcacuesco-Ortices type of solid small figurines (von Winning, 1974: Fig. 106).

Folded arms are positioned in three different ways.

- a. The forearms are resting on the stomach (Figs. 47-8, 66-8, 74). The same position of the arms is illustrated in solid small figurines of the Tuxcacuesco-Ortices type (ibid: Figs. 103-105), Tuxcacuesco (ibid: Fig. 212), Amapa (Grosscup, 1961: Fig. 5 AA), Teotihuacán (Séjourné, 1966, Fig. 45) and hollow figurines from Chupícuaro ("Art précolombien du Mexique", 1990: Fig. 104).
- b. One hand, either the right (Figs. 39, 44, 255) or the left (Fig. 70), is resting on the chest. Such occurrences are very few on pottery figurines (von Winning, 1974: Fig. 252).
- c. Both hands are resting on the shoulders (Fig. 69). A similar

position of the left arm is illustrated in a shell figurine from Snaketown (Haury, 1976: Fig. 15.17 cc).

Figurines with folded arms are sometimes playing a musical instrument, like a flute (Figs. 53-4, 73) or a whistle (Figs. 71-2). Pottery figurines blowing a flute, from Jalisco, Ameca style (Nicholson & al, 1979: Fig. 32), or a whistle are illustrated in Jalisco (von Winning, 1974: Fig. 175), Nayarit (Kan & al, 1970: Fig. 26) and Colima (von Winning, 1974: Fig. 113). There are few occurrences of figurines with the arms in an upward position (Figs. 40, 42-3), always illustrated among the two-dimensional representations.

**Legs.** These are usually straight (Figs. 35, 38, 44-8, 63-4, 67-73, 75-6), or with the knees pointing outward (Figs. 17, 33-4, 36, 40-3, 61-2, 74). This latter treatment of the legs only occurs in solid figurines from Jalisco (Kan & al, 1970: Fig. 93). In Colima, legs are short and thick.

**Circular motifs.** They are illustrated by means of circular depressions or cut through decorations, and were probably originally inlaid with another material. They are located in the following following positions:

- a. under the armpits (Figs. 34, 36, 38, 61, 65, 67, 70).
- b. under the crotch (Figs. 34-6, 38, 48, 65, 69).
- c. on both sides of mouth (Figs. 62, 65-6). Similar motifs are illustrated on pottery figurines from Ixtlán del Rio (Gifford, 1950: Pl. 9).
- d. over the knees, the stomach and the feet (Fig. 70).

Circular motifs are often used for the decoration of the ears in anthropomorphic figurines, and more occasionally for zoomorphic ones (Figs. 104, 118, 120) and for non-figurative pieces (Figs. 152, 181, 240, 244). In the last two examples, they were probably used as a main element of decoration, and they can be found in Colima (Playa del Tesoro), Jalisco and Michoacán (San Gregorio, Cuitzeo).

**Feet.** When shown, these are frequently facing outward (Figs. 17, 34, 36, 40-6, 52, 61-2, 65, 71, 74). This position is never recurrent in pottery figurines. However, feet are sometimes so damaged that their position is difficult to identify.

**Fingers/ toes.** These are almost invariably shown with incised lines, like in pottery figurines from Colima and Jalisco (von Winning, 1974: 31, 49).

The facial features are always indicated, unless the figurine is treated in a very abstract way (Figs. 42-3, 46, 76).

**Eyes.** Three different stylistic variations have been identified for the treatment of the eyes.

- a. Circular depressions are recurrent in most figurines (Figs. 15, 33-8, 44-5, 180, 182, 182, 191, etc.). They are occasionally replaced by round perforations (Figs. 40, 60). Round eyes are representative of the Colima hollow figurines (von Winning, 1974: 31).
- b. Coffee-bean eyes (Figs. 39, 57) are representative of the Chupícuaro solid figurines (Porter Weaver, 1956: Figs. 16-7) and the Chinesco hollow ones, Types B-D (von Winning, 1974: 71).
- c. Lozenge-shaped eyes. There is only one occurrence, from Michoacán (Fig. 52), similar in shape to the "diamond-eyed" figurines from the Tuxcacuesco area (ibid: Fig. 210).
- d. Elongated eyes (Fig. 68), similar to those of the solid small figurines of the Tuxcacuesco-Ortices type (ibid: Fig. 103) and of Amapa (Grosscup, 1961: Fig. 3 R).

The eyes in variations "a", "c" and "d" were probably inlaid with another material. They were sometimes surrounded by a single (Figs. 180, 183) or double (Figs. 16, 28, 221) incised circle. In some instances (Fig. 70), the pupil was indicated with a circular depression. There is only one occurrence where the eyebrows are indicated with an incised line (Fig. 77).

**Ears.** Ears are often not indicated (Figs. 38, 40, 68, 78-9). Some are only projections at the side of the head (Figs. 34-6, 44, 65, 69) and sometimes have a circular depression in the lower part, probably for the inlay of other material (Figs. 39, 50, 58, 80, 255). Some figurines have pierced earlobes, perhaps for the insertion of multiple rings, as in the hollow figurines from Nayarit (von Winning, 1974: Fig. 287), small discs or some ornament made of a perishable material which has not been preserved (Figs. 53-4, 61-2, 77). Perforations in the lower part of the ear are a characteristic trait of Colima figurines. In two figurines, the pierced ears are represented by a stylised bird's head (Figs. 61-2).

**Nose.** In most figurines noses are too eroded to be visible. Three stylistic variants can however be defined.

- a. Straight and thin (Figs. 50, 53).
- b. Flat-based (Figs. 61, 64-5, 67, 73, 255).
- c. T-shaped (Figs. 17, 39, 57-8).



**Mouth.** This is treated in four different ways.

- a. A circular depression (Figs. 34, 36, 49, 50, 61, 67, 74) or a perforation (Figs. 40, 44, 59).
- b. An elongated slit (Figs. 33, 38, 47-8, 58, 62, 65-6, 69, 77-8, 80, 255), made of one incised line. In some instances, two circular motifs surround each side of the mouth (Figs. 62, 65-6).
- c. In the shape of a triangle (Fig. 52).
- d. Thick lines carved in the round indicate the lips (Figs. 39, 57, 68).

In some instances (Figs. 38, 55, 66, 78), the teeth are clearly visible. They are indicated either with incised lines or with small inlays. In many hollow pottery figurines from Jalisco and Nayarit, lips are parted and occasionally show a row of teeth (von Winning, 1974: 52 and Figs. 118, 287). In Michoacán, the same treatment of the teeth is visible on figurines from Chupícuaro ("Art précolombien du Mexique", 1990: Fig. 104) and Apatzingán (Kelly, 1947: Plate 13 A).

## **B. Body garments and ornaments (Tables 13 & 14)**

**Clothes.** Three different types of men's clothes are illustrated.

- a. Triangular loincloths (Figs. 34-6, 38, 47-8, 52, 61-5, 73), shown with incised lines, are sometimes supported by a belt (Fig. 62). Similar triangular-shaped pieces, resembling loincloths, are illustrated in many hollow and solid pottery figurines from Colima (von Winning, 1974, Figs. 36, 106 a, 107/ Kan & al, 1970: Fig. 135).
- b. Pants (Figs. 53-4, 71-2), from Colima and Michoacán, are sometimes worn under the loincloth (Fig. 63-4, 67, 73). Short pants are illustrated on pottery figurines, usually painted in a different colour from the rest of the body and occasionally outlined by incising (von Winning, 1974: 23).
- c. Skirts (Fig. 55).

Most of the figurines display only one of these garments, but no other cloths, such as blankets (ibid: Fig. 45). They are sometimes wearing a waistband (Fig. 72). Others (Figs. 61-3) have one or two incised lines crossing their chest, like some pottery figurines from Colima (Eisleb, 1971: Fig. 1) and Jalisco ("Art Précolombien du Mexique", 1990: Fig. 111). This could suggest that the individual is wearing another type of garment. All these features, loincloths, pants and other types of garments, were probably originally emphasised by paint in different colours.

In Jalisco, naked figurines are more frequent than in Colima, where most figurines seem to be wearing a type of garment. However, it would not be justified to assign a socially lower rank to the naked

figurines, because individuals of identical posture and configuration occur nude as well as dressed in garments (von Winning, 1974: 24).

**Headdresses.** Headgear is not only part of the costume but an iconographic attribute that indicates rank and identifies deity impersonators or priests in the religious hierarchy. Studies by Heyden (1976) for Teotihuacán suggest that styles of headdresses indicated rank or status of the individual or group in the society. Consistent variations in headdress forms can be found, resulting in a set of distinct iconographic attributes. According to von Winning (1974: 21) headdresses occur in the Occidente in various forms which are elaborations of three basic forms:

- a. Bands/coils, single or double (Figs. 39, 45, 47, 57). The incised patterns on the headband suggest that they were made of woven textiles or wicker. Headbands, sometimes double, with square patterns could represent a headdress made of a soft quilted material, like those illustrated on Colima figurines (McBride, 1986: 89, Pls. 2 1, 2). The solid figurines of Ixtepete, Jalisco, display a single horizontal headband similar to those found on the figurines from Teotihuacán IV (Sáenz, 1966). Those from Los Altos display a single or double headband around their forehead (Williams, 1974: Fig. 7). This type of headdress can be identified with those described by Furst (1965b: 53). According to him, the Huichol shaman wears a headdress consisting of a flat woven straw hat covered with eagle feathers, the eagle being his spirit helper
- b. Conical caps, or tight fitting caps, covering the head down to the ears (Figs. 44, 61, 63, 71-2, 73, 75). Some may simply indicate the edge of the hairline. The caplike head coverings are comparable to the filleted ones of the Formative figures from Chupícuaro and the Valley of Mexico (von Winning, 1974: 22). In some instances (Figs. 58, 255), the incised lines outlining the forehead could represent the bordering line of the hair. Some of these caps are square-shaped (Fig. 44) and resemble in shape those from Amapa (Grosscup, 1961: Fig. 1 A & C).
- c. Helmets, with a ridge on top (Figs. 64, 66). Warrior figures in armour wear bucket helmets with a crest. In the Occidente, single-horned figurines (Fig. 59) are sometimes associated with shamans and the ritual functions they had to assume. They are most common in Colima (Furst, 1965b: 34). The double-horned helmet illustrated in Fig. 180 is similar to those worn by the figurines in Fig. 268, from Colima.

Apart from the three variations mentioned above, a variety of more elaborate headdresses can be found (Figs. 55, 60, 70, 80). They have not been identified on pottery figurines. Some figurines are not

wearing any headgear and may represent single individuals without any hierarchical or religious functions.

**Necklaces.** There are only two illustrations of figurines wearing a necklace: a double row consisting of a square-shaped pattern, worn around the neck (Fig. 39) and two incised lines, slightly concave and possibly inlaid before, suggesting a necklace (Fig. 52), both from Michoacán. In addition, the figurine in Fig. 47, with no provenance, is wearing a skull representation hanging on his chest.

**Armbands.** There are few occurrences of figurines with armbands: four from Colima (Figs. 61-4) and one from Jalisco (Fig. 66). The armbands in Figs. 62 and 66 consist of two rows of the same square pattern which has been used for other garments. This pattern may suggest that they were made of woven textiles or wicker. The armbands in Fig. 61 are similar to those described in part 2.3.C.1.b. of the Classification (Figs 174-176). These armbands were usually worn on one, or both upper arms, either on their own, or in sets of one to eight rings, as in pottery figurines from Colima and Nayarit respectively (von Winning, 1974: Figs. 26, 234). They are rare in Jalisco, and restricted to a few areas only (ibid: 27).

**Nose ornaments.** There are only two examples: a figurine with a square-shaped turquoise nose ornament, from Michoacán (Fig. 70), and a head representation, from Jalisco, with two small circular depressions under the nose, probably inlaid with another material (Fig. 77).

**Bands protecting knees.** There is only one occurrence of a figurine wearing a protective band covering the knees (Fig. 47). This could be a garment for ball players. These garments are sometimes encountered on pottery figurines, and usually restricted in Jalisco to San Sebastian figures and in Nayarit to figures with elaborate polychrome designs and black eye mask (von Winning, 1974: 27, Figs. 120, 121) and burnished red slip (Kan & al, 1970: Fig. 114). Painted bands covering the knees are illustrated in the miniature ceremonial ball games from Nayarit (ibid: Fig. 34). In Teotihuacán, they are described on some pottery figurines (Séjourné, 1966: Fig. 68, top left, third illustration).

**Incised squares decoration.** This pattern comes up in the decoration of several types of body ornaments: necklaces (Fig. 39), armbands ( Figs. 62, 66), skirts and pants (Figs. 72-3) and headdresses (Figs. 32, 39, 75). Most of these pieces belong to Style A. A similar pattern is also used:

a. in pottery figurines for the decoration of necklaces (Kelly 1947:

Fig. 15 c, from Apatzingán ), armbands (Eisleb, 1971: Fig. 142, from Michoacán/ Colima), headbands (Kan & al, 1970: Figs. 98, from Jalisco, and 136, from Colima/ Eisleb, 1971: Fig. 252, from Jalisco), and pants (Parres Arias, 1962: Fig. 3, from San Juanito, Jalisco);

- b. in pottery vessels, as a decorative element (Fig. 267, from Colima). If we look at the main anatomical features and body garments and ornaments of these figurines (Tables 13 and 14), we realise that many figurines share some common attributes which may be found in several stylistic areas mentioned above.

**II. Zoomorphic figurines** incorporate all the pieces included in Ch. 2, i.e. all the pieces whose outline relates to the form of an animal, and all the animal representations illustrated in other pieces, i.e. univalves and non-figurative pieces. If we compare these illustrations to anthropomorphic ones, more feeling of movement is recognizable in the animal representations.

As opposed to human representations who share many common characteristics, it is difficult to talk of common attributes for the more diverse animal ones. There are however some features which are shared by both human and animal representations.

- a. The triangular-shaped face of some animals (Figs. 19, 123, 156, etc.) is stylistically similar to those illustrated in the humans in Style D. Animals with triangular heads are illustrated on pottery vessels from Colima (Fig. 267).
- b. The eyes, in all styles, are always represented by two circular depressions, like in most anthropomorphic representations.
- c. The encircled eye, consisting of one (Figs. 18, 90-1, 128, 134, 225 ) circle incised around the circular depression is also illustrated in anthropomorphic figurines.
- d. The teeth are sometimes visible (Figs. 108, 131), a characteristic feature of Michoacán.
- e. The bird motif for the representation of the ears (Figs. 61-2) seems to be a characteristic of Style A, from Colima (see also Fig. 89), and is also used for the decoration of other pieces (Figs. 148, 160, 242). The same motif, illustrated in a more abstract way, can also be found in other unclassified pieces (Figs. 85, 149, 154).
- f. Circular motifs ("CM" in Table 12) are used for the decoration of the body (Figs. 104, 118, 167), similar to those found under the armpits, the crotches, etc. of anthropomorphic figurines in Styles A, B and C.

**Triangles.** The decoration illustrated in Fig. 26 seems to have

some relationship with the piece shown in Fig. 209, consisting of two triangles joined at the apex, and possibly with the decoration of some pottery vessels from Capacha (Kelly, 1980: Fig. 17 g-i), from the Morett Site (Meighan, 1972: Fig. 10), both from Colima, and from Chupícuaro (Porter Weaver, 1956: Fig. 13 p-q). A similar motif has also been illustrated on pottery figurines from Tlatilco (Taube, 1988: Fig. I-30) and from Ixtlán del Río (Gifford, 1950: Pl. 5 b). This motif, however, is recurrent in several cultural areas in Mesoamerica, and does not seem to be diagnostic of any particular style. Its symbolism is unknown.

**Table 13. Anatomical features, garments and ornaments of shell figurines from Western Mexico.**

**Key for Tables 13 and 14**

<u>Figure numbers</u>	plain characters	= figurines	<u>Arms</u>	: straight: a = longitudinal slits
	bold characters	= heads		b = incised line
<u>Provenance</u>	italic	= representations		c = free from body
	C = Colima			: folded: a = both resting on
	J = Jalisco			stomach/ chest
	M = Michoacán			b = one resting on chest
	Me = Mexico			c = resting on shoulders
	O = Occidente		<u>Sq</u>	= square-shaped pattern

Provenance	< Jalisco																> Colima			
Fig. Numbers	34	41	46	49	55	63	64	66	67	68	69	73	74	75	76	77	61	62	65	
<b>Heads</b>																				
elongated	*									*	*				*	*				
round				*		*	*		*			*					*	*	*	
triangular													*	*						
square								*												
Wide shoulders			*			*	*		*			*					*	*	*	
<b>Arms</b>																				
straight: a	*																*			
straight: b																			*	
straight: c						*	*											*		
folded: a								*	*	*			*							
folded: b																				
folded: c											*									
<b>Legs</b>																				
straight			*			*	*		*	*	*	*			*					
knees outward	*	*											*				*	*		
<b>Circular motifs</b>																				
under armpit	*								*								*		*	
under crotch	*										*								*	
both sides of mouth								*										*	*	
over knees																				
inside ears								*												
Feet: outward	*	*	*					*					*				*	*	*	
<b>Fingers/toes</b>																				
incised lines: fingers					*		*	*	*	*	*						*	*	*	
incised lines: toes						*	*		*	*	*	*					*			
<b>Eyes</b>																				
circular depression	*			*	*	*	*	*	*		*	*	*	*	*	*	*		*	*
coffee-bean									*											
lozenge-shaped																				
<b>Ears</b>																				
side of head	*							*	*			*		*			*	*	*	
bird's motif																	*	*		
<b>Nose</b>																				
straight & thin																				
flat-based							*		*			*					*		*	
T-shaped																				
<b>Mouth</b>																				
circular	*			*		*			*				*				*			
elongated								*			*					*		*	*	
triangular																				
thick lips										*										
teeth visible				*				*												
<b>Cloths</b>																				
triangular loincloth	*					*	*		*			*					*	*	*	
pants						*	*		*			Sq								
skirts				*																
<b>Headresses</b>																				
bands and coils																				
conical cups						*					*		Sq				*			
helmets							*	*												
<b>Necklaces</b>																				
Armbands						*	*	Sq									*		Sq	
<b>Nose ornaments</b>																				

Provenance	> < Michoacan															> <	
Fig. Numbers	71	72	36	38	39	44	45	50	52	53	54	57	58	70	80	83	85
<b>Heads</b>																	
elongated																	*
round	*	*															
triangular																	
square			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
<b>Wide shoulders</b>																	
<b>Arms</b>																	
straight: a									*							*	*
straight: b			*	*			*										
straight: c																	
folded: a																	
folded: b			*	*	*									*			
folded: c																	
<b>Legs</b>																	
straight	*	*		*		*	*							*			*
knees outward			*													*	
<b>Circular motifs</b>																	
under armpit			*	*										*		*	*
under crotch			*	*													*
both sides of mouth																	
over knees														*			
inside ears				*				*					*				
<b>Feet: outward</b>	*		*			*	*		*							*	
<b>Fingers/toes</b>																	
incised lines: fingers			*	*					*		*			*			*
incised lines: toes	*													*			*
<b>Eyes</b>																	
circular depressions	*	*	*	*		*	*	*		*	*		*	*	*	*	*
coffee-bean					*							*					
lozenge-shaped								*									
<b>Ears</b>																	
side of head			*			*	*	*	*	*	*				*	*	*
bird's motif																	
<b>Nose</b>																	
straight & thin								*		*							
flat-based																	
T-shaped					*							*	*				
<b>Mouth</b>																	
circular			*			*	*	*									
elongated				*									*		*	*	
triangular									*						*		
thick lips					*							*					
teeth visible				*													
<b>Cloths</b>																	
triangular loincloth			*	*					*								*
pants	*	Sq					*			*	*						
skirts																	
<b>Headresses</b>																	
bands and coils					Sq		*					*	*				
conical cups	*	*				*							*	*			
helmets																	
<b>Necklaces</b>																	
					Sq			*									
<b>Armbands</b>																	
<b>Nose ornaments</b>																	
														*			



[illegible]

**Table 14. Common attributes of anthropomorphic figurines and representation according to styles.**

Fig. Number	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500	501	502	503	504	505	506	507	508	509	510	511	512	513	514	515	516	517	518	519	520	521	522	523	524	525	526	527	528	529	530	531	532	533	534	535	536	537	538	539	540	541	542	543	544	545	546	547	548	549	550	551	552	553	554	555	556	557	558	559	560	561	562	563	564	565	566	567	568	569	570	571	572	573	574	575	576	577	578	579	580	581	582	583	584	585	586	587	588	589	590	591	592	593	594	595	596	597	598	599	600	601	602	603	604	605	606	607	608	609	610	611	612	613	614	615	616	617	618	619	620	621	622	623	624	625	626	627	628	629	630	631	632	633	634	635	636	637	638	639	640	641	642	643	644	645	646	647	648	649	650	651	652	653	654	655	656	657	658	659	660	661	662	663	664	665	666	667	668	669	670	671	672	673	674	675	676	677	678	679	680	681	682	683	684	685	686	687	688	689	690	691	692	693	694	695	696	697	698	699	700	701	702	703	704	705	706	707	708	709	710	711	712	713	714	715	716	717	718	719	720	721	722	723	724	725	726	727	728	729	730	731	732	733	734	735	736	737	738	739	740	741	742	743	744	745	746	747	748	749	750	751	752	753	754	755	756	757	758	759	760	761	762	763	764	765	766	767	768	769	770	771	772	773	774	775	776	777	778	779	780	781	782	783	784	785	786	787	788	789	790	791	792	793	794	795	796	797	798	799	800	801	802	803	804	805	806	807	808	809	810	811	812	813	814	815	816	817	818	819	820	821	822	823	824	825	826	827	828	829	830	831	832	833	834	835	836	837	838	839	840	841	842	843	844	845	846	847	848	849	850	851	852	853	854	855	856	857	858	859	860	861	862	863	864	865	866	867	868	869	870	871	872	873	874	875	876	877	878	879	880	881	882	883	884	885	886	887	888	889	890	891	892	893	894	895	896	897	898	899	900	901	902	903	904	905	906	907	908	909	910	911	912	913	914	915	916	917	918	919	920	921	922	923	924	925	926	927	928	929	930	931	932	933	934	935	936	937	938	939	940	941	942	943	944	945	946	947	948	949	950	951	952	953	954	955	956	957	958	959	960	961	962	963	964	965	966	967	968	969	970	971	972	973	974	975	976	977	978	979	980	981	982	983	984	985	986	987	988	989	990	991	992	993	994	995	996	997	998	999	1000	1001	1002	1003	1004	1005	1006	1007	1008	1009	1010	1011	1012	1013	1014	1015	1016	1017	1018	1019	1020	1021	1022	1023	1024	1025	1026	1027	1028	1029	1030	1031	1032	1033	1034	1035	1036	1037	1038	1039	1040	1041	1042	1043	1044	1045	1046	1047	1048	1049	1050	1051	1052	1053	1054	1055	1056	1057	1058	1059	1060	1061	1062	1063	1064	1065	1066	1067	1068	1069	1070	1071	1072	1073	1074	1075	1076	1077	1078	1079	1080	1081	1082	1083	1084	1085	1086	1087	1088	1089	1090	1091	1092	1093	1094	1095	1096	1097	1098	1099	1100	1101	1102	1103	1104	1105	1106	1107	1108	1109	1110	1111	1112	1113	1114	1115	1116	1117	1118	1119	1120	1121	1122	1123	1124	1125	1126	1127	1128	1129	1130	1131	1132	1133	1134	1135	1136	1137	1138	1139	1140	1141	1142	1143	1144	1145	1146	1147	1148	1149	1150	1151	1152	1153	1154	1155	1156	1157	1158	1159	1160	1161	1162	1163	1164	1165	1166	1167	1168	1169	1170	1171	1172	1173	1174	1175	1176	1177	1178	1179	1180	1181	1182	1183	1184	1185	1186	1187	1188	1189	1190	1191	1192	1193	1194	1195	1196	1197	1198	1199	1200	1201	1202	1203	1204	1205	1206	1207	1208	1209	1210	1211	1212	1213	1214	1215	1216	1217	1218	1219	1220	1221	1222	1223	1224	1225	1226	1227	1228	1229	1230	1231	1232	1233	1234	1235	1236	1237	1238	1239	1240	1241	1242	1243	1244	1245	1246	1247	1248	1249	1250	1251	1252	1253	1254	1255	1256	1257	1258	1259	1260	1261	1262	1263	1264	1265	1266	1267	1268	1269	1270	1271	1272	1273	1274	1275	1276	1277	1278	1279	1280	1281	1282	1283	1284	1285	1286	1287	1288	1289	1290	1291	1292	1293	1294	1295	1296	1297	1298	1299	1300	1301	1302	1303	1304	1305	1306	1307	1308	1309	1310	1311	1312	1313	1314	1315	1316	1317	1318	1319	1320	1321	1322	1323	1324	1325	1326	1327	1328	1329	1330	1331	1332	1333	1334	1335	1336	1337	1338	1339	1340	1341	1342	1343	1344	1345	1346	1347	1348	1349	1350	1351	1352	1353	1354	1355	1356	1357	1358	1359	1360	1361	1362	1363	1364	1365	1366	1367	1368	1369	1370	1371	1372	1373	1374	1375	1376	1377	1378	1379	1380	1381	1382	1383	1384	1385	1386	1387	1388	1389	1390	1391	1392	1393	1394	1395	1396	1397	1398	1399	1400	1401	1402	1403	1404	1405	1406	1407	1408	1409	1410	1411	1412	1413	1414	1415	1416	1417	1418	1419	1420	1421	1422	1423	1424	1425	1426	1427	1428	1429	1430	1431	1432	1433	1434	1435	1436	1437	1438	1439	1440	1441	1442	1443	1444	1445	1446	1447	1448	1449	1450	1451	1452	1453	1454	1455	1456	1457	1458	1459	1460	1461	1462	1463	1464	1465	1466	1467	1468	1469	1470	1471	1472	1473	1474	1475	1476	1477	1478	1479	1480	1481	1482	1483	1484	1485	1486	1487	1488	1489	1490	1491	1492	1493	1494	1495	1496	1497	1498	1499	1500	1501	1502	1503	1504	1505	1506	1507	1508	1509	1510	1511	1512	1513	1514	1515	1516	1517	1518	1519	1520	1521	1522	1523	1524	1525	1526	1527	1528	1529	1530	1531	1532	1533	1534	1535	1536	1537	1538	1539	1540	1541	1542	1543	1544	1545	1546	1547	1
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Fig. Numbers	46	56	63	76	77	200	77	28	86	88	89	44	46	52	53	54	57
Style	B	B	B	B	B	B	>	<	C1	C1	C1	C1	C1	C1	C1	C1	C1
Provenance	O	U	U	U	U	U		M	M	M	M	M	M	U	M	M	M
<b>Heads</b>																	
elongated	*		*	*	*	*											
round																	
triangular																	
square		*							*	*	*	*	*		*	*	*
<b>Wide shoulders</b>														*			
<b>Arms</b>																	
straight: a															*		
straight: b										*	*		*				
straight: c																	
folded: a	*	*															
folded: b										*		*	*				
folded: c			*														
<b>Legs</b>																	
straight			*	*							*	*	*	*			
knees outward								*		*							
<b>Circular motifs</b>																	
under armpit										*	*						
under crotch		*	*							*	*						
both sides of mouth						*											
over knees																	
inside ears		*									*						
<b>Feet: outward</b>								*		*		*	*	*	*		
<b>Fingers/toes</b>																	
incised lines: fingers		*	*			*		*		*	*			*		*	
incised lines: toes			*														
<b>Eyes</b>																	
circular depressions	*	*	*	*	*	*			*	*	*		*	*		*	*
coffee-bean								*				*					*
<b>Ears</b>																	
side of head		*				*		*		*		*	*		*	*	*
bird motif																	
<b>Nose</b>																	
straight & thin			*			*									*		
flat-based																	
T-shaped								*				*					*
<b>Mouth</b>																	
circular										*		*	*				
elongated	*	*	*		*	*		*			*						
triangular															*		
thick lips											*						*
teeth visible		*						*			*						
<b>Cloths</b>																	
triangular loincloth	*									*	*				*		
pants													*			*	*
skirts																	
<b>Headaddresses</b>																	
bands and coils												Sq	*				*
conical cups																	
helmets		*										*					
<b>Necklaces</b>								*				Sq			*		
<b>Armbands</b>		*															
<b>Nose ornaments</b>																	

Fig. Numbers	58	68	80	788	797	70	78	79	40	41	42	43	59	60	74	782
Style	C1	C1	C1	C1	C1	< C2	C2	C2>	< D	D	D	D	D	D	D	D>
Provenance	M	J	M	M	M	M	O	O	O	J	O	O	O	O	J	J
<b>Heads</b>																
elongated		*														
round							*									
triangular									*		*	*	*	*	*	*
square	*		*	*	*	*		*								
<b>Wide shoulders</b>																
<b>Arms</b>																
straight : a																
straight : b																
straight : c																
folded : a																
folded : b						*										
folded : c																
<b>Legs</b>																
straight		*				*										*
knees outward									*	*	*	*				
<b>Circular motifs</b>																
under armpit						*										
under crotch																
both sides of mouth																
over knees						*										
inside ears	*															
<b>Feet : outward</b>																
<b>Fingers/toes</b>																
incised lines : fingers		*				*			*							
incised lines : toes																
<b>Eyes</b>																
circular depressions	*		*	*	*	*	*	*	*				*	*	*	*
coffee-bean		*														
<b>Ears</b>																
side of head			*		*											
bird motif																
<b>Nose</b>																
straight & thin																
flat-based																
T-shaped	*			*	*											
<b>Mouth</b>																
circular									*				*		*	*
elongated	*		*		*		*									
triangular																
thick lips		*														
teeth visible																
<b>Cloths</b>																
triangular loincloth																
pants																
skirts																
<b>Headdresses</b>																
bands and coils	*				*	*										
conical cups																
helmets																*
<b>Necklaces</b>																
<b>Armbands</b>																
<b>Nose ornaments</b>																
						*										

## **Appendix II**

### **Inventory of Marine Shell Artifacts**

**from the Occidente**

The following inventory includes all the marine shell artifacts from the Occidente referred to under the heading "Comparisons: Occidente" of each artifact illustrated in the Classification, Ch. 2 (in italic). It is meant to be a useful guideline for the researchers who are interested in locating this type of material in the various museums of Mexico, Europe and the U.S.A. This list certainly does not include all the shell artifacts from the Occidente, because all the museums and many private collections could not be approached, but it should hopefully be representative of the whole corpus of this material.

This list is divided into different headings, following the same order used in the Classification , i.e. univalves, anthropomorphic figurines, etc. For each figure number referring to an artifact illustrated in the Classification a list of museums where similar materials can be found is provided - with the number of pieces, if more than one, and the museum number, if available. Following this information, the provenance of these pieces is mentioned, together with the reference to the numbering of the Classification.

The repository of some material has not been included in this list and can be located in the following museums:

Guadalupe Mound: Museum and Art Gallery, Bristol.

Playa del Tesoro: Centro Regional INAH, Colima, Co.

Zacoalco: Southwest Museum, Los Angeles.

#### Univalves

- Fig. 14** Museo Nacional de Antropología, México D.F. Michoacán (Cuitzeo) 1.1.A.2  
Cat. No. 15  
Museo Nacional de Antropología, México D.F. Occidente "  
(x23) No. 20.2018
- Fig. 22** Centro de Estudios de la Revolución Mexicana, Michoacán (El Otero) 1.1.B.1.c.  
Jiquilpan: (x2). No. 39.PJ.87  
Museo de Arqueología, Colima Colima (Las Conchas) "  
Museo Nacional de Antropología, México D.F. Michoacán "  
No. 2.7.6755  
Museo Nacional de Antropología, México D.F. Occidente "  
No. 20.2125

#### Anthropomorphic Figurines

- Fig. 35** Museo Nacional de Antropología, México D.F. Michoacán (Cuitzeo) 2.1.A.1.a.  
Cat. No. 28
- Fig. 36** Museo Nacional de Antropología, México D.F.  
(X4) No. 2.3.658 Michoacán (Apatzingán) "  
(x2) Cat. No. 27 Michoacán (Cuitzeo) "

<b>Fig. 39</b>	Museo Nacional de Antropología, México D.F. No. 2.5.5630	Michoacán (Apatzingán)	"
<b>Fig. 41</b>	Museo Regional, Guadalajara (x4)	Occidente	"
<b>Fig. 49</b>	Museo Regional, Guadalajara (several identical specimens)	Jalisco	"
<b>Fig. 54</b>	Museo Nacional de Antropología, México D.F. Cat. No. 28	Michoacán (Cuitzeo)	2.1.A.1.b.
<b>Fig. 74</b>	Museo Regional, Guadalajara	Jalisco	2.1.B.
<b>Fig. 76</b>	Museo Regional, Guadalajara (several identical specimens)	Jalisco	"
<b>Fig. 77</b>	Museo Nacional de Antropología, México D.F. No. 20.2044	Occidente	2.1.B.2.

## **Zoomorphic Figurines**

### **Birds**

<b>Fig. 82</b>	Museo del Estado, Morelia (several specimens) No. 326	Michoacán	2.2.A.1.a.
<b>Fig. 85</b>	Museo Regional, Guadalajara (x11)	Jalisco	2.2.A.1.b.
<b>Fig. 88</b>	Museo Regional, Guadalajara No. D 2085	Jalisco	2.2.A.2.a.
<b>Fig. 90</b>	Museo Regional, Guadalajara (x15)	Jalisco	2.2.A.2.b.

### **Fish**

<b>Fig. 93</b>	Museo Regional, Guadalajara No. D 1684.2823	Colima	2.2.B.2.
	Musées Royaux d'Art et d'Histoire, Brussels No. AAM 39.197	Colima	"
	Amerika Museum, Cuijk	Colima	"

### **Scorpions**

<b>Fig. 96</b>	Museo del Estado, Morelia (x5)	Michoacán	2.2.C.1.
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### **Frogs**

<b>Fig. 102</b>	Museo Regional, Guadalajara (x13)	Jalisco	2.2.E.1.
<b>Fig. 103</b>	Museum and Art Gallery, Bristol (x4) No. E 4898	Michoacán (Churumuco)	"
<b>Fig. 104</b>	Museo Regional, Guadalajara	Jalisco	"
<b>Fig. 106</b>	Museo del Estado, Morelia (several identical specimens) No. 330	Michoacán	"
<b>Fig. 107</b>	Musées Royaux d'Art et d'Histoire, Brussels. No. AAM 39.185	Colima	2.2.E.2.

### **Pisotes**

<b>Fig. 110</b>	Musées Royaux d'Art et d'Histoire, Brussels, No. AAM 39.199	Colima	2.2.F.2.a.
	Museo Regional, Guadalajara (x1)	Jalisco	"
	Museo de Arqueología del Occidente de México, Guadalajara (x2)	Jalisco	"
	Private collection	Colima (Los Ortices)	"
<b>Fig. 113</b>	Museo Regional, Guadalajara No. D 2029	Colima	"
	Musées Royaux d'Art et d'Histoire, Brussels. No. AAM 39.201	Colima	"



Fig. 115 Museo Nacional de Antropología, México D.F. (x2). No. 20.2035/37	Occidente	"
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### Dogs

Fig. 121 Museo Regional, Guadalajara No. D 1506	Jalisco	2.2.H.b.
Museo Nacional de Antropología, México D.F. No. 20.2018	Occidente	"

### Lizards

Fig. 127 Museo Regional, Guadalajara Museo de Arqueología, Colima (x2)	Jalisco	2.2.J.2.
Stiftung Altamerikanische Kulturen, Zurich	Colima	"
	unknown provenance	"
Fig. 128 Museo Nacional de Antropología, México D.F. (x1). No. 20.2036	Jalisco	"
Brenman Collection, Cuernavaca (x1)	Jalisco	"

### Non-identified Animals

Fig. 133 Museo Regional, Guadalajara (x3) No. D 2022/2029	Jalisco	2.2.L.1.
Fig. 138 Museo Regional, Guadalajara (several specimens)	Jalisco	2.2.L.2.

## **Non-figurative Representations**

### Discs

Fig. 142 Museo Regional, Guadalajara (x3) No. D 402/959/960	Jalisco	2.3.A.1.b.
Universidad Autónoma, Guadalajara No. UAG 01021.1/3-2/3	Jalisco	"
Fig. 143 British Museum, London (x6) No. 1940. AM.1.1-22	Michoacán (Tepehuanco)	2.3.A.2.a.
Fig. 144 Museo Regional, Guadalajara (x2) No. D 93	Jalisco	"
Fig. 147 Museo Nacional de Antropología, México D.F. No. 2.5.6165	Michoacán (Tarascan)	2.3.A.2.b.
Fig. 148 Museo Regional, Guadalajara	Jalisco	"
Fig. 155 Museo de Arqueología, Colima	Colima	"
Fig. 157 Museo Regional, Guadalajara (x2) No. D 394/396	Jalisco	"

### Rings

Fig. 170 Museo de Arqueología del Occidente de México, Guadalajara. No. MRG 01608	Jalisco	2.3.C.1.a.
Fig. 171 Museo Regional, Guadalajara	Jalisco (Juanacuatlan)	"
Museo Nacional de Antropología, México D.F.	Michoacán	"
Museum für Völkerkunde, Berlin No. Ca 34.835	Michoacán	"
Amerika Museum, Cuijk	Occidente	"
Fig. 172 Amerika Museum, Cuijk	Occidente	"

<b>Fig. 173</b>	Museo Regional, Guadalajara (x2/ <u>pottery</u> )	Jalisco	"
	Museo Nacional de Antropología, México D.F. (x2). No. 20.2031	Occidente	"
	Amerika Museum, Cuijk	Occidente	"
<b>Fig. 174</b>	Museo Regional, Guadalajara	Jalisco	<b>2.3.C.1.b.</b>
	Musées Royaux d'Art et d'Histoire, Brussels (x4). No. AAM 39.195	Colima	"
	Museum and Art Gallery, Bristol No. E 5897.900	Michoacán	"
	Amerika Museum, Cuijk (x2)	Occidente	"
<b>Fig. 175</b>	Museum and Art Gallery, Bristol No. E 5914	Jalisco (Guadalupe Mound)	"
	Museo Regional, Guadalajara	Jalisco	"
	Museo Nacional de Antropología, México D.F. Cat. No. 16	Michoacán (Cuitzeo)	"
	Smithsonian Institute, Washington D.C. No. 148205	Colima (Manzanillo)	"
	Amerika Museum, Cuijk (x9)	Occidente	"
<b>Fig. 176</b>	Museo Regional, Guadalajara No. MRG/1.00956	Jalisco	"
	Museo Nacional de Antropología, México D.F. No. 2.7.2287	Michoacán (Chupícuaro)	"
<b>Fig. 177</b>	Museo Municipal, Compostela	Nayarit	"
<b>Fig. 181</b>	Museo Nacional de Antropología, México D.F.	Michoacán (Cuitzeo)	<b>2.3.C.2.a.</b>
	Museo Regional, Guadalajara No. D 68	Jalisco	"
<b>Fig. 183</b>	Museo Nacional de Antropología, México D.F. No. 2.5.6507	Michoacán (Apatzingán)	<b>2.3.C.2.b.</b>
	Museo Municipal, Compostela	Nayarit	"
<b>Fig. 185</b>	Museo Regional, Guadalajara	Occidente	"
<b>Fig. 186</b>	Museo Nacional de Antropología, México D.F. No. 2.5.6461	Michoacán (San Gregorio)	"
	Museo Regional, Guadalajara	Occidente	"
<b>Fig. 187</b>	Museo Regional, Guadalajara	Jalisco	"
	Museum and Art Gallery, Bristol (X6). No. E 4904-6/4912	Michoacán (Churumuco)	"

#### **Cylindrical pieces**

<b>Fig. 197</b>	Museo de Arqueología del Occidente de México, Guadalajara. No. MRG 01613	Jalisco	<b>2.3.D.1.</b>
<b>Fig. 199</b>	Museo Regional, Guadalajara	Jalisco	<b>2.3.D.2.</b>
	Museo Nacional de Antropología, México D.F. (x4) No. 2.5.5624	Michoacán	"
<b>Fig. 200</b>	Brenman Collection, Cuernavaca	Colima	"

#### **Quadrangular pieces** (without decoration)

<b>Fig. 202</b>	Museo Regional, Guadalajara	Jalisco	<b>2.3.E.1.a.</b>
	Museo Nacional de Antropología, México D.F. No. 2.5.6263	Michoacán (Apatzingán)	"
<b>Fig. 203</b>	Museo Municipal, Compostela	Nayarit	"
<b>Fig. 204</b>	Museo Regional, Guadalajara (several identical specimens)	Jalisco	"
	Museo del Estado, Morelia	Michoacán	"

<b>Fig. 205</b>	Museo Regional, Guadalajara (several identical specimens)	Jalisco	"
<b>Fig. 206</b>	Museum of Cultural History, UCLA (x9)	Colima	"
<b><u>Triangular pieces</u></b> (without decoration)			
<b>Fig. 208</b>	Museo Nacional de Antropología, México D.F. No.2.5.6254 Museo del Estado, Morelia	Michoacán (Apatzingán)	2.3.E.1.b.
<b>Fig. 210</b>	Museo Nacional de Antropología, México D.F. No. 2.5.2525	Michoacán Michoacán (Apatzingán)	" "
<b>Fig. 211</b>	Museo Regional, Guadalajara (several identical specimens)	Jalisco	"
<b>Fig. 212</b>	Museo Regional, Guadalajara (several identical specimens)	Jalisco	"
<b><u>Crosses</u></b> (without decoration)			
<b>Fig. 213</b>	Museo Nacional de Antropología, México D.F. No. 20.2018	Occidente	2.3.E.1.d.
<b><u>Spherical pieces</u></b> (without decoration)			
<b>Fig. 218</b>	Musées Royaux d'Art et d'Histoire, Brussels (several identical specimens) No. AAM 39 195	Colima	2.3.E.1.g.
<b>Fig. 219</b>	Museum and Art Gallery, Bristol (x17) No. E 4959	Michoacán (Churumuco)	"
<b><u>Quadrangular pieces</u></b> (with decoration)			
<b>Fig. 225</b>	Musées Royaux d'Art et d'Histoire, Brussels (x3.) No. AAM 39.205	Colima	2.3.E.2.a.
<b><u>Spherical pieces</u></b> (with decoration)			
<b>Fig. 234</b>	Museo Nacional de Antropología, México D.F. (x18). No. 2.5.6524	Michoacán (Apatzingán)	2.3.E.2.d
<b><u>Finger loops</u></b> (without decoration)			
<b>Fig. 235</b>	Museo Municipal, Compostela (x2)	Nayarit	2.3.F.1.
<b>Fig. 239</b>	Museo Regional, Guadalajara (x2) Museo Municipal, Compostela (x3) Museo Nacional de Antropología, México D.F. (x2). No. 2.5.5522 Museo del Estado, Morelia	Jalisco (Juanacatlan) Nayarit Michoacán Michoacán	" " " "
<b><u>Finger loops</u></b> (zoomorphic representations)			
<b>Fig. 241</b>	Universidad Autónoma, Guadalajara (x2) No. UAG1037.1/2 Museo Nacional de Antropología, México D.F. No. 20.669	Jalisco unknown provenance	2.3.F.2.b. "
<b><u>Finger-loops</u></b> (non-figurative representations)			
<b>Fig. 243</b>	Musées Royaux d'Art et d'Histoire, Brussels. No. AAM 38.103 Amerika Museum, Cuijk (x2)	Jalisco (lake Chapala) Occidente	2.3.F.2.c. "

**Spirals**

Fig. 248 Museo Nacional de Antropología, México D.F. (x4). No. 2.3.684 (x11) No. 2.5.6532	Jalisco (El Llano) Michoacán (Apatzingán)	2.3.G.1.a "
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**Columella Pieces**

Fig. 250 Museo Regional, Guadalajara	Jalisco	2.3.G.1.c.
Fig. 252 Museo Regional, Guadalajara (several identical specimens)	Jalisco	"

**Rectangular Convex Plates**

Fig. 256 Museo Nacional de Antropología, México D.F. ( x4). No. 2.5.6523 Museo del Estado, Morelia	Michoacán (Apatzingán)	2.3.G.2.b
	Michoacán (Huetamo)	"

**Miniature representations**

Figs. 257-8 Museo Regional, Guadalajara (x17) No. C 476/7	Jalisco	2.3.G.2.c.
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**Other shapes**

Fig. 259 Museo Nacional de Antropología, México D.F.(x10). No. 2.5.6459	Michoacán (San Gregorio)	2.3.G.2.d.
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**Pottery representations of univalves****Spouted gastropods**

Fig. 262 Museum für Völkerkunde, Berlin No. Ca 34.735	Colima
Art Institute, Chicago No. A 19923	Colima
The Art Museum, Princeton No. Y 1984.23	Colima
The Metropolitan Museum of Art, New York, No. 1979.205.5	Colima
Philadelphia Museum of Art, Philadelphia, No. 50 134 367	Colima

**Non-spouted gastropods**

Fig. 264 Museo Regional, Guadalajara (x2)	Colima
The Snite Museum of Art, Notre Dame No. 82.90.14	Colima
Museum of Cultural History, UCLA No. 81.00290	Colima

## **Appendix III**

### **List of Museums and Private Collections**

**with marine shell artifacts**

**from the Occidente.**

## **Europe**

Amerika Museum, Cuijk, Holland.  
British Museum, London.  
Musée de l'Homme, Paris.  
Musées Royaux d'Art et d'Histoire, Brussels.  
Museum and Art Gallery, Bristol.  
Museum für Völkerkunde, Berlin.  
Pitt Rivers Museum, Oxford.  
Rijksmuseum voor Völkerkunde, Leiden.  
Stiftung Altamerikanische Kulturen, Zurich.

## **Mexico**

Brenman Collection, Cuernavaca, Mo.  
Centro de Estudios de la Revolución Mexicana, Jiquilpan, Mich.  
Centro Regional INAH, Colima, Co.  
Museo de Arqueología, Colima, Co.  
Museo de Arqueología del Occidente de México, Guadalajara, Jal.  
Museo del Estado, Morelia, Mich.  
Museo Michoacano, Morelia, Mich.  
Museo Municipal, Compostela, Nay.  
Museo Nacional de Antropología, México D.F.  
Museo Regional, Guadalajara, Jal.  
Museo Regional, Tepic, Nay.  
Private Collection, Colima, Col.  
Private Collection, Jiquilpan, Mich.  
Universidad Autónoma, Guadalajara, Jal.

## **U.S.A.**

Art Institute, Chicago, Illinois  
Charles W. Bowers Museum, Santa Ana, Ca.  
Cleveland Museum of Art, Cleveland, Ohio.  
Denver Art Museum, Denver, Col.  
Dumbarton Oaks, Washington D.C.  
Field Museum of Natural History, Chicago, Illinois.  
Los Angeles County Museum of Art, Los Angeles, Ca.  
Museum of Cultural History, UCLA, Los Angeles, Ca.  
Museum of the American Indian, New York.  
Philadelphia Museum of Art, Philadelphia, Penn.  
Smithsonian Institute, Washington D.C.  
Southwest Museum, Los Angeles, Ca.  
The Art Museum, Princeton, Princeton University, New Jersey.  
The Metropolitan Museum of Art, New York.  
The Snite Museum of Art, Notre Dame, Indiana.

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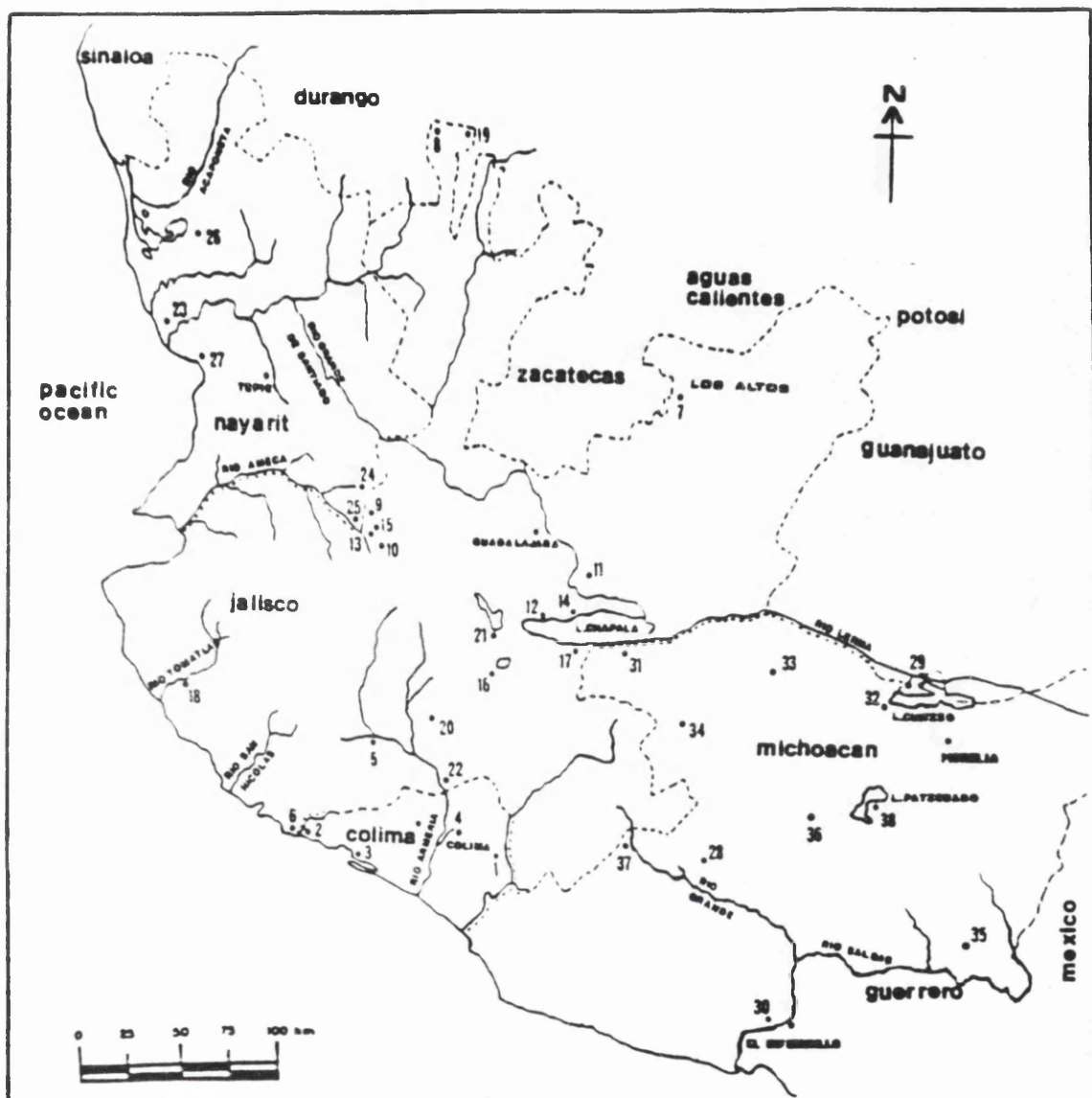
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#### Archeological sites mentioned in text

##### Colima

Los Ortices (1)  
Morett (2)  
Playa del Tesoro (3)  
Pueblo Juarez (4)

##### Jalisco

Autlán (5)  
Barra de Navidad (6)  
Cerro Encantado (7)  
Cerro del Huistle (8)  
El Arenal (9)  
Guadalupe Mound (10)  
Juanacuatlán (11)  
San Antonio (12)  
San Marcos (13)

San Nicolas, Chapala (14)  
San Sebastian (15)  
Sayula (16)  
Tequesquite, Los Altos (7)  
Tizapan el Alto (17)  
Tomatlán (18)  
Totoate (19)  
Tuxcacuesco (20)  
Zacoalco (21)  
Zapotitlán (22)

##### Nayarit

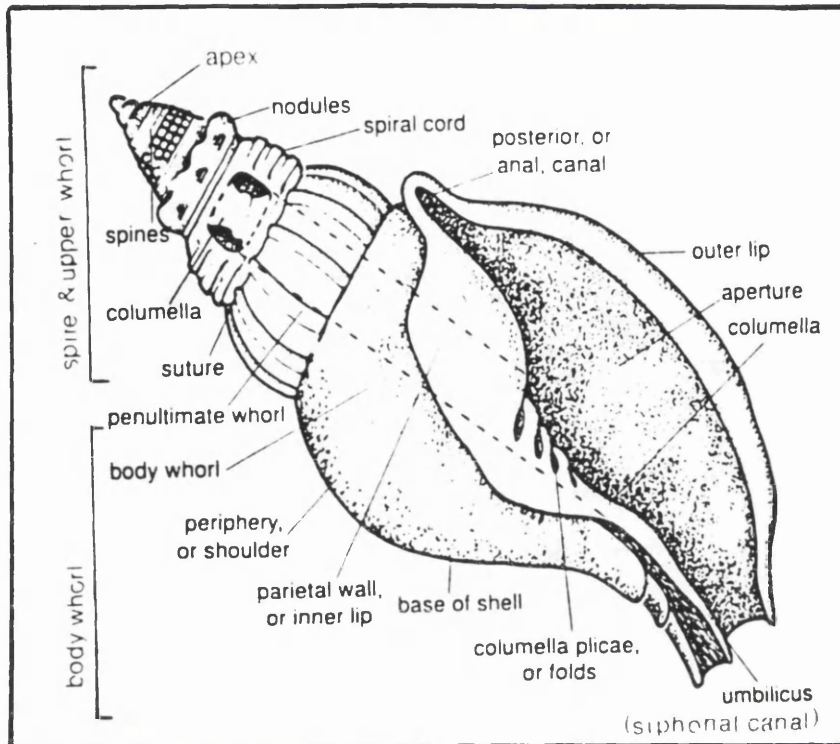
Amapa (23)  
Ixtlán del Rio (24)  
Las Cebollas (25)  
Las Peñitas (26)

San Blas (27)

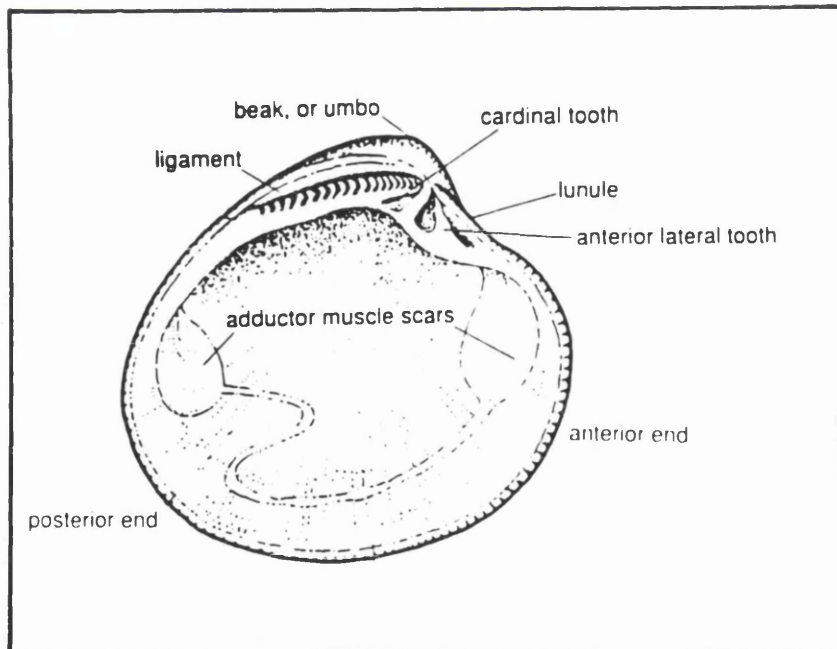
##### Michoacán

Apatzingán (28)  
Chupicuaro (29)  
Churumuco (30)  
Cojumatlán (31)  
Cuitzeo (32)  
El Opeño (33)  
El Otero (34)  
Huandacareo (32)  
Huetamo (35)  
Tingambato (36)  
Tres Cerritos (32)  
Tepalcatepec (37)  
Tzintzúntzan (38)

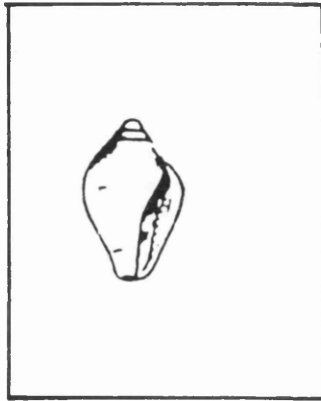
Fig. 1. Archaeological map of Western Mexico



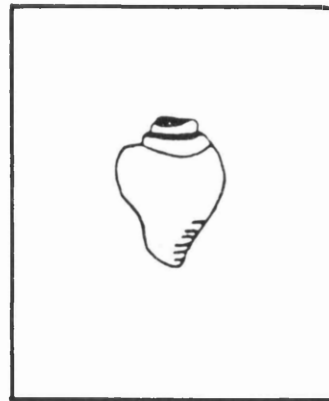
**Fig. 2.** Parts of the Gastropod shell (univalve)  
(after Tucker Abbott, 1990).



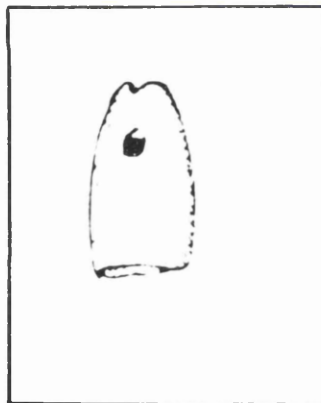
**Fig. 3.** Parts of a bivalve shell  
(after Tucker Abbott, 1990).



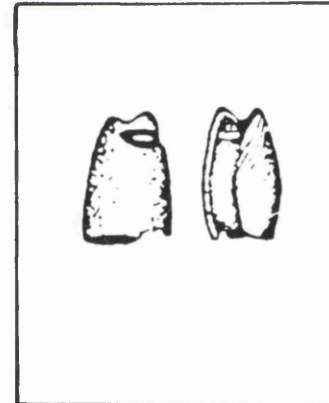
**Fig. 4.** Univalve, "a": no decoration.  
L: n.a.  
Provenance: Tuxcacuesco, Jal.  
(after Kelly, 1949: Fig. 87 i)



**Fig. 5.** Univalve, "a": no decoration.  
L: c. 3.-  
Provenance: Cerro de Huistle, Jal.  
(after Olguin, 1983: Fig. 2 m)



**Fig. 6.** Univalve, "a": no decoration.  
L: c. 5.-  
Provenance: Apatzingán, Mich. Jal.  
(after Kelly, 1947: Fig. 69 d)



**Fig. 7.** Univalve, "a": no decoration.  
L: 5.30.  
Provenance: San Sebastian, Tomb 1,  
(after Long, 1966: Fig. 107)

**Key to Illustrations**

L = length = maximum measurement in cm.  
c = approximate measurement  
n.a. = not available

"a" = "Size a"  
"b" = "Size b"  
D = diameter

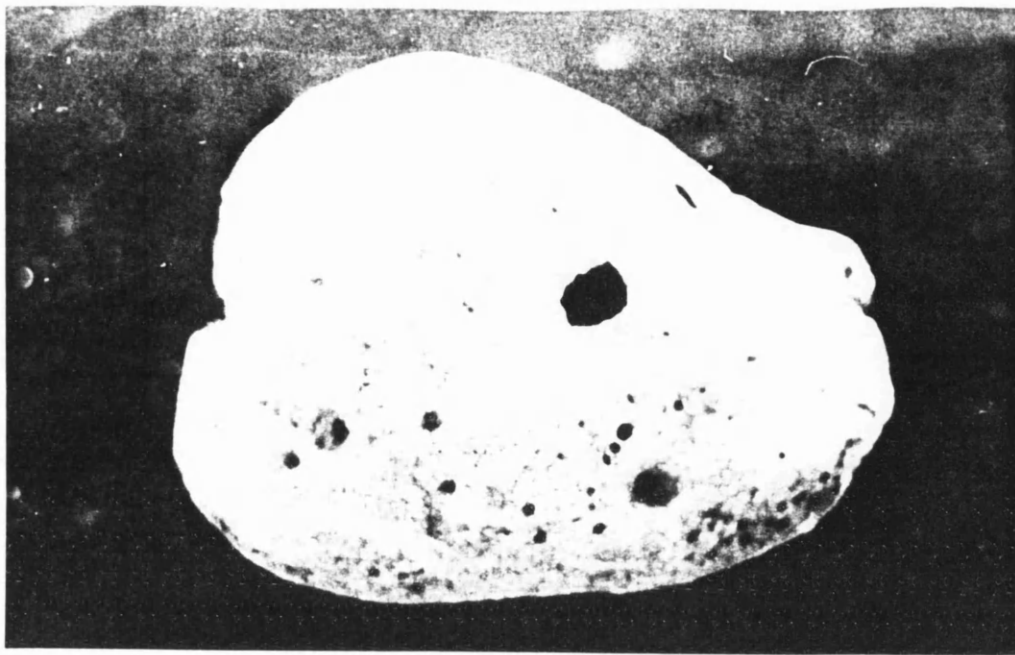


Fig. 8. Univalve, "b": no decoration. L: 19.-.  
Provenance: Colima.  
Private Collection, Colima, Co.

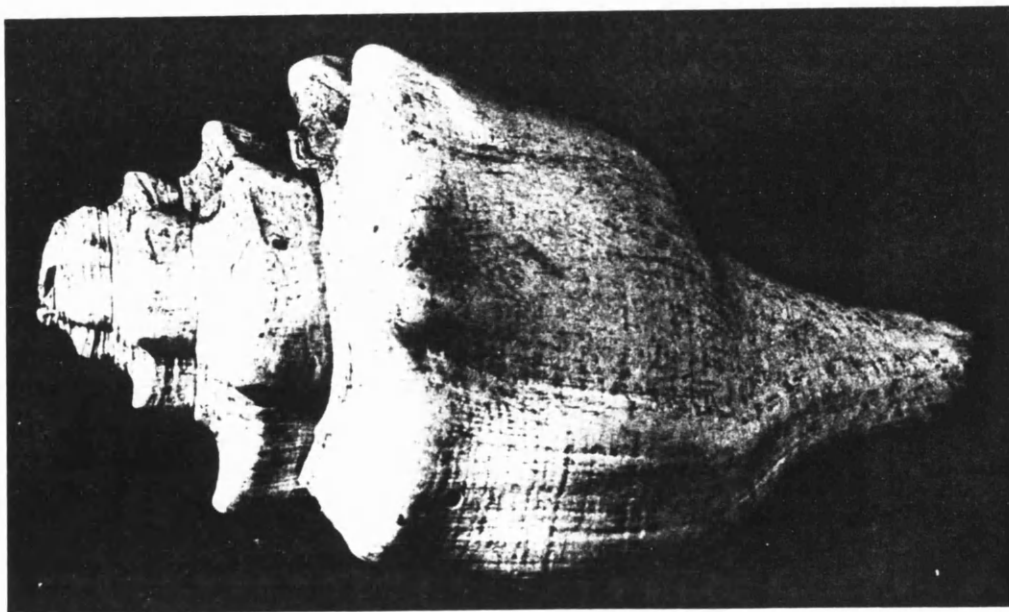


Fig. 9. Univalve, "b": no decoration. L: 22.90.  
Provenance: Jalisco.  
Museo Regional, Guadalajara, Jal. No. D 949.1863.



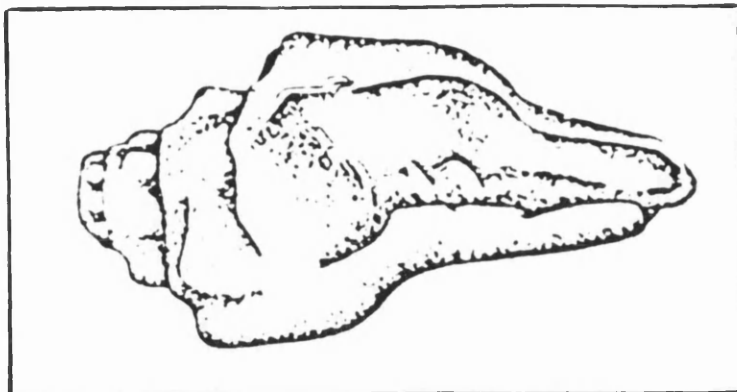


Fig. 10. Univalve, "b": no decoration. L: 12.30.  
Provenance: San Sebastian, Tomb 1, Jal.  
(after Long, 1966: Fig. 112)

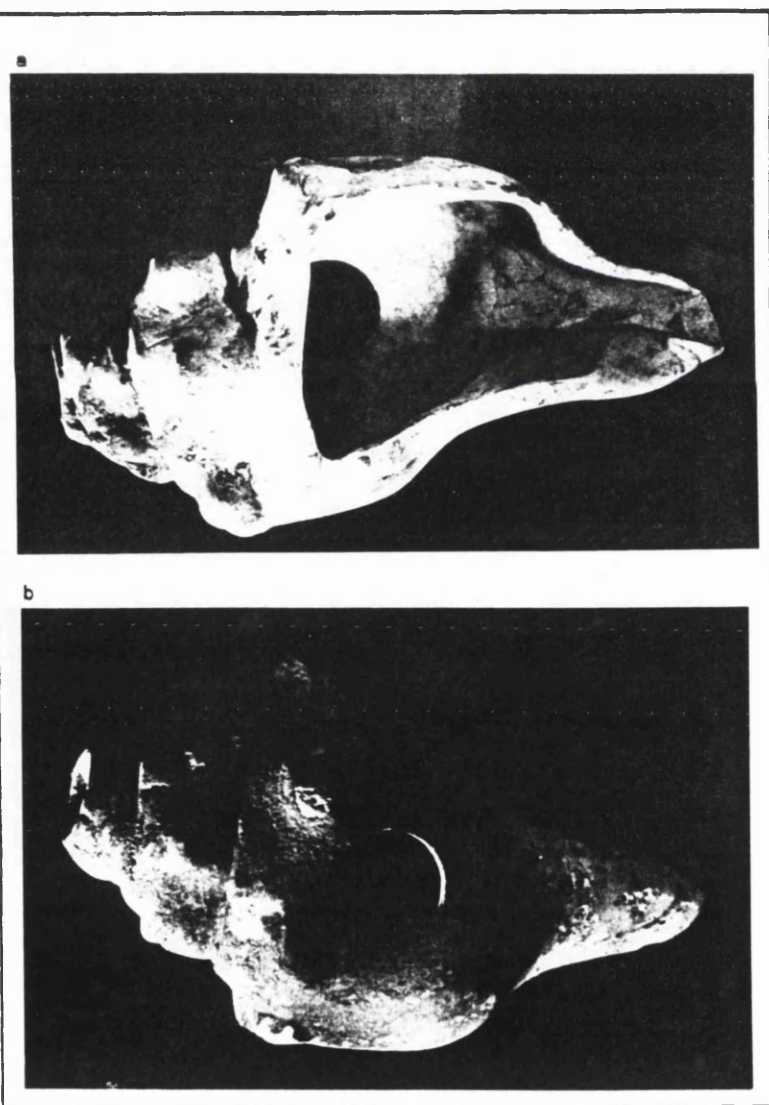
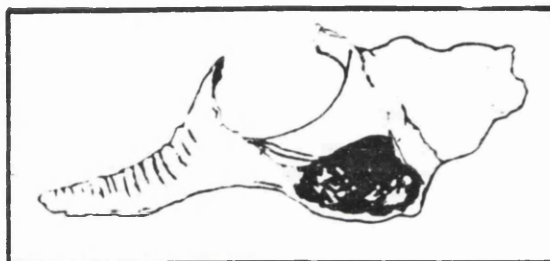


Fig. 11. Univalve, "b": no decoration. L: 14.-.  
Provenance: Jalisco.  
Museo Regional, Guadalajara, Jal.

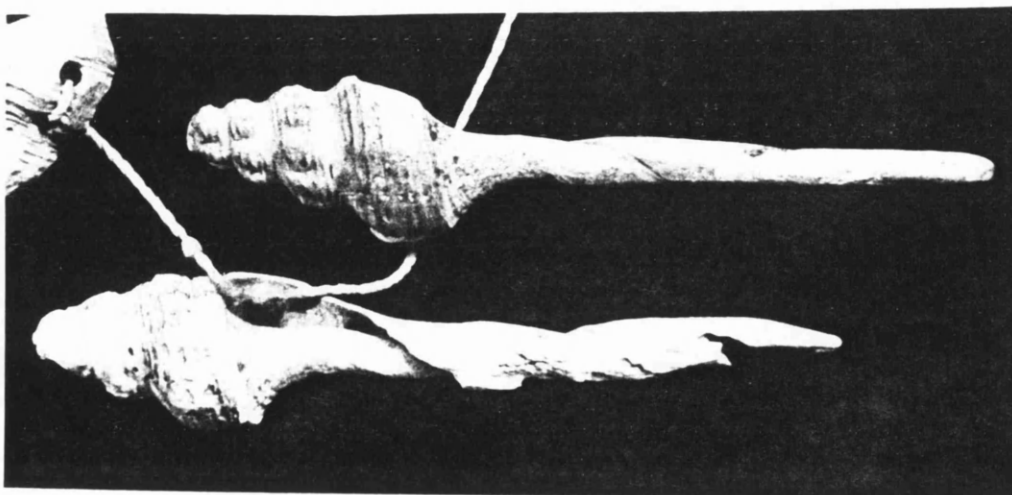




**Fig. 12.** Univalve, "b": no decoration. L: n.a.  
Provenance: Tres Cerritos, Cuitzeo, Mich.  
Museo Nacional de Antropología, Mexico D.F. .



**Fig. 13.** Univalve, "b": no decoration.  
L: c. 30.-.  
Provenance: Tingambato, Mich.  
(after Piña Chan, 1982: Fig. 27 d)



**Fig. 14.** Univalves, "b": no decoration. L: 10.10.  
Provenance: Occidente.  
Museo Nacional de Antropología, Mexico D.F. No. 20.2018.

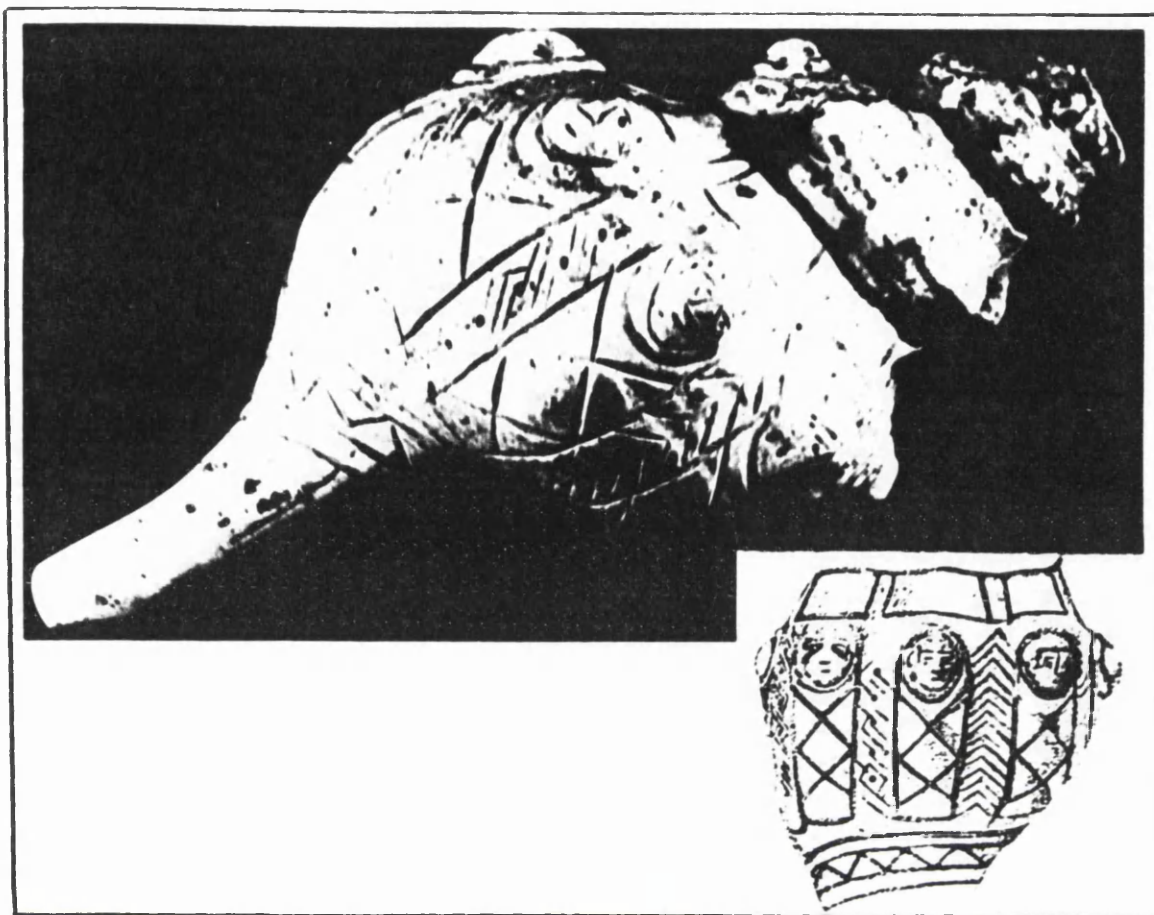


Fig. 15. Decorated univalve, "b". L: 33.-.  
Provenance: Colima. (photo museum)  
Museum of Cultural History, UCLA. No. 81.00239.

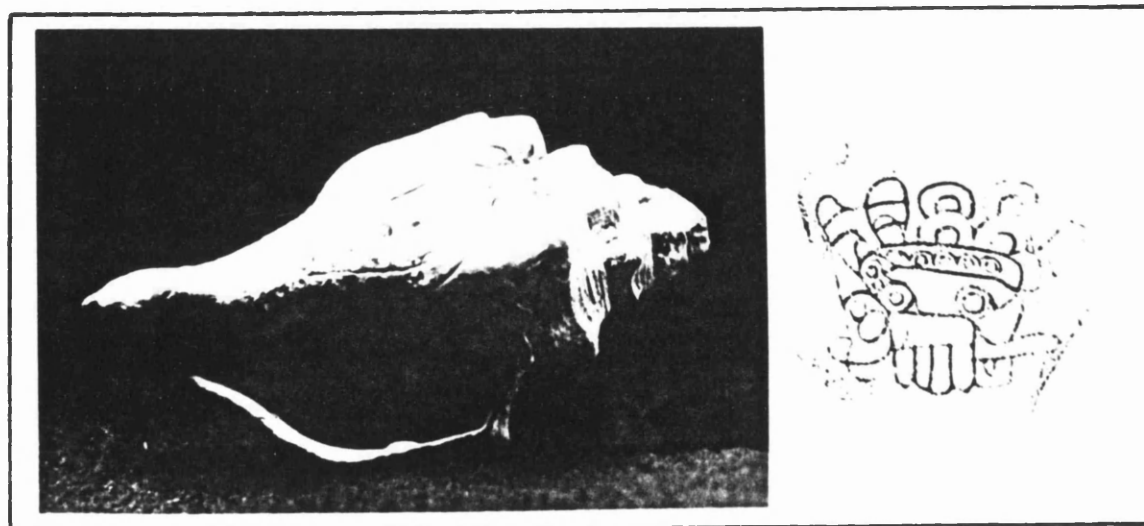
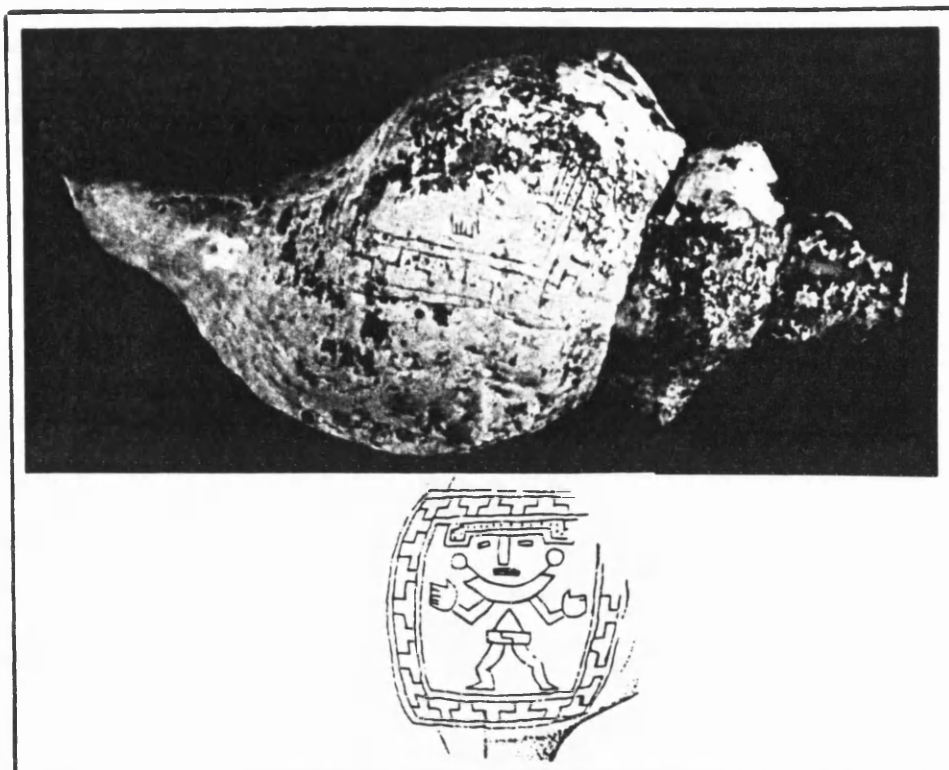
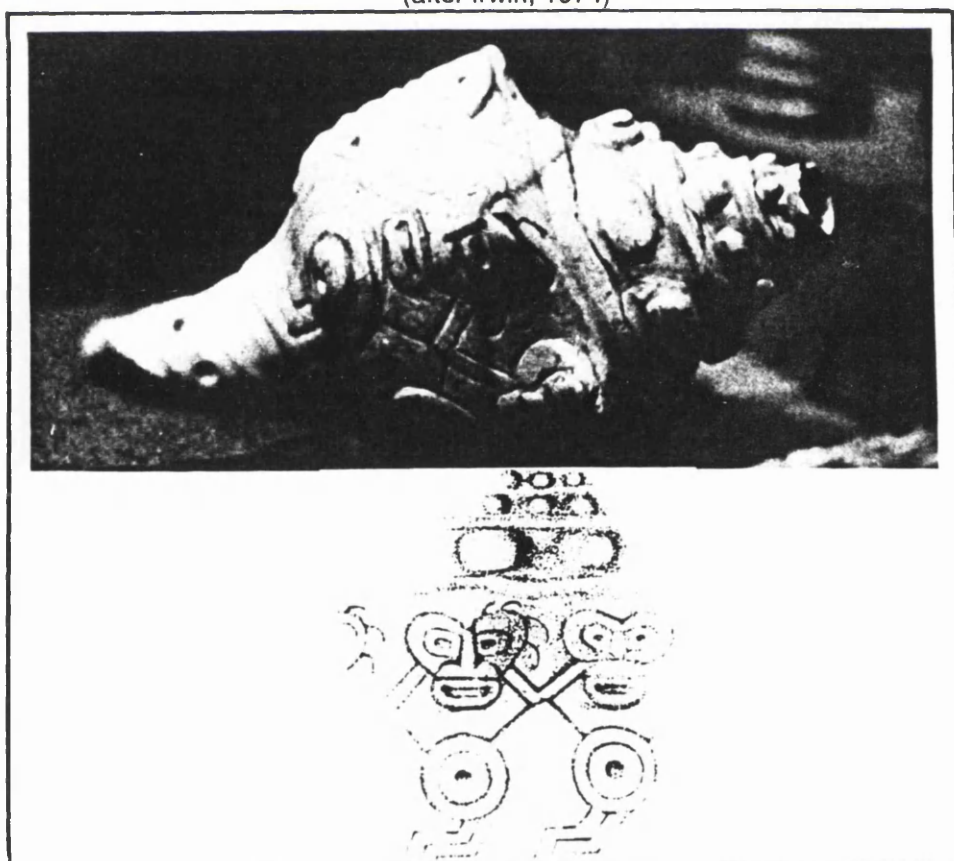


Fig. 16. Decorated univalve, "b". L: c. 17.-.  
Provenance: Occidente.  
Museo Regional, Guadalajara, Jal.



**Fig. 17.** Decorated univalve, "b". L : 34.-.  
 Provenance: Puruandiro, Mich. (photo museum)  
 Charles W. Bowers Museum, Santa Ana, Ca. No. 340.76.  
 (after Irwin, 1974)



**Fig. 18.** Decorated univalve, "b". L: 19.-.  
 Provenance: Occidente (Michoacán ?).  
 Museo Michoacano, Morelia, Mich. No. 10.83765.



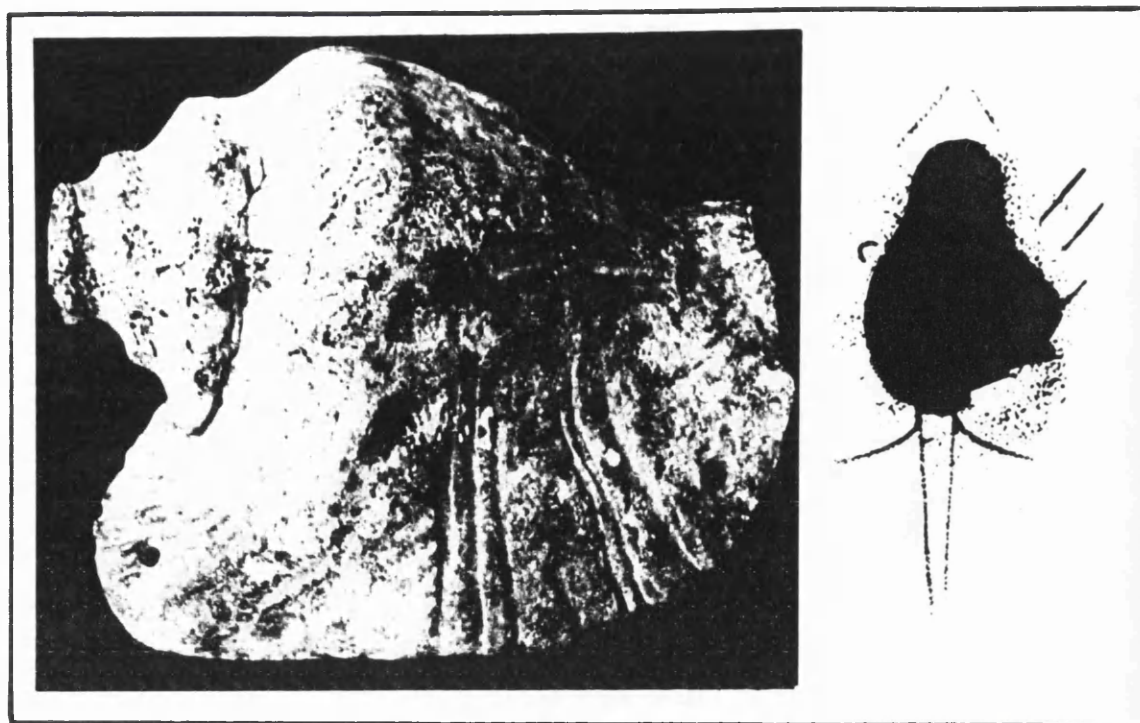


Fig. 19. Decorated univalve, "b". L: 22.-.

Provenance: Jalisco.

Museo de la Universidad Autónoma, Guadalajara, Jal., Mex. No. UAG.10148.

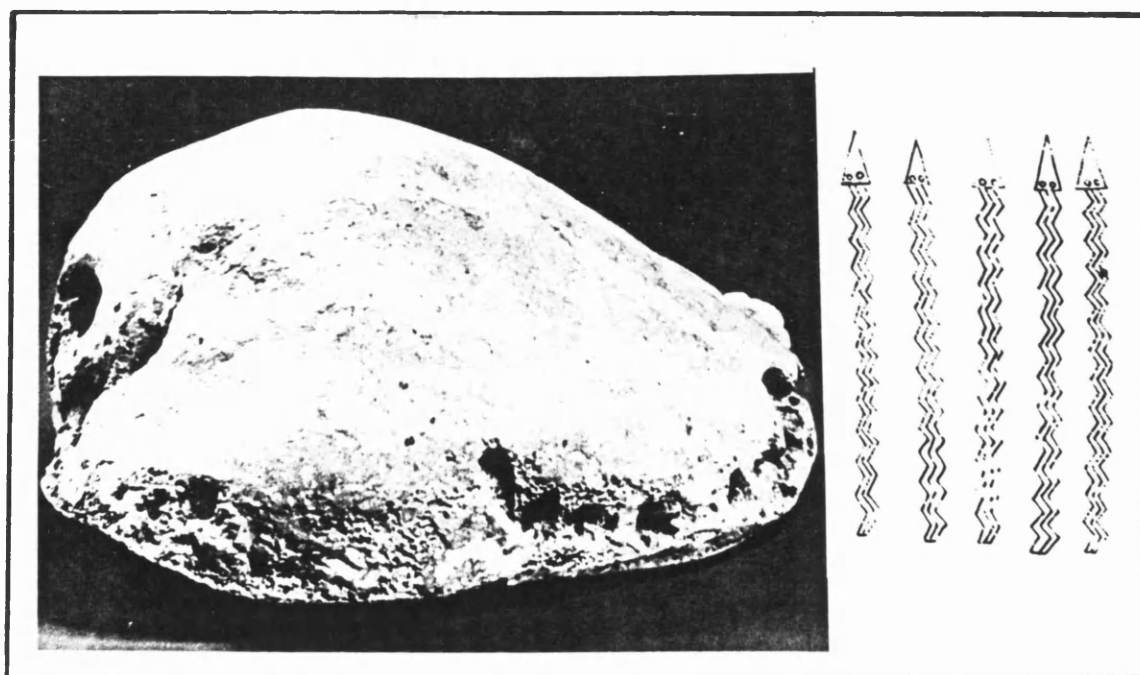
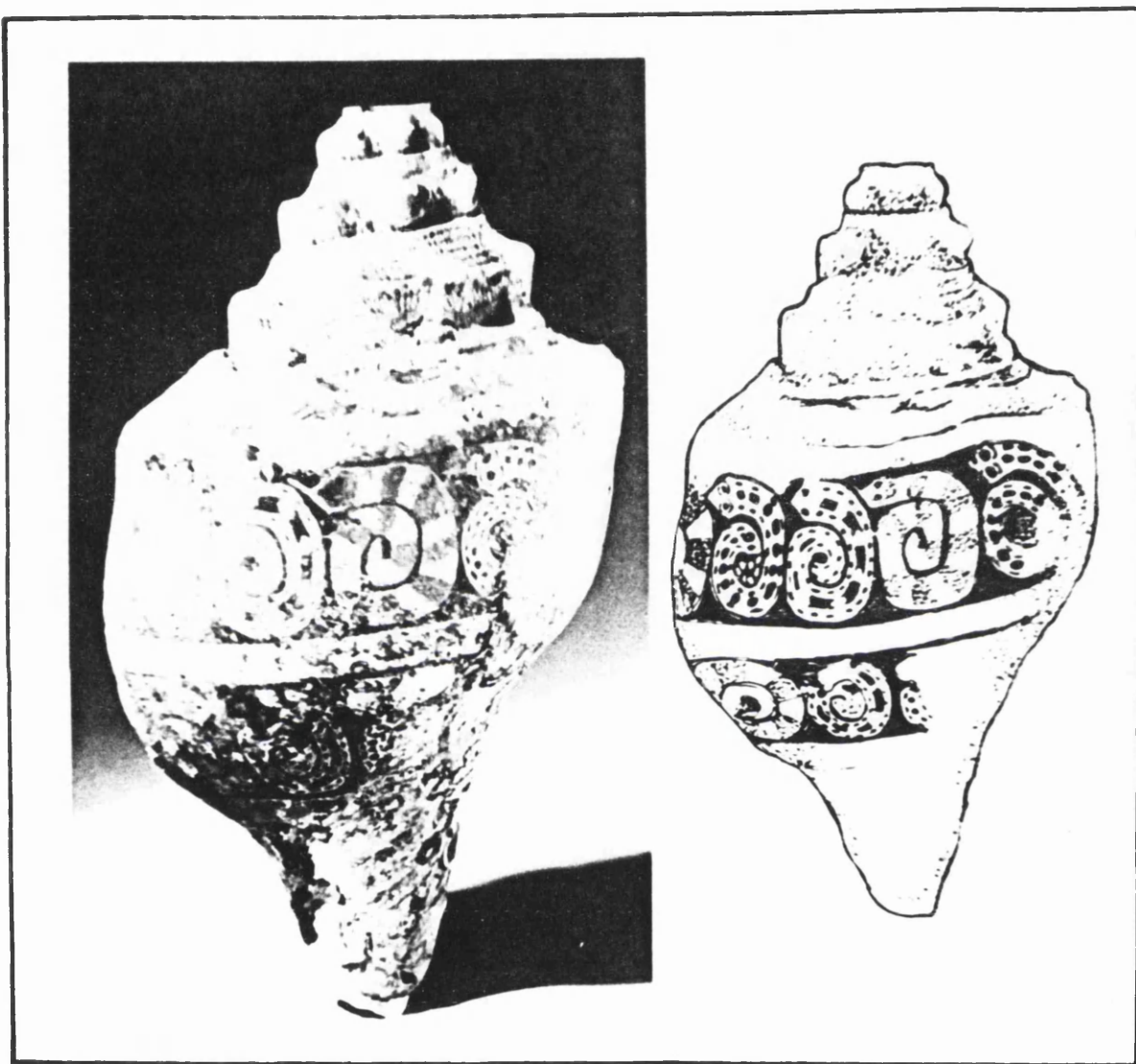


Fig. 20. Decorated univalve, "b". L: 17.-.

Provenance: Jalisco. (photo museum)

Museum für Völkerkunde, Berlin. No. IV.Ca 46860.



**Fig. 21.** Decorated univalve, "b". L: 20.60.  
Provenance: Chupícuaro, Mich. (photo museum)  
Museum of the American Indians, New York. No. 24.2892.

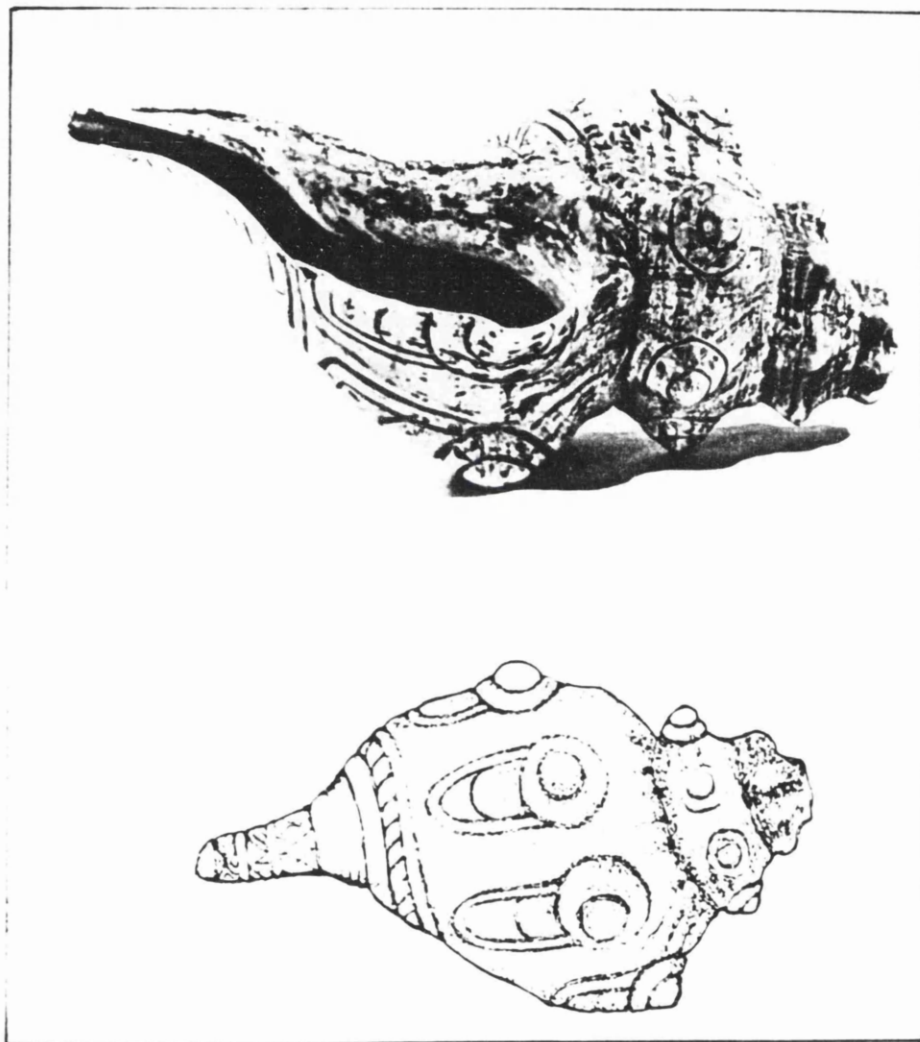
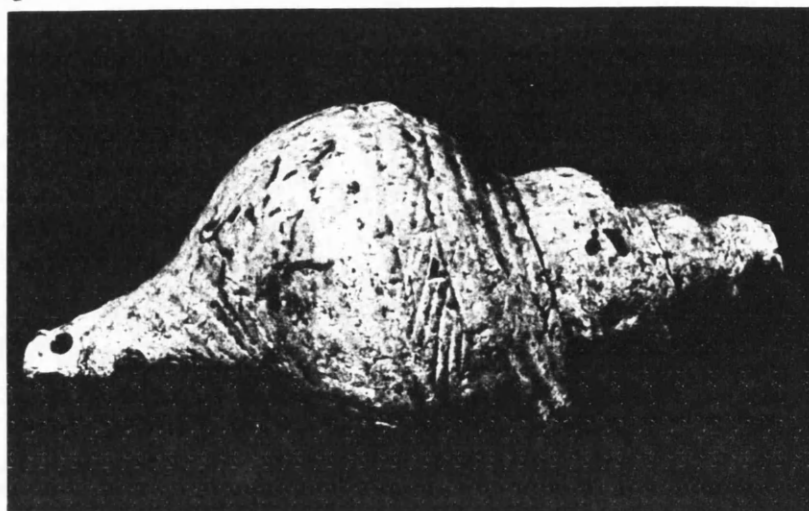


Fig. 22. Decorated univalve, "b". L: 13.30.  
Provenance: Nayarit. (photo museum)  
Los Angeles County Museum of Art, Los Angeles.  
No. M.86.296.50.

a

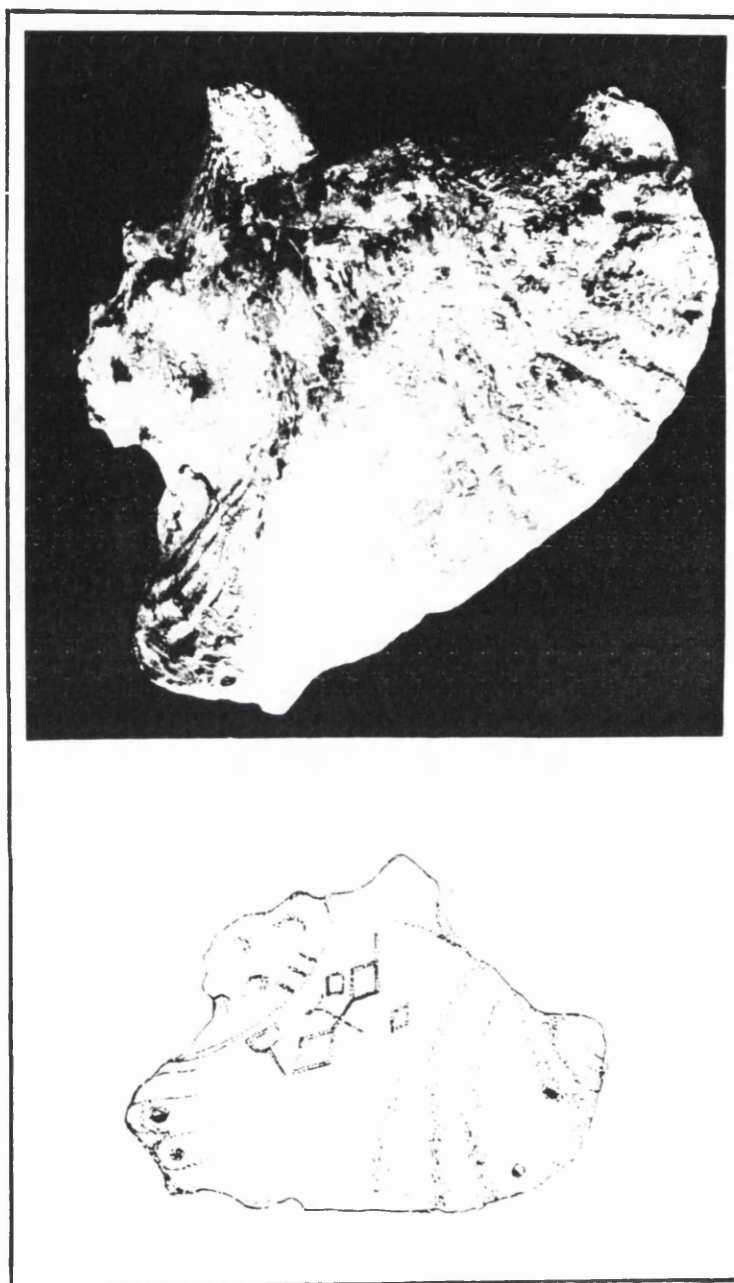


b



Fig. 23. Decorated univalve, "b". L: 23.90.  
Provenance: Churumuco, Mich.  
Museum and Art Gallery, Bristol.  
No. E 8103.





**Fig. 24.** Decorated univalve, "b". L: n.a.  
Provenance: Jalisco.  
Museo Regional, Guadalajara, Jal., Mex.  
No. FS 45.V44C.



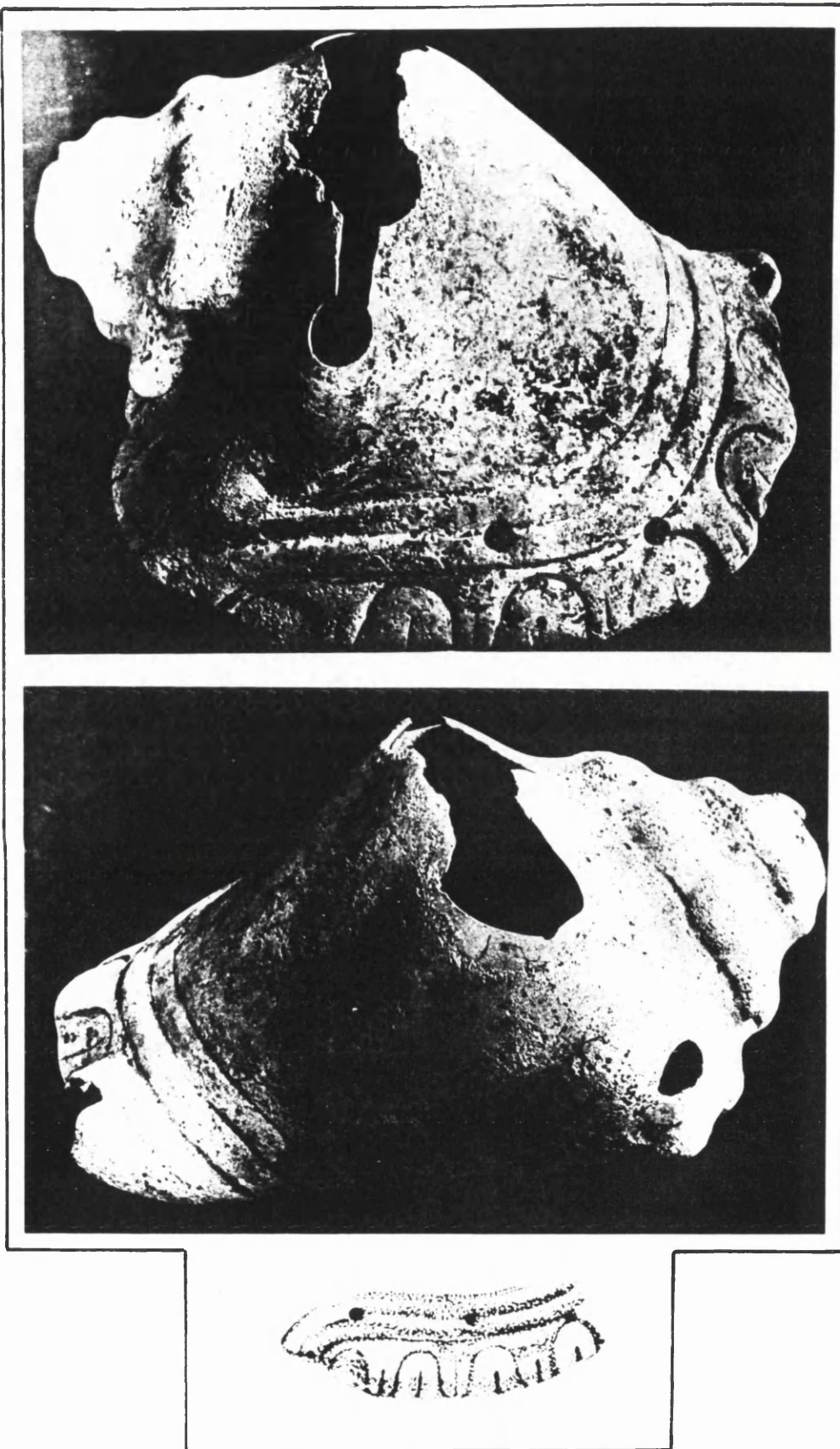
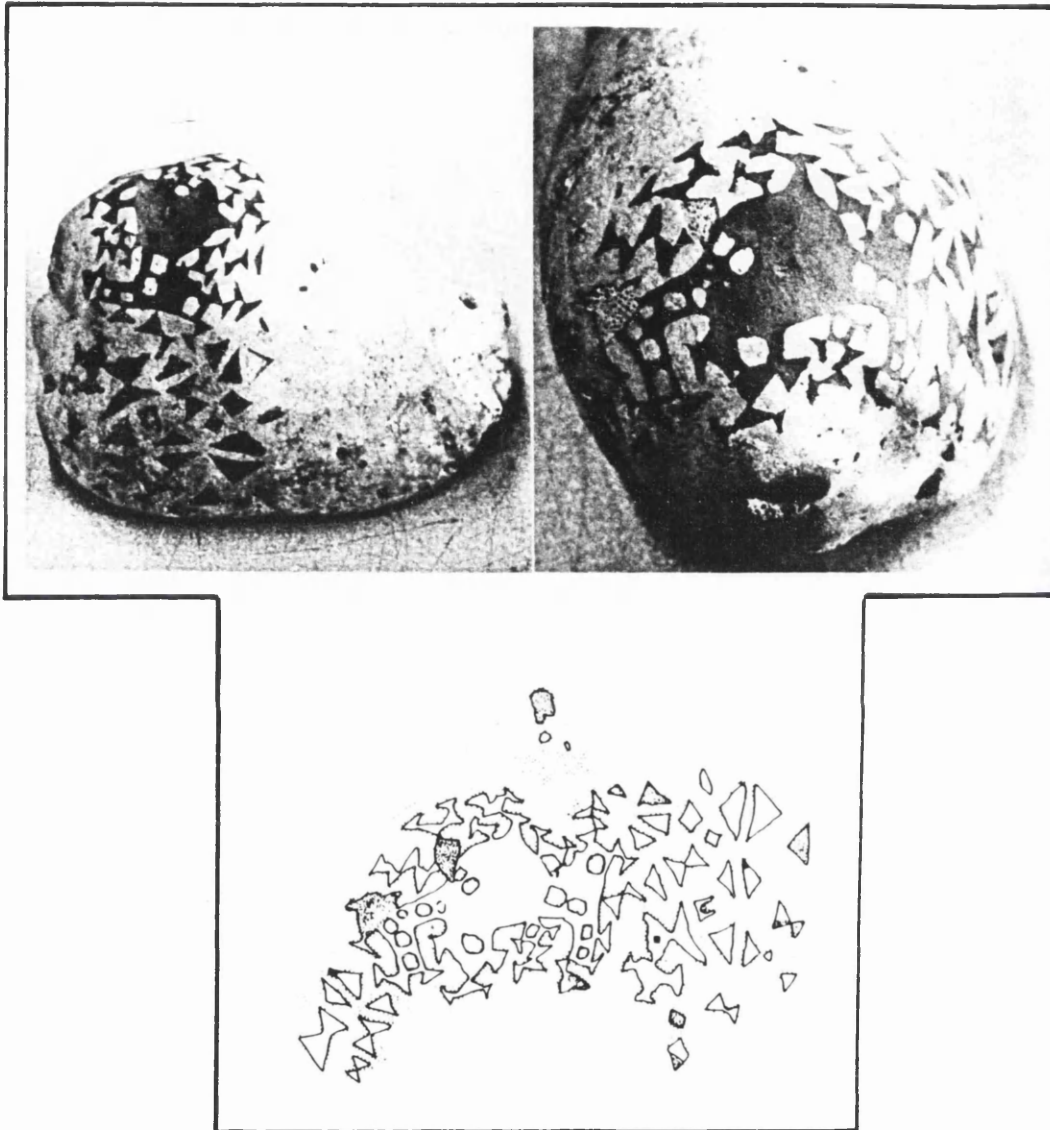
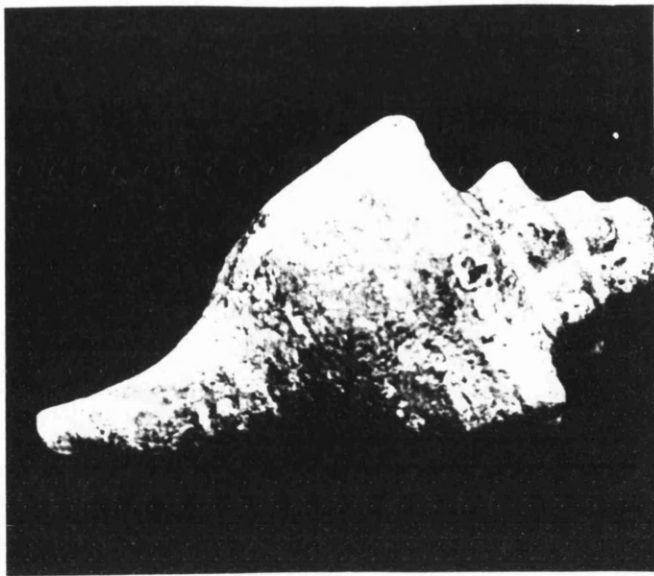


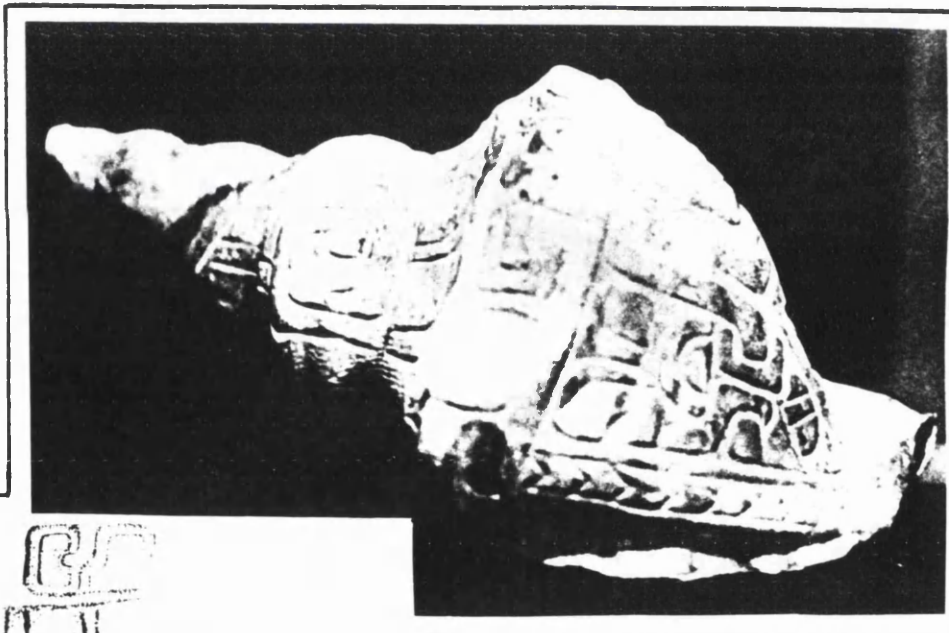
Fig. 25. Decorated univalve, "b". L: 24.20 .  
 Provenance: Ixtlán del Rio (?).  
 Museo Regional, Tepic, Nay.  
 No. C.906.10/97366.



**Fig. 26.** Decorated univalve, "b". L: 18.20.  
Provenance: Jalisco.  
Rijksmuseum voor Völkerkunde, Leiden.  
No. 4541.2.

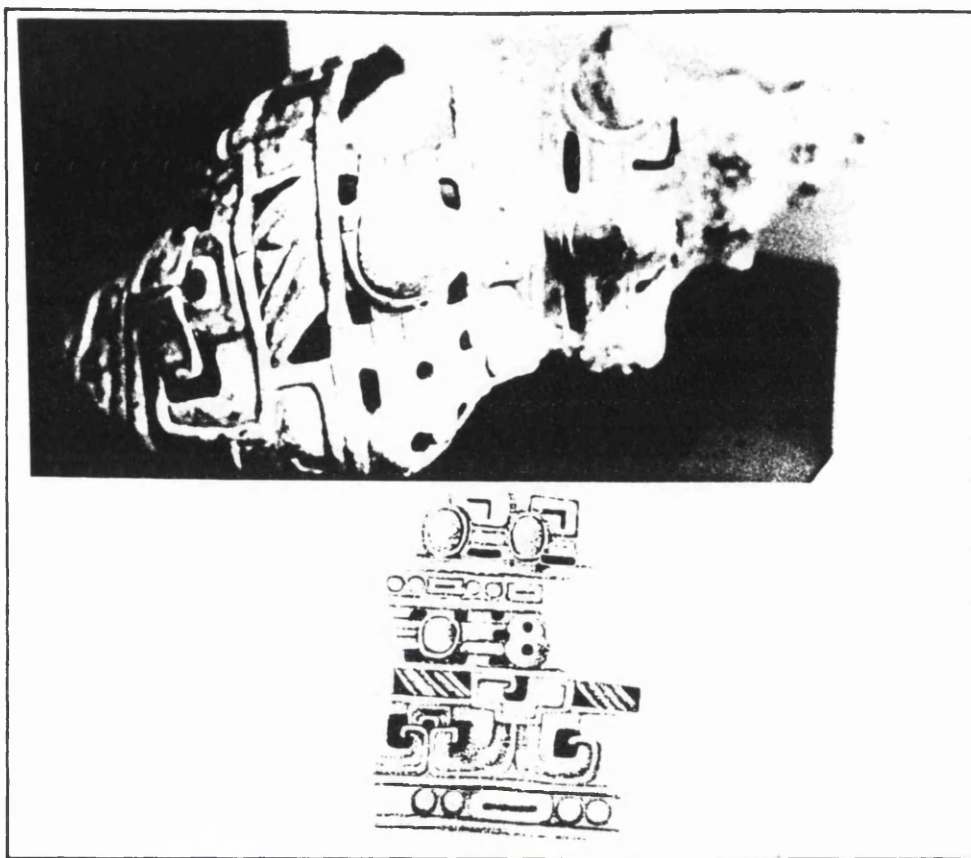


**Fig. 27.** Decorated univalve, "b". L: 16.-.  
Provenance: Jalisco (Chapala area ?).  
Museo Regional, Guadalajara, Jal. No. FS 8. 02830.



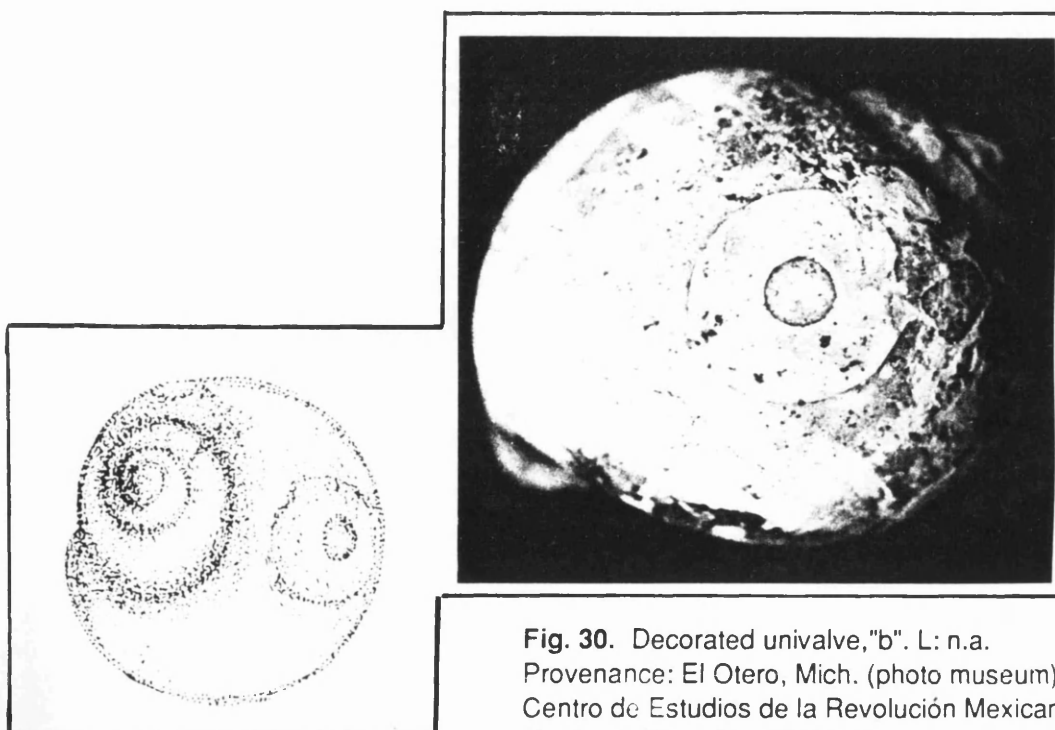
**Fig. 28.** Decorated univalve, "b". L: 28.-.  
Provenance: Occidente (Michoacán ?).  
Museo Michoacano, Morelia, Mich.  
No. 10.83.766.





**Fig. 29.** Decorated univalve, "b". L: 25.50.

Provenance: Michoacán, possibly Apatzingán  
Museo Nacional de Antropología, Mexico D.F. No. 2.5.6231.



**Fig. 30.** Decorated univalve, "b". L: n.a.

Provenance: El Otero, Mich. (photo museum)  
Centro de Estudios de la Revolución Mexicana,  
Jiquilpan, Mich. No. 39.PJ 85.

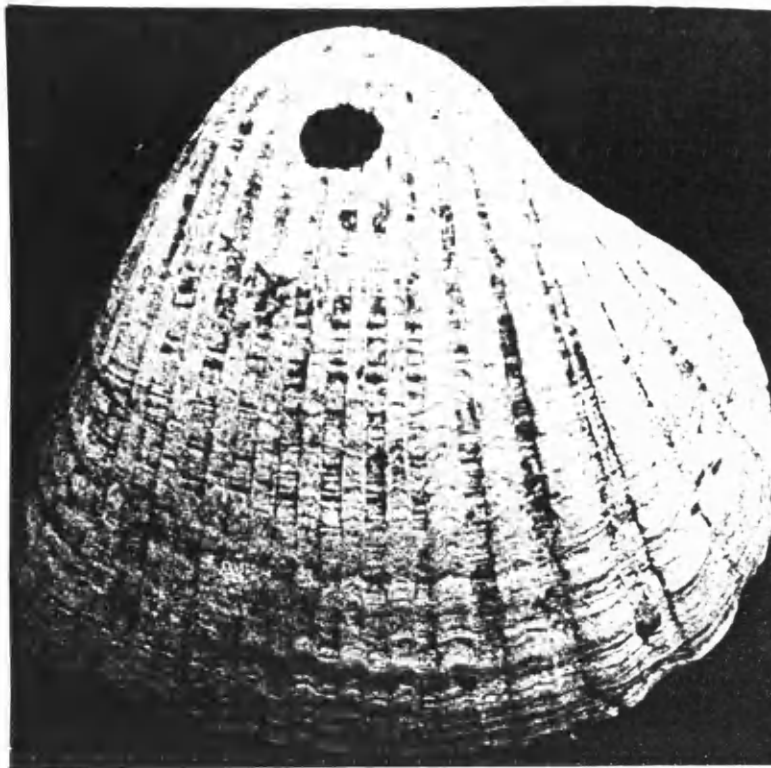
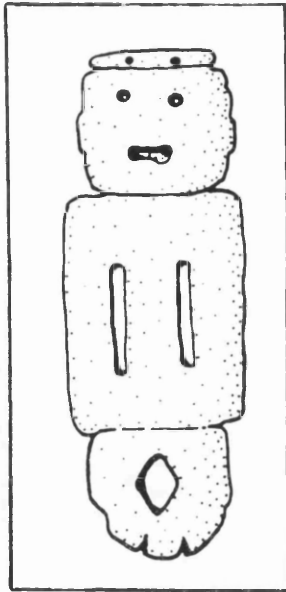


Fig. 31. Bivalve: no decoration. L: 5.30.  
Provenance: Playa del Tesoro, Co.  
Centro Regional INAH, Colima, Co. Cat. No. MI.P27.M6.

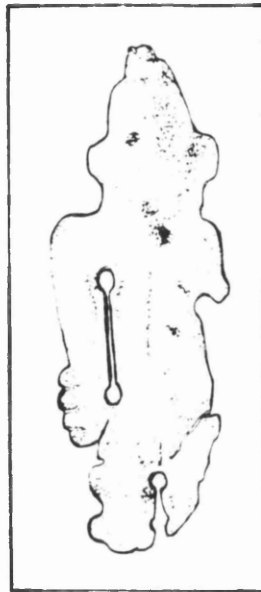


Fig. 32. Decorated bivalve. L: 2.60.  
Provenance: Jalisco.  
Museo Regional, Guadalajara, Jal.



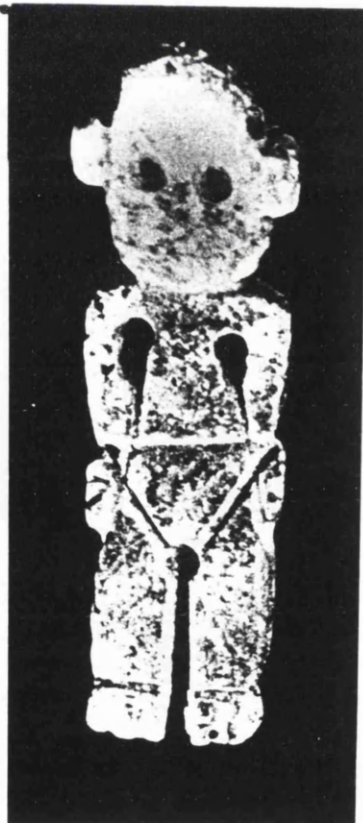
**Fig. 33.** Anthropomorphic fig: two-dim.  
L: 8.60.

Provenance: Occidente.  
Museo Regional, Guadalajara, Jal.



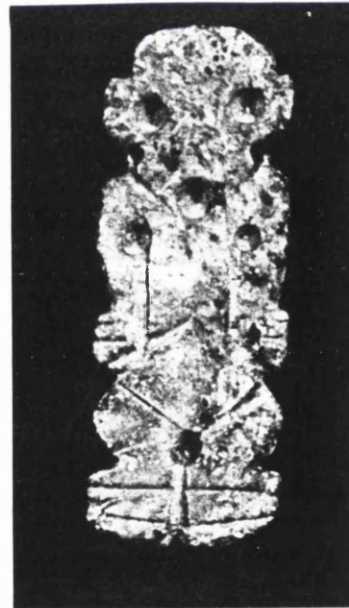
**Fig. 34.** Anthropomorphic fig: two-dim.  
L: 6.20.

Provenance: Jalisco.  
Museo Regional, Guadalajara, Jal.  
No. MRA 5.01519.



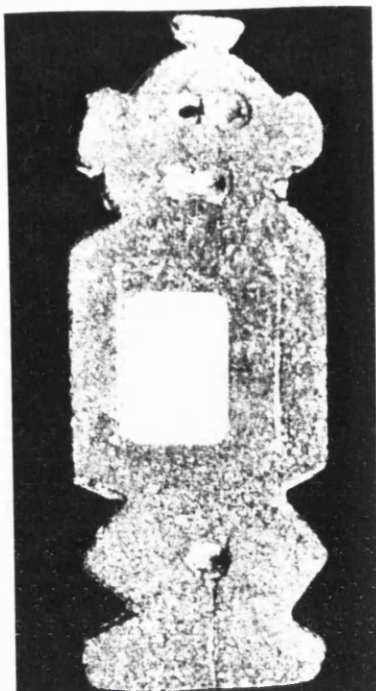
**Fig. 35.** Anthropomorphic fig: two-dim.  
L: 4.60.

Provenance: Occidente.  
Museo Regional, Guadalajara, Jal



**Fig. 36.** Anthropomorphic fig: two-dim.  
L: 4.70.

Provenance: Apatzingán, Mich.  
Museo Nacional de Antropología,  
Mexico D.F. No. 2.3.655.



**Fig. 37.** Stone anthropomorphic fig.  
L: 6.-.  
Provenance: Apatzingán, Mich.  
Museo Nacional de Antropología, Mexico D.F.  
No. 2.3.681.



**Fig. 38.** Anthropomorphic fig: two-dim.  
L: 6.20.  
Provenance: Huandacareo, Cuitzeo, Mich.  
Museo Nacional de Antropología,  
Mexico D.F. Cat. No. 27.

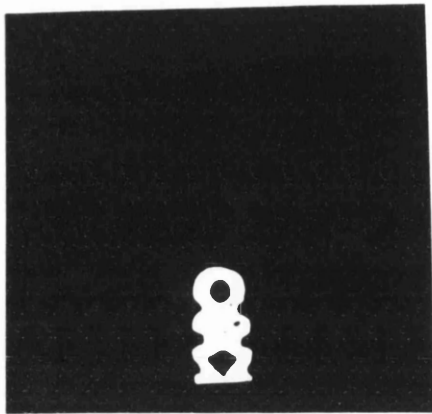


**Fig. 39.** Anthropomorphic fig: two-dim.  
L: 8.60.  
Provenance: Apatzingán, Mich.  
Museo Nacional de Antropología, Mexico D.F.  
No. 2.5.5629.

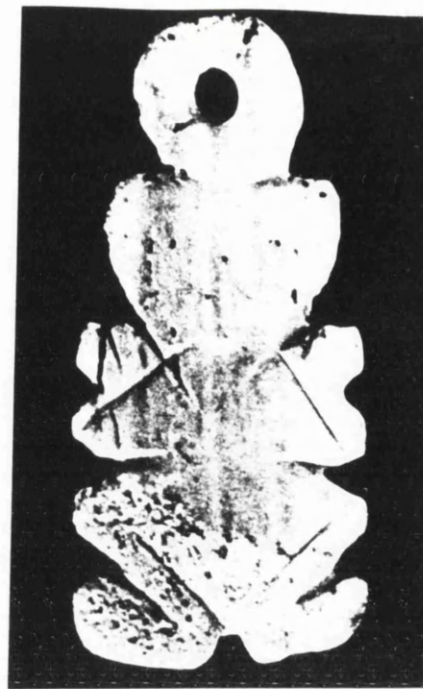


**Fig. 40.** Anthropomorphic fig: two-dim.  
L: 5.50.  
Provenance: Occidente.  
Museo Regional, Guadalajara, Jal.

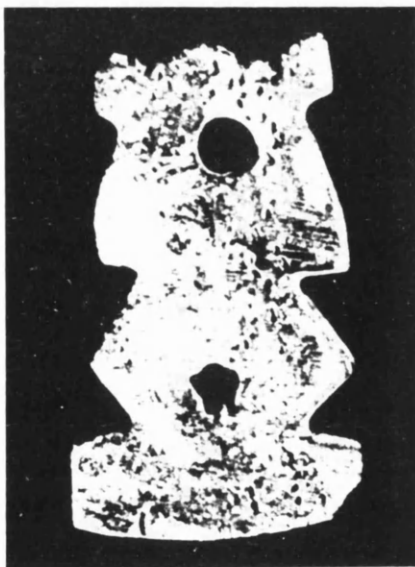




**Fig. 41.** Anthropomorphic fig: two-dim.  
L: 1.90.  
Provenance: Guadalupe Mound, Jal.  
Museum and Art Gallery, Bristol. No. Ea 8462.  
(after Breton, 1903: Fig. 5.13)



**Fig. 42.** Anthropomorphic fig: two-dim.  
L: 4.35.  
Provenance: Occidente.  
Museo Regional, Guadalajara, Jal.

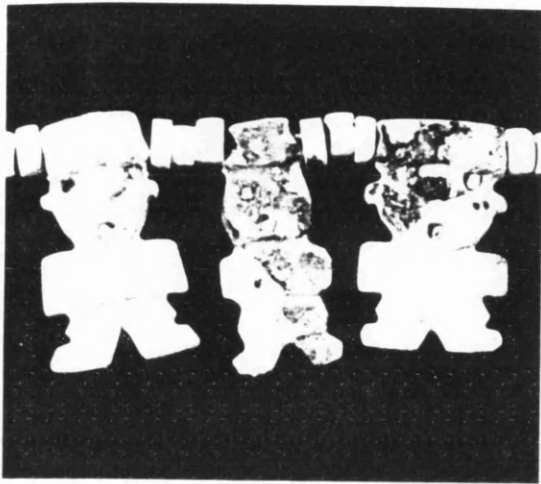


**Fig. 43.** Anthropomorphic fig: two-dim.  
L: 4.30.  
Provenance: Occidente.  
Museo Regional, Guadalajara, Jal.



**Fig. 44.** Anthropomorphic fig: two-dim.  
L: 5.60.  
Provenance: Apatzingán, Mich.  
Museo Nacional de Antropología,  
Mexico D.F. No. 2.5.6516.

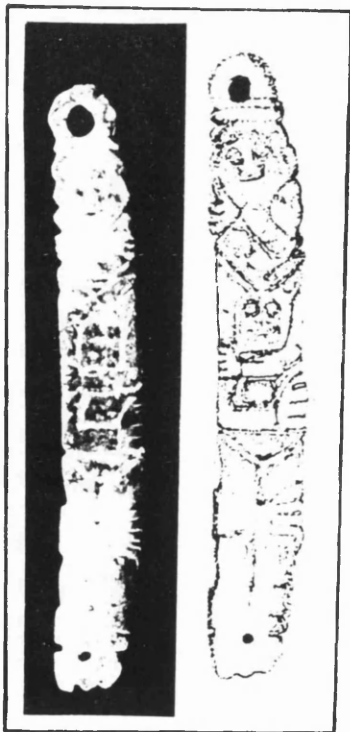




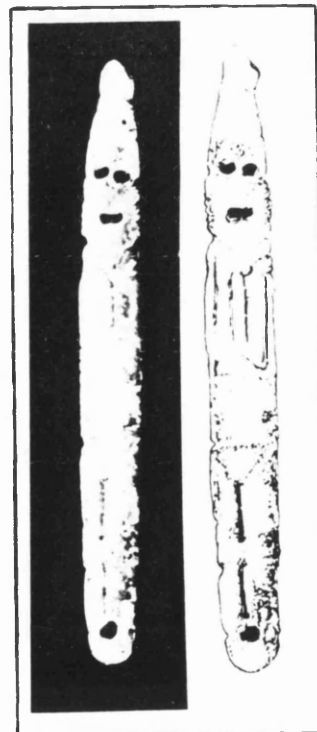
**Fig. 45.** Anthropomorphic figs: two-dim.  
L: 2.-.  
Provenance: San Gregorio, Mich.  
Museo Nacional de Antropología, Mexico D.F.  
No. 2.5.6470.



**Fig. 46.** Anthropomorphic fig: two-dim.  
L: 4.30.  
Provenance: Jalisco.  
Museo Regional, Guadalajara, Jal.  
No. D 2051.



**Fig. 47.** Anthropomorphic fig: two-dim.  
L: 8.30.  
Provenance: Occidente.  
Museo Regional, Guadalajara, Jal.



**Fig. 48.** Anthropomorphic fig: two-dim.  
L: 8.10.  
Provenance: Occidente.  
Museo Regional, Guadalajara, Jal.



**Fig. 49.** Anthropomorphic fig: two-dim. L: 1.80.  
Provenance: Jalisco.  
Museo Regional, Guadalajara, Jal.



**Fig. 50.** Anthropomorphic fig: two-dim.  
L: 15.90.  
Provenance: Apatzingán, Mich.  
Museo Nacional de Antropología, Mexico D.F.  
No. 2.5.563.



**Fig. 51.** Seated pottery female figurine  
holding a "raspador".  
Provenance: Colima.  
Museo Nacional de Antropología,  
Mexico D.F.



**Fig. 52.** Anthropomorphic fig: two-dim. L: 6.20.  
Provenance: Huandacareo, Cuitzeo, Mich.  
Museo Nacional de Antropología, Mexico D.F. Cat. No. 27.



**Fig. 53.** Anthropomorphic fig: two-dim.  
L: 7.50.  
Provenance: Huandacareo, Cuitzeo, Mich.  
Museo Nacional de Antropología, Mexico D.F.  
Cat. No. 28.



**Fig. 54.** Anthropomorphic fig: two-dim.  
L: 7.50.  
Provenance: Huandacareo, Cuitzeo, Mich.  
Museo Nacional de Antropología, Mexico D.F.  
Cat. No. 28.

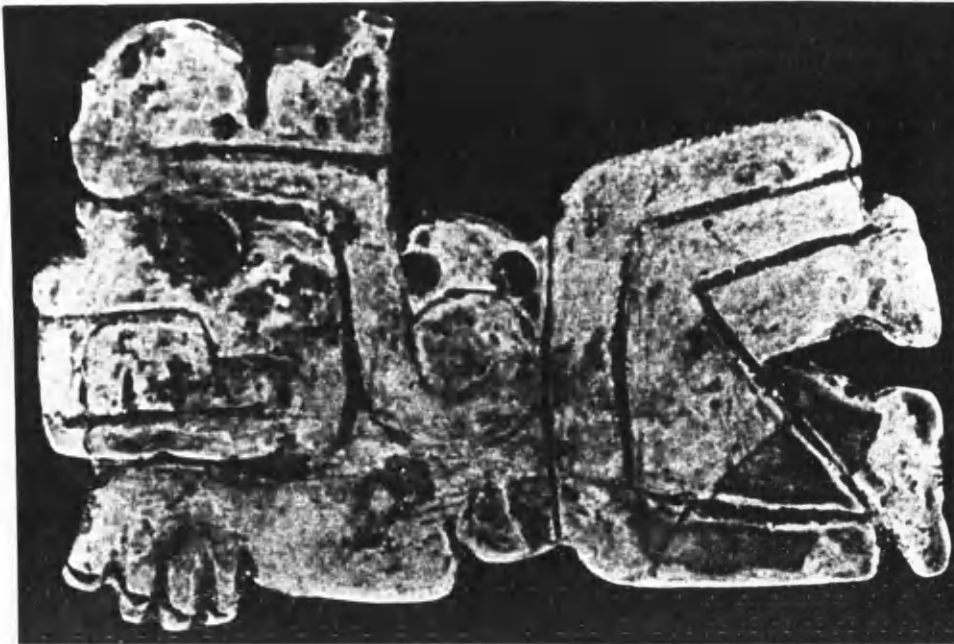
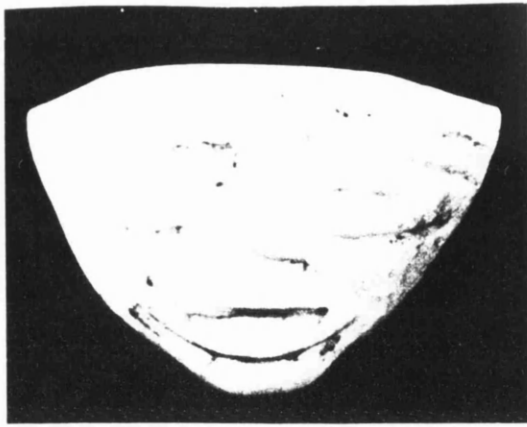


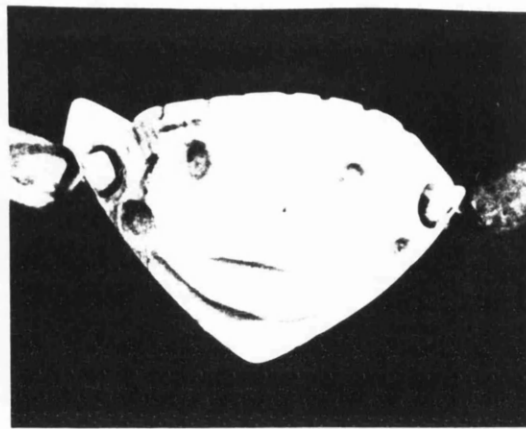
Fig. 55. Anthropomorphic fig: two-dim. L: 7.10.  
Provenance: Jalisco.  
Museo Regional, Guadalajara, Jal.



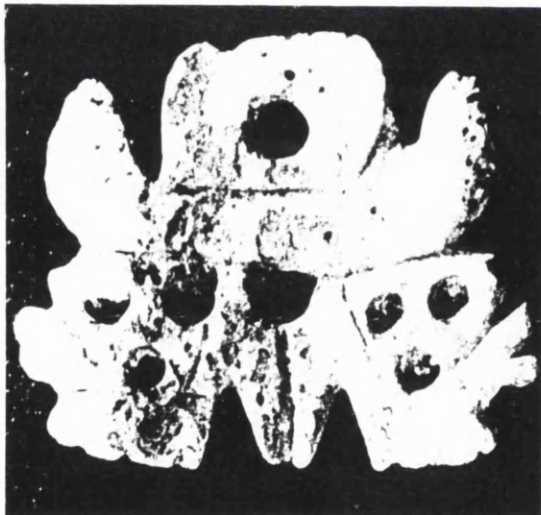
Fig. 56. Anthropomorphic fig: two-dim. L: 10.60.  
Provenance: Jaina. (photo museum)  
Denver Art Museum, Denver, Col. No. 1986.646.



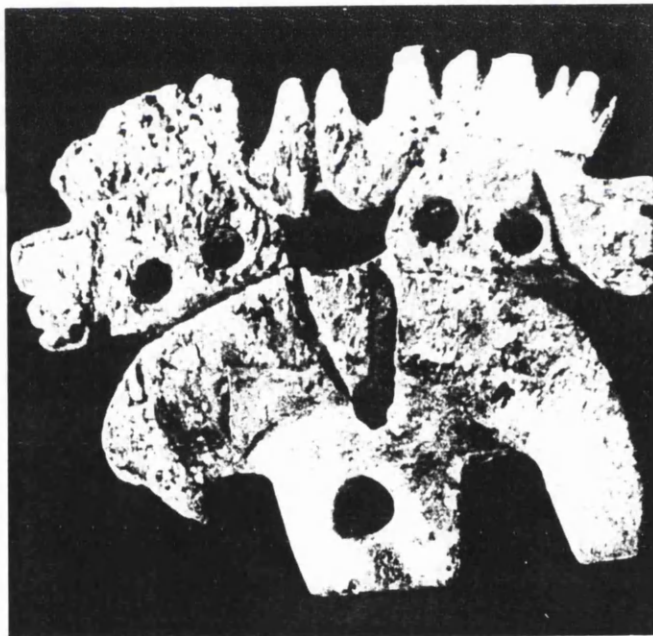
**Fig. 57.** Anthropomorphic head: two-dim.  
L: 3.60.  
Provenance: Apatzingán, Mich.  
Museo Nacional de Antropología, Mexico D.F.  
D.F. No. 2.5.6520.



**Fig. 58.** Anthropomorphic head:  
two-dim. L: 3.50.  
Provenance: Apatzingán, Mich.  
Museo Nacional de Antropología, Mexico  
No. 2.5.6534.



**Fig. 59.** Anthropomorphic dual  
representation: two-dim.  
L: 3.60.  
Provenance: Occidente.  
Museo Regional, Guadalajara, Jal.  
No. D 2045.

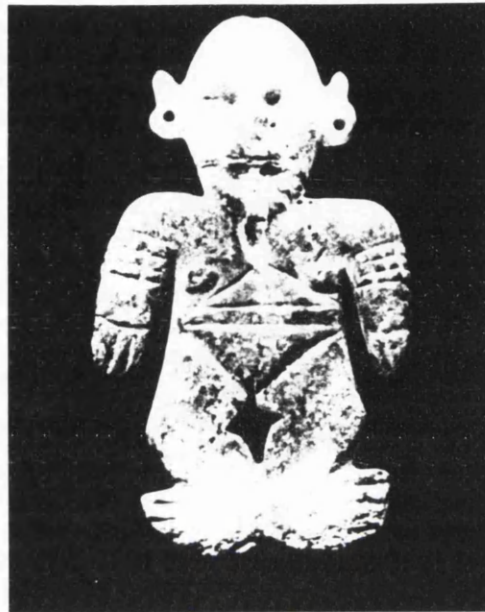


**Fig. 60.** Anthropomorphic dual  
representation: two-dim.  
L: 4.10.  
Provenance: Occidente.  
Museo Regional, Guadalajara, Jal.  
No. D 2046.

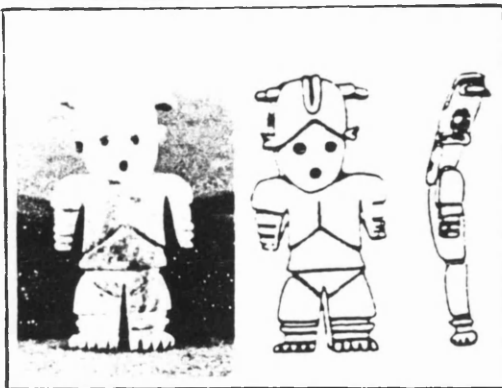




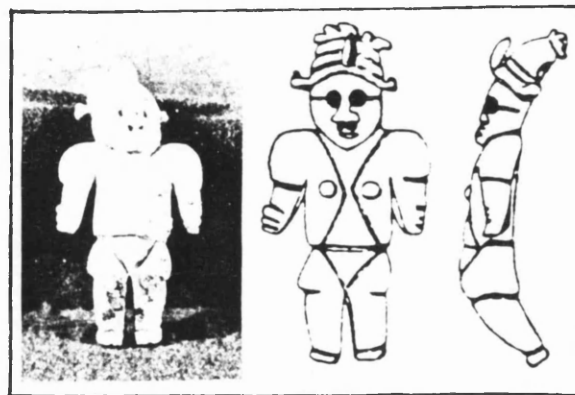
**Fig. 61.** Anthropomorphic fig: three-dim.  
L: n.a.  
Provenance: Colima. (photo museum)  
The Metropolitan Museum of Art, New York.  
No. 1985.260.



**Fig. 62.** Anthropomorphic fig: three-dim.  
L: 7.10.  
Provenance: Los Ortices, Co.  
Private Collection, Colima, Co.



**Fig. 63.** Anthropomorphic fig: three-dim.  
L: c. 6.-.  
Provenance: Zacoalco, Jal. (photo museum)  
Southwest Museum, Los Angeles.  
No. 1956. G. 10.  
(after von Winning, 1971: Fig. 1)



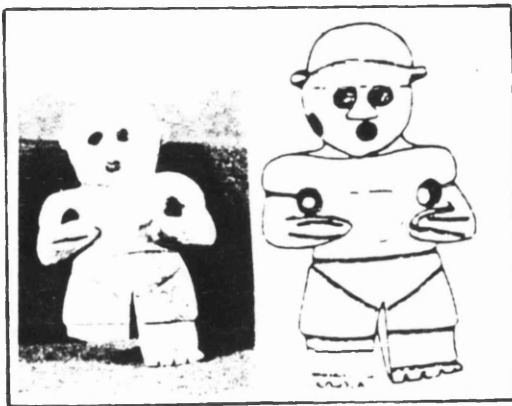
**Fig. 64.** Anthropomorphic fig: three-dim.  
L: c. 6.-.  
Provenance: Zacoalco, Jal. (photo museum)  
Southwest Museum, Los Angeles.  
No. 1956. G. 11.  
(after von Winning, 1971: Fig. 1)



**Fig. 65.** Anthropomorphic fig: three-dim.  
L: 2.60.  
Provenance: Colima. (photo museum)  
Museum of the American Indians, New York.  
No. 24.6705.



**Fig. 66.** Anthropomorphic fig: three-dim.  
L: c. 15.60.  
Provenance: Jalisco.  
Museo Regional, Guadalajara, Jal.



**Fig. 67.** Anthropomorphic fig: three-dim.  
L: c. 6.-.  
Provenance: Zacoalco, Jal. (photo museum)  
Southwest Museum, Los Angeles.  
No. 1956. G. 5.  
(after von Winning, 1971: Fig. 1)



**Fig. 68.** Anthropomorphic fig: three-dim.  
L: c. 6.60.  
Provenance: Jalisco.  
Museo Regional, Guadalajara, Jal.

**Fig. 69.** Anthropomorphic fig: three-dim.  
L: 3.60.  
Provenance: Jalisco.  
Museo Regional, Guadalajara, Jal.



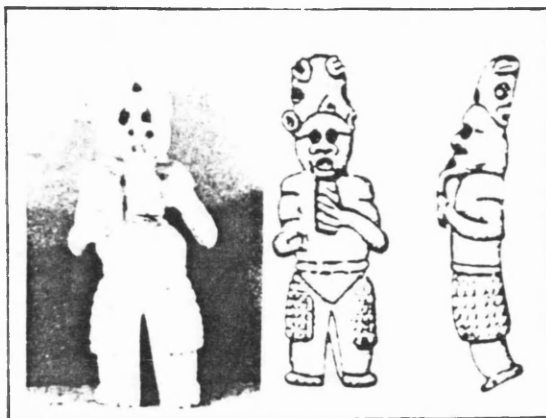
**Fig. 70.** Anthropomorphic fig: three-dim.  
L: 12.-.  
Provenance: Michoacán. (photo museum)  
Dumbarton Oaks, Washington D.C.  
No. B 540.64.ML.



**Fig. 71.** Anthropomorphic fig: three-dim.  
L: 7.50.  
Provenance: Colima. (photo museum)  
Los Angeles County Museum of Art, Los Angeles.  
No. M.86.296.205b.



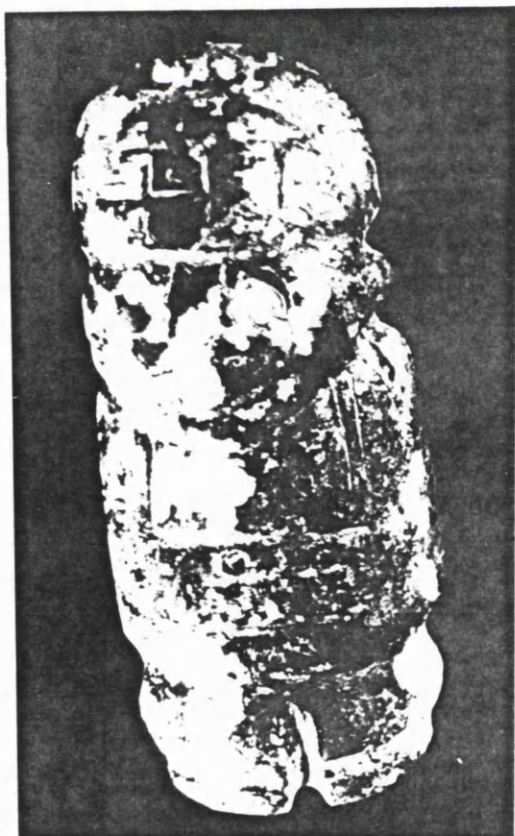
**Fig. 72.** Anthropomorphic fig: three-dim.  
L: 4.50.  
Provenance: Colima. (photo museum)  
Los Angeles County Museum of Art,  
Los Angeles. No. M.86.296.205a.



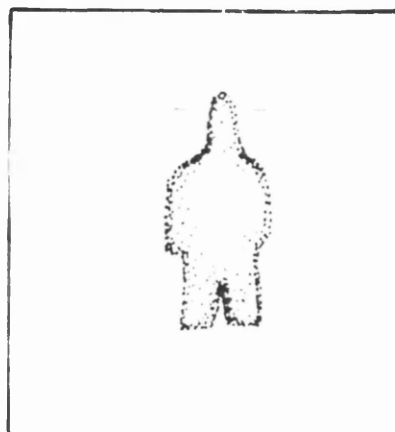
**Fig. 73.** Anthropomorphic fig: three-dim.  
L: c. 6.-.  
Provenance: Zacoalco, Jal. (photo museum)  
Southwest Museum, Los Angeles.  
No. 1956. G. 20.  
(after von Winning, 1971: Fig. 1)



**Fig. 74.** Anthropomorphic fig: three-dim.  
L: 2.40.  
Provenance: Jalisco.  
Museo Regional, Guadalajara, Jal.



**Fig. 75.** Anthropomorphic fig: three-dim.  
L: 3.50.  
Provenance: Jalisco.  
Museo Regional, Guadalajara, Jal.



**Fig. 76.** Anthropomorphic fig: three-dim.  
L: 1.70.  
Provenance: Jalisco.  
Museo Regional, Guadalajara, Jal.



**Fig. 77.** Anthropomorphic head: three-dim.  
L: 2.10.  
Provenance: Jalisco (Juanacatlán ?).  
Museo Regional, Guadalajara, Jal.



**Fig. 78.** Anthropomorphic head: three-dim.  
L: 2.80.  
Provenance: Occidente. (photo museum)  
Field Museum of Natural History, Chicago.  
No. 24.15.63.



**Fig. 79.** Anthropomorphic head: three-dim.  
L: 2.50.  
Provenance: Occidente. (photo museum)  
Museum of Cultural History, UCLA.  
No. 24.15.65.



**Fig. 80.** Anthropomorphic head: three-dim.  
L: 2.90.  
Provenance: Apatzingán, Mich.  
Museo Nacional de Antropología, Mexico D.  
No. 2.3.639.



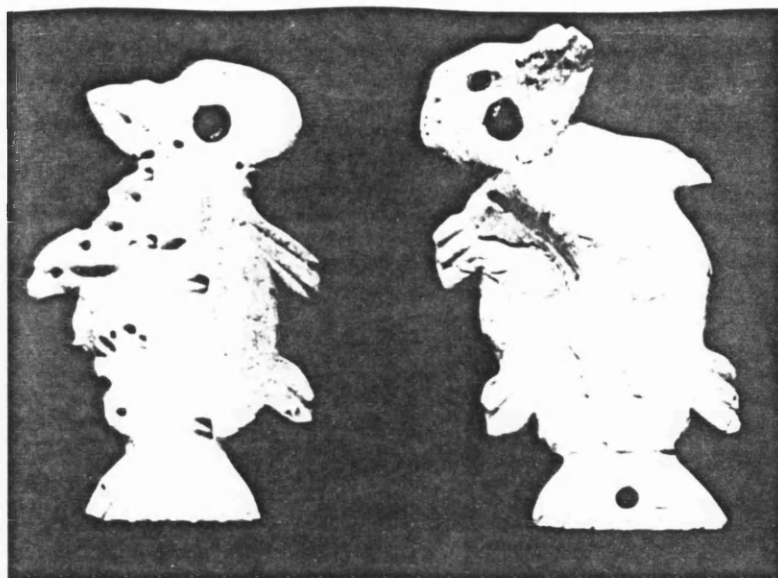


Fig. 81. Bird figurines: two-dim. L: 6.40.  
Provenance: Cerro de Locotero, Mich.  
Private Collection, Colima, Co.

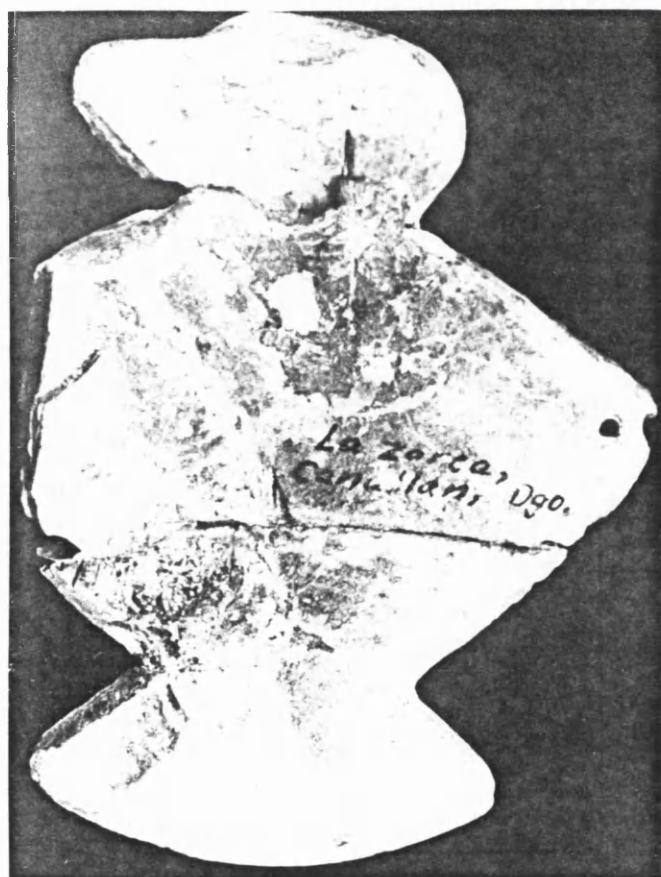


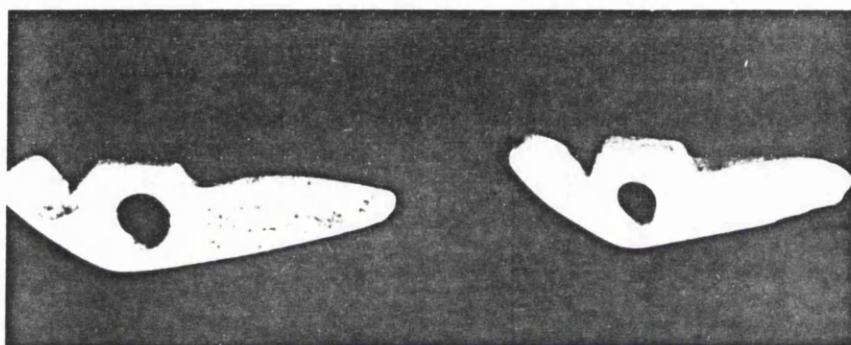
Fig. 82. Bird figurine: two-dim.  
L: 3.40.  
Provenance: Apatzingán, Mich.  
Museo Nacional de Antropología, Mexico D.F.  
No. 2.5.6535.



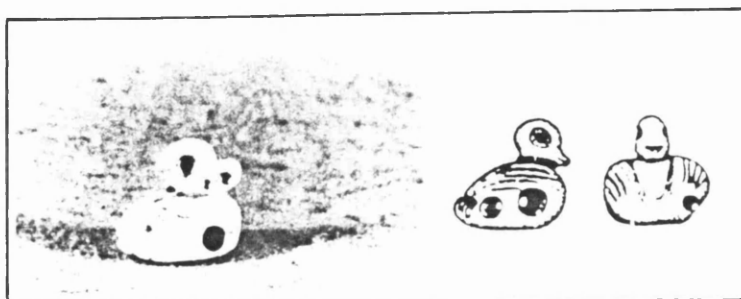
Fig. 83. Stone bird figurine.  
L: 8.20.  
Provenance: La Zarca, Durango.  
Museo Nacional de Antropología, Mexico D.  
No. 12 1920.



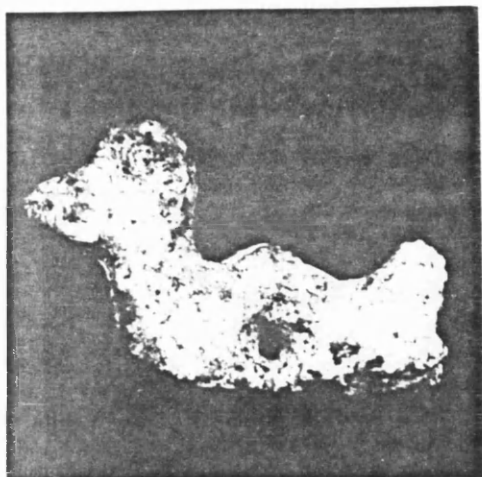
**Fig. 84.** Bird figurine: two-dim.  
L: 1.60.  
Provenance: Playa del Tesoro, Co.  
Centro Regional INAH, Colima, Co.



**Fig. 85.** Bird figurines: two-dim. L: 1.70.  
Provenance: Jalisco.  
Museo Regional, Guadalajara, Jal.



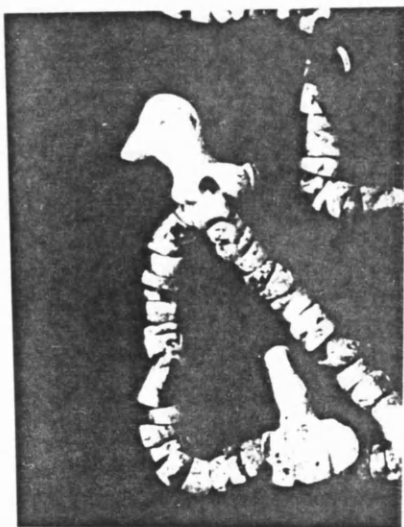
**Fig. 86.** Bird figurine: three-dim. L: 1.80.  
Provenance: Zacoalco, Jal. (photo museum)  
Southwest Museum, Los Angeles. No. 1956.G.7.  
(after von Winning, 1971: Fig. 3 b)



**Fig. 87.** Bird figurine: three-dim. L: 3.90.  
Provenance: San Antonio, Jal.  
Museo Nacional de Antropología, Mexico D.F.  
No. 2.3.702.



**Fig. 88.** Bird figurine: three-dim. L: 1.50.  
Provenance: Jalisco.  
Museo Regional, Guadalajara, Jal.  
No. D.2102.



**Fig. 89.** Bird figurines: three-dim. L: 1.20 .  
Provenance: Playa del Tesoro, Co.  
Centro Regional INAH, Colima, Co. Cat.  
No. 2.157.160.



**Fig. 90.** Bird head: three-dim. L: 2.90.  
Provenance: Jalisco.  
Museo Regional, Guadalajara, Jal.

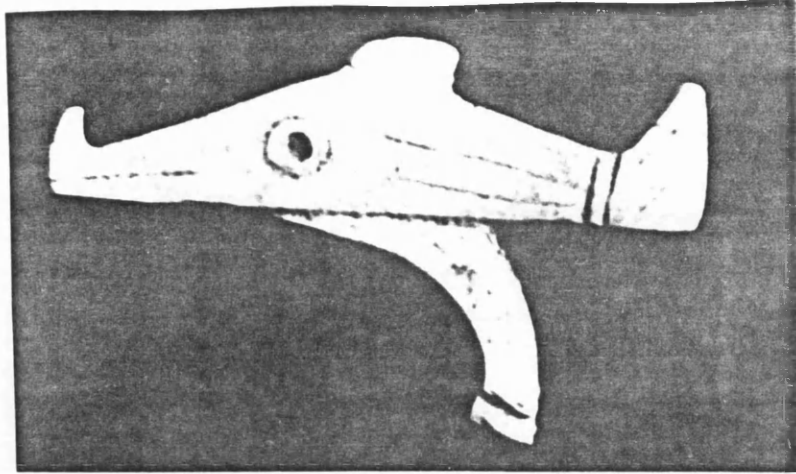


Fig. 91. Fish figurine: two-dim. L: 2.30.  
Provenance: Jalisco.  
Museo Regional, Guadalajara, Jal.

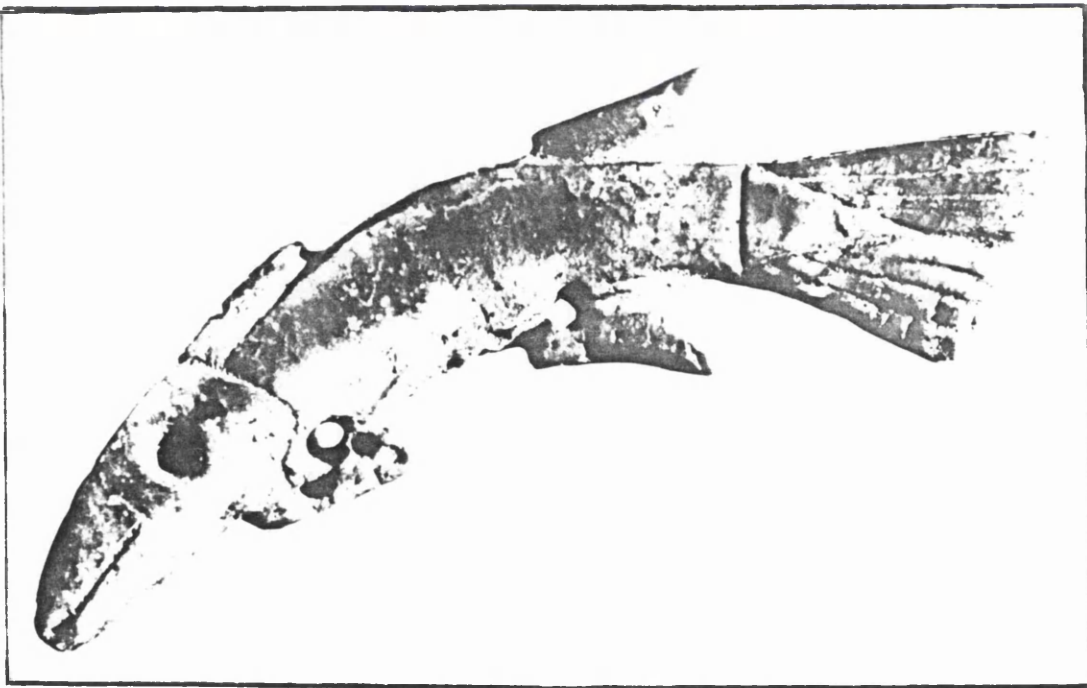
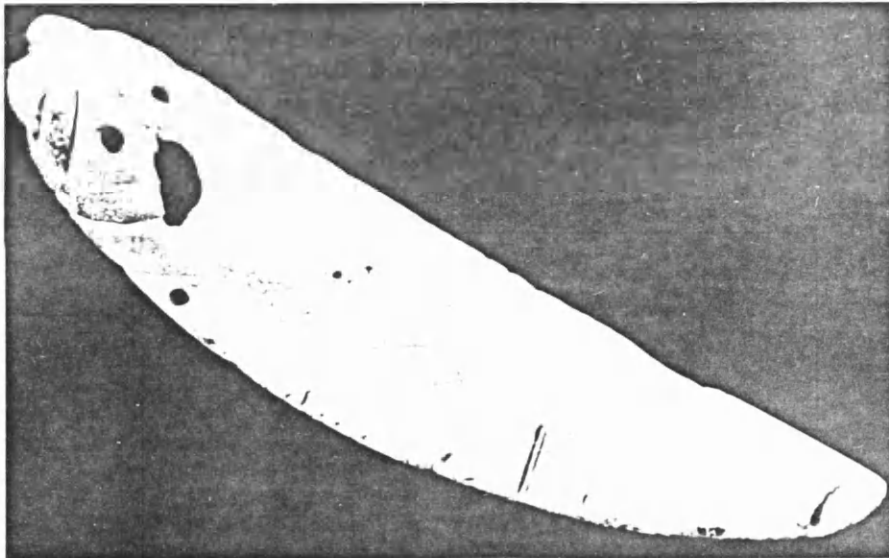


Fig. 92. Fish figurine: three-dim. L: 8.70.  
Provenance: Colima (?). (photo museum)  
Musée de l'Homme, Paris.  
No. MH 72.40.1.

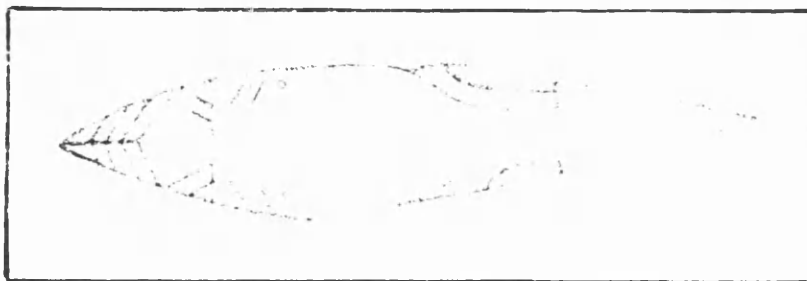




**Fig. 93.** Fish figurine: three-dim. L: 10.80.  
Provenance: Michoacán or Colima.  
Museum für Völkerkunde, Berlin. No. Ca 34833.



**Fig. 94.** Fish figurine: three-dim. L: 13.40.  
Provenance: Jalisco.  
Museo Regional, Guadalajara, Jal. No. D 1745.



**Fig. 95.** Fish figurine: three-dim. L: 18.30.  
Provenance: unknown.  
Stiftung Altamerikanische Kulturen, Zurich.





Fig. 96. Scorpion figurine: two-dim. L: 3.50.  
Provenance: Michoacán.  
Museo del Estado, Morelia, Mich. No. 229.



Fig. 97. Scorpion figurine: three-dim.  
L: 4.30.  
Provenance: Jalisco.  
Museo Regional, Guadalajara, Jal. No. 489.76.



Fig. 98. Scorpion figurine: three-dim. L: 5.-.  
Provenance: Jalisco.  
Museo Regional, Guadalajara, Jal. No. 496.76.



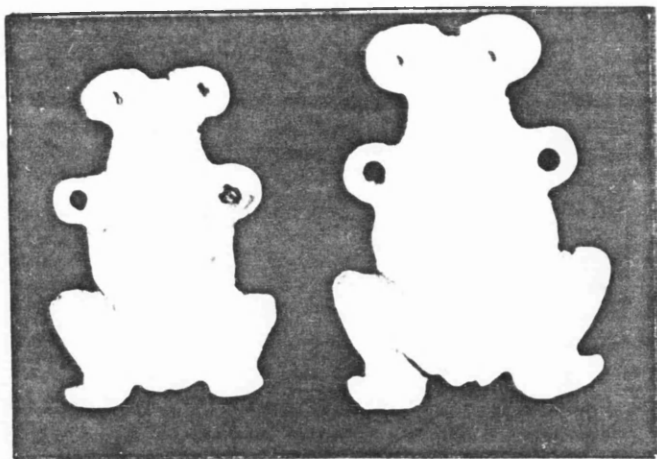
**Fig. 99.** Scorpion figurine: three-dim.  
L: 4.90.  
Provenance: Jalisco.  
Museo Regional, Guadalajara, Jal.  
No. D 1503.



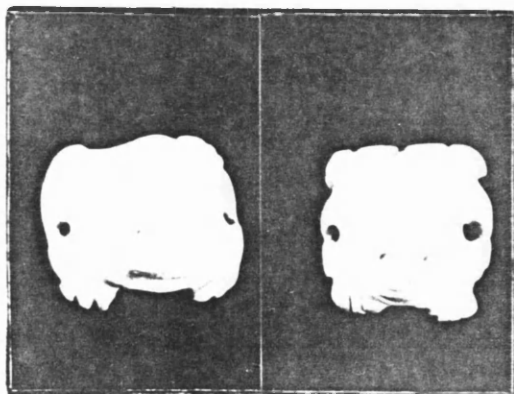
**Fig. 100.** Scorpion figurine: three-dim.  
L: 4.20.  
Provenance: Jalisco.  
Museo Regional, Guadalajara, Jal.



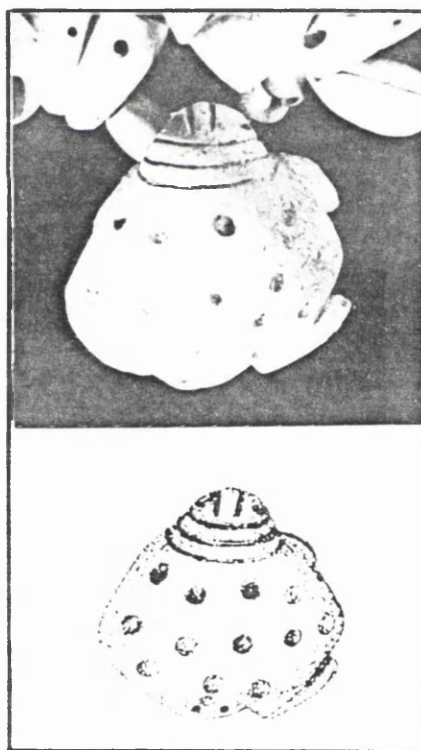
**Fig. 101.** Crab figurine: two-dim. L: 5.20.  
Provenance: Colima (?).  
Stiftung Altamerikanische Kulturen, Zurich.



**Fig. 102.** Frog figurines: two-dim. L: 3.20.  
Provenance: Jalisco.  
Museo Regional, Guadalajara, Jal.



**Fig. 103.** Frog figurines: two-dim. L: 3.90.  
Provenance: Churumuco, Mich.  
Museum and Art Gallery, Bristol.  
No. E 4898.



**Fig. 104.** Frog figurine: two-dim.  
L: 5.80.  
Provenance: Jalisco.  
Museo Regional, Guadalajara, Jal.  
No. Fs.B. 031.181.

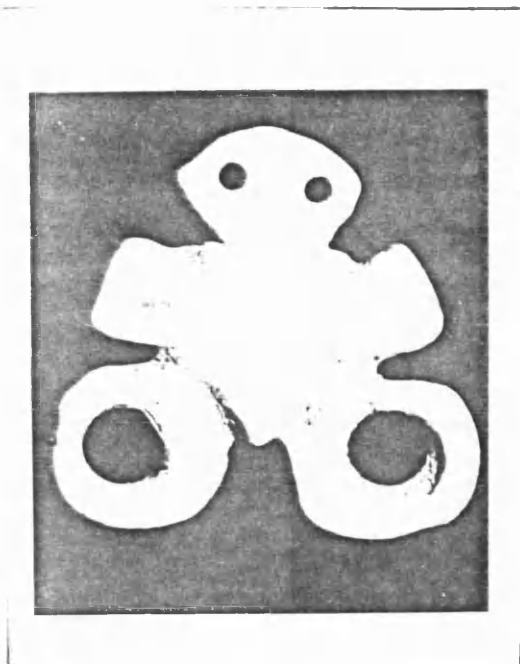


Fig. 105. Frog figurine: two-dim. L: 2.50.  
Provenance: Jalisco.  
Museo Regional, Guadalajara, Jal.



Fig. 106. Frog figurine: two-dim. L: 3.60.  
Provenance: Playa del Tesoro, Co.  
Centro Regional INAH, Colima, Co.

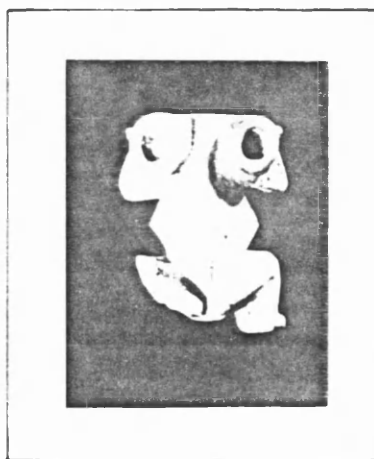


Fig. 107. Frog figurine: three-dim. L: 1.60.  
Provenance: Jalisco.  
Museo Regional, Guadalajara, Jal.

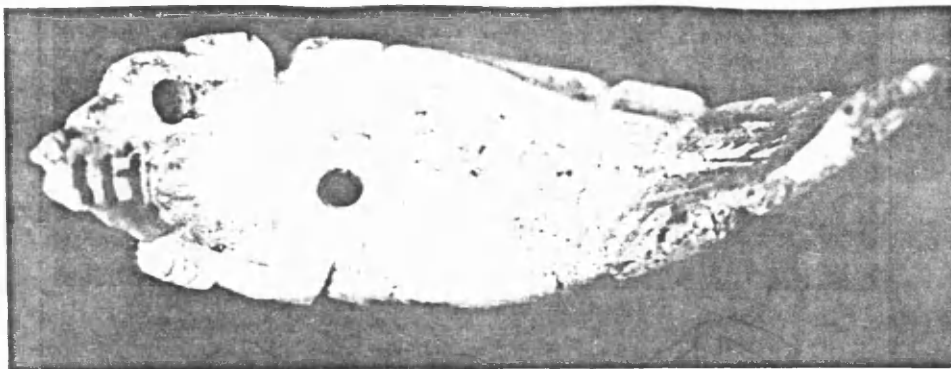


Fig. 108. Pisote figurine: two-dim. L: c. 20.-.  
Provenance: El Otero, Mich. (photo museum)  
Centro de Estudios de la Revolución Mexicana, Jiquilpan, Mich.  
No. 39.PJ.86.

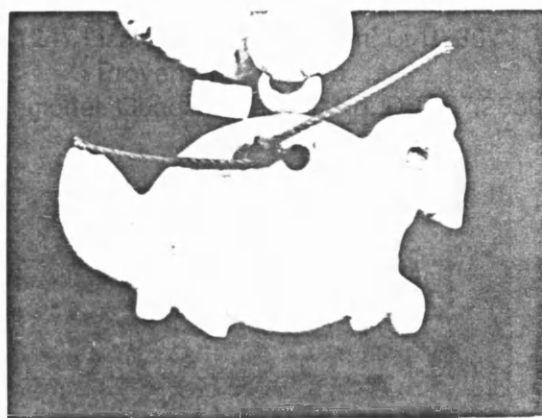


Fig. 109. Pisote figurine: two-dim. L: 3.90.  
Provenance: Pueblo Juarez, Co.  
Museo Nacional de Antropología, Mexico D.F.  
No. 2.4.553.



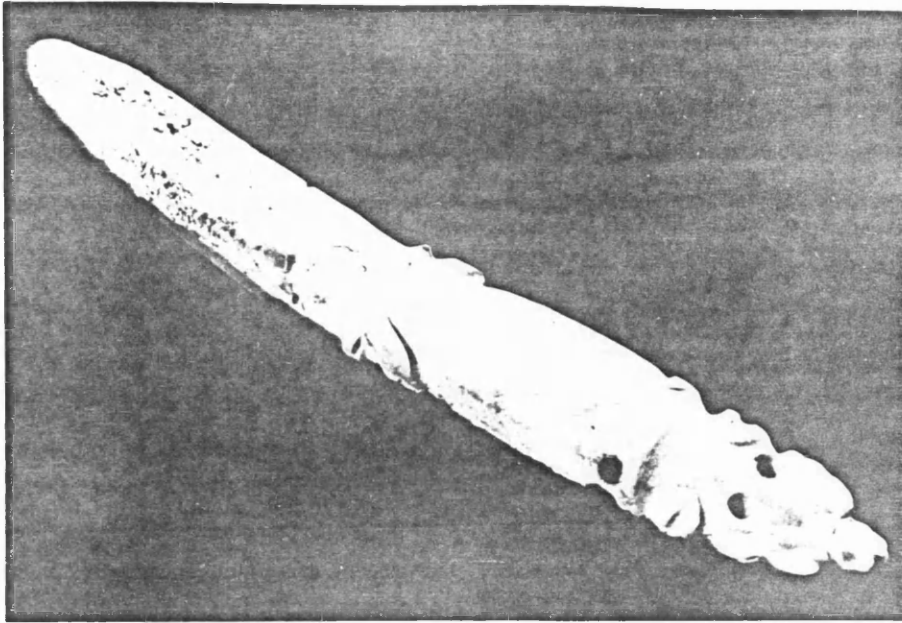


Fig. 110. Pisote figurine: three-dim. L: 8.50.  
Provenance: Colima.  
Museo Regional, Guadalajara, Jal.  
No. D.2025.

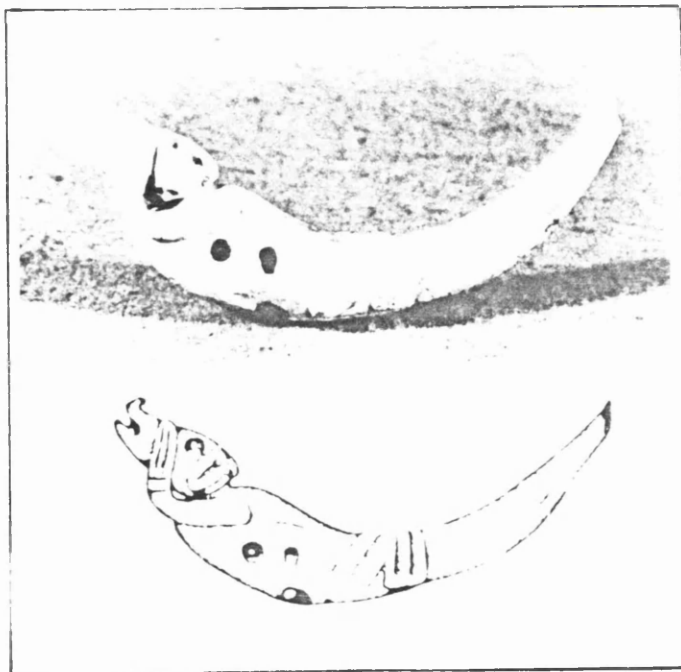


Fig. 111. Pisote figurine: three-dim. L: 9.50.  
Provenance: Zacoalco, Jal. (photo museum)  
Southwest Museum, Los Angeles. No. 1956.G.15.  
(after von Winning, 1971: Fig. 2 b)

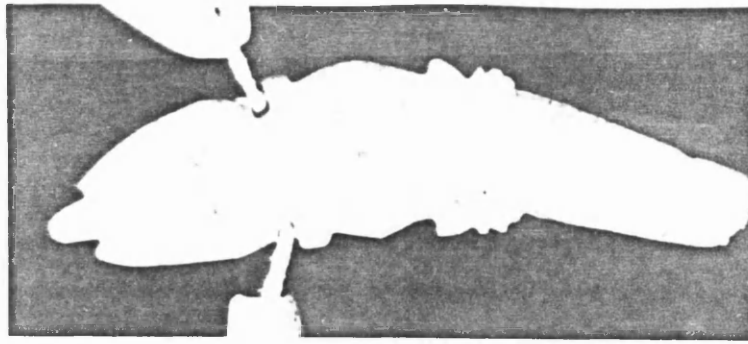


Fig. 112. Pisote figurine: three-dim. L: 9.90.  
Provenance: Jalisco.

Museo de Arqueología del Occidente de Mexico, Guadalajara. No. MRG 01541.3.5.

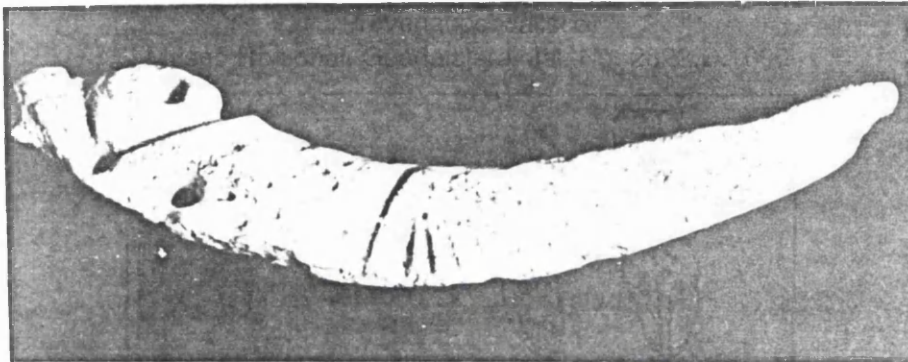


Fig. 113. Pisote figurine: three-dim. L: 9.90.  
Provenance: Colima.

Musées Royaux d'Art et d'Histoire, Brussels. No. AAM 39.198.

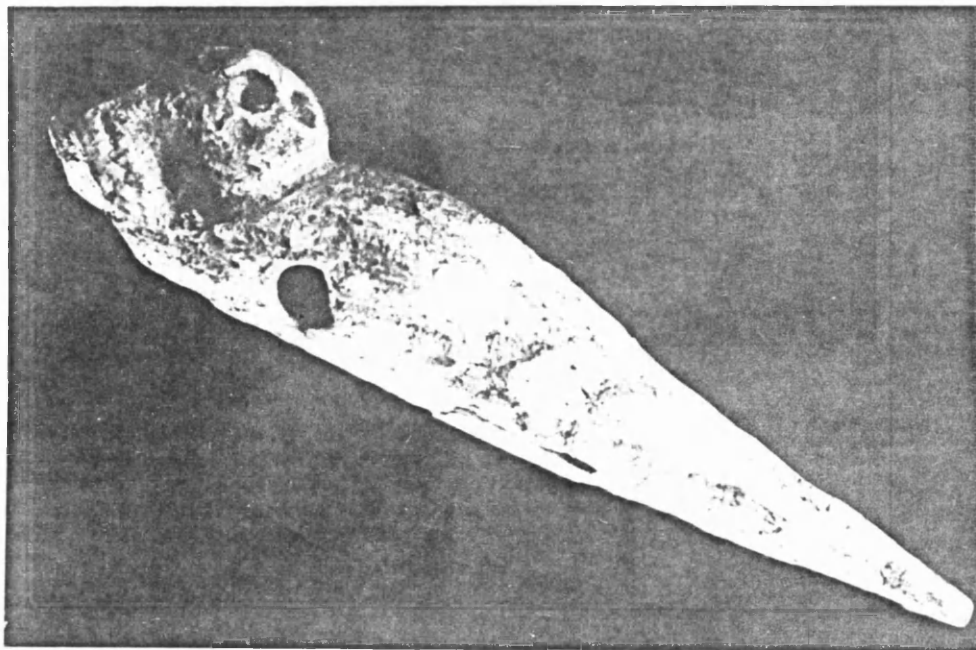
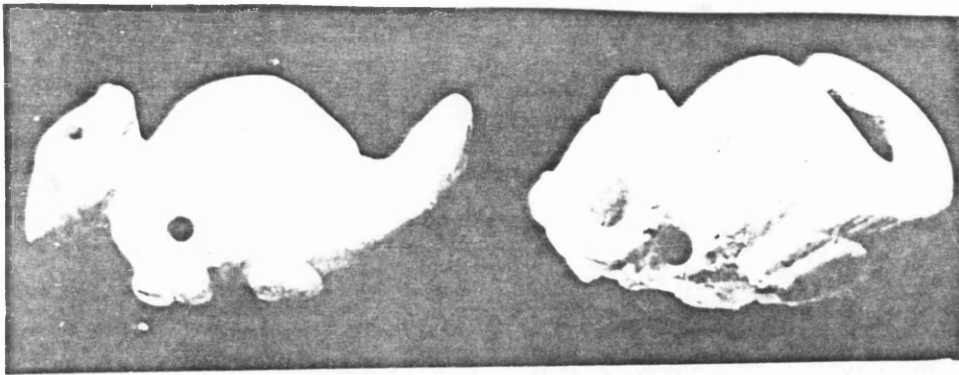
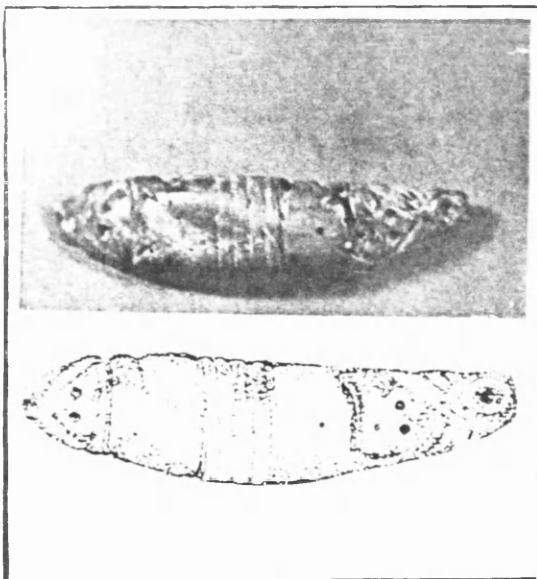


Fig. 114. Pisote figurine: three-dim. L: 8.90.  
Provenance: Jalisco.

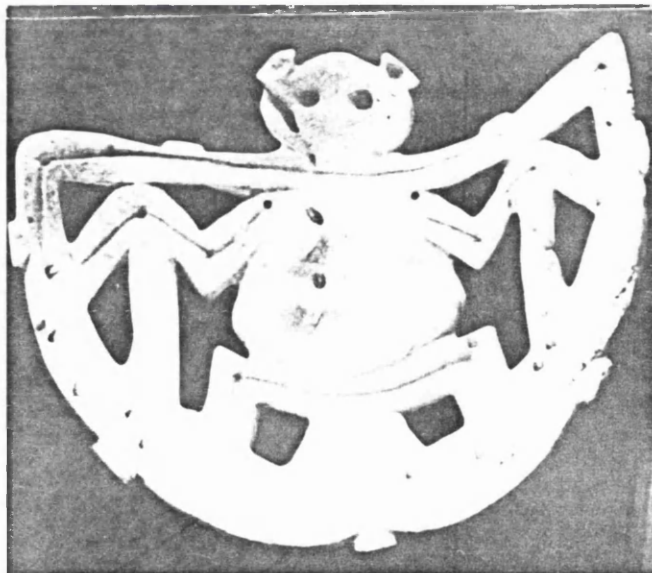
Museo Regional, Guadalajara, Jal.



**Figs. 115 & 116.** Pisote figurine: three-dim. L: 4.40.  
Provenance: Cerro de Locotero, Mich.  
Private Collection, Colima, Co.



**Fig. 117.** Pisote figurine: dual representation.  
L: 9.40.  
Provenance: unknown.  
Stiftung Altamerikanische Kulturen, Zurich.



**Fig. 118.** Bat figurine: two-dim.  
L: 8.60.  
Provenance: Cerro de Locotero, Mich.  
Private Collection, Colima, Co.



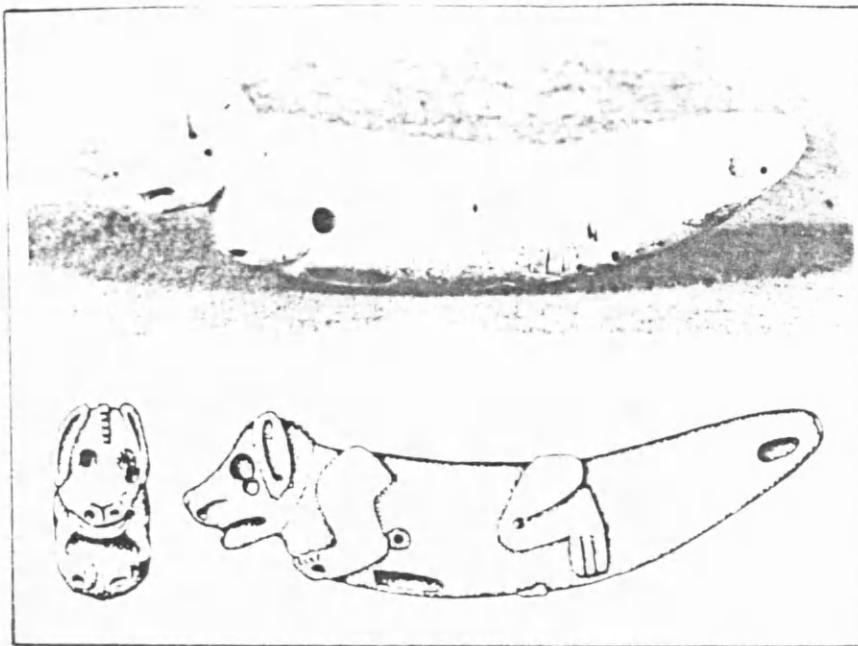


Fig. 119. Dog figurine: three-dim. L: 12.50.  
Provenance: Zacoalco, Jal. (photo museum)  
Southwest Museum, Los Angeles. No. 1956.G.17.  
(after von Winning, 1971: Fig. 2 a)

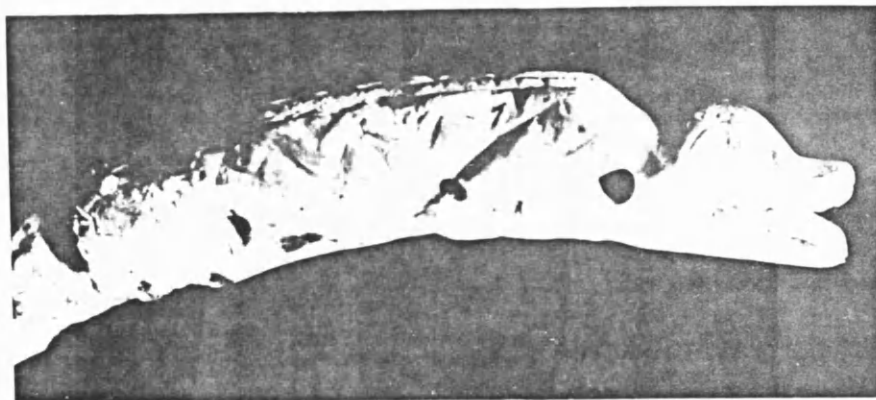
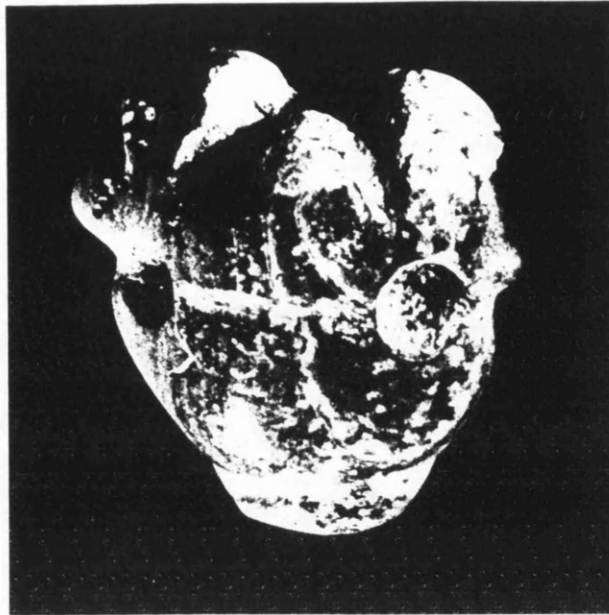
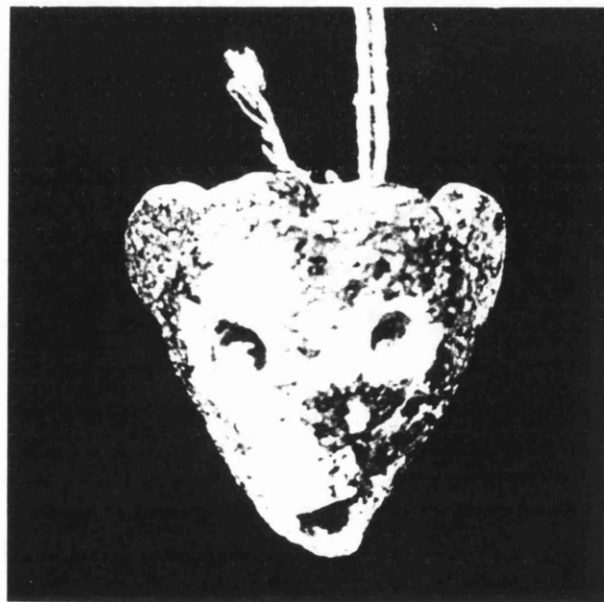


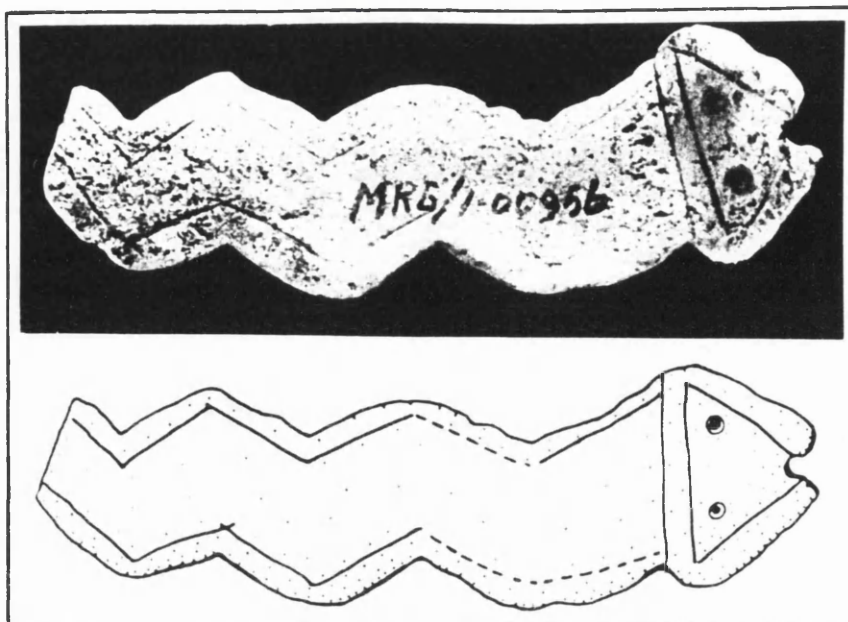
Fig. 120. Dog figurine: three-dim. L: 8.90.  
Provenance: Jalisco.  
Museo Regional, Guadalajara, Jal. No. MRG 5.01547.



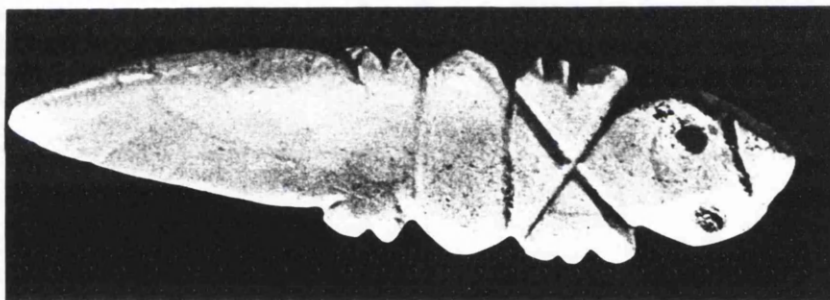
**Fig. 121.** Dog figurine: head. L: 2.10.  
Provenance: Jalisco.  
Museo Regional, Guadalajara, Jal. No. D 1505.



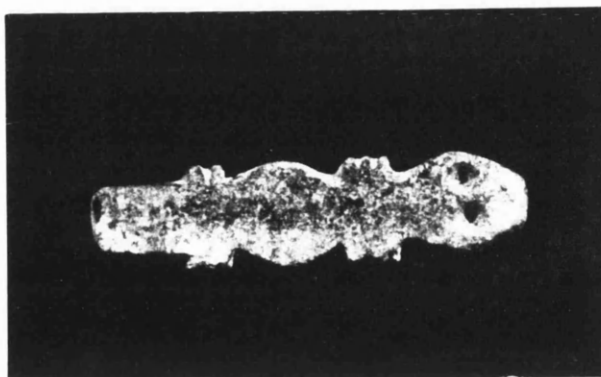
**Fig. 122.** Dog figurine: head. L: 2.30.  
Provenance: Apatzingán, Mich.  
Museo Nacional de Antropología, Mexico D.F. No. 2.5.6513.



**Fig. 123.** Snake figurine: two-dim. L: c. 13.50.  
 Provenance: Jalisco.  
 Museo Regional, Guadalajara, Jal. No. MRG 1.00956.



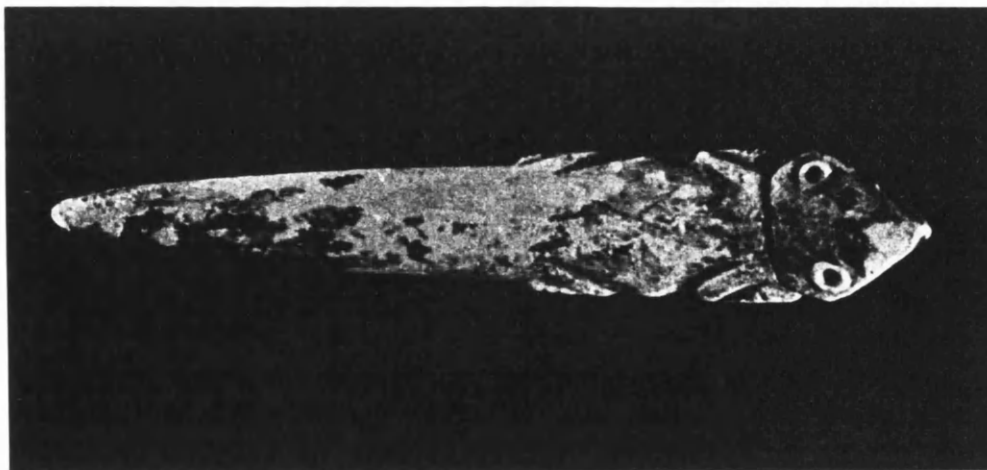
**Fig. 124.** Lizard figurine: two-dim. L: 10.30.  
 Provenance: Colima.  
 Museo Regional, Guadalajara, Jal. No. D 1657.2830.



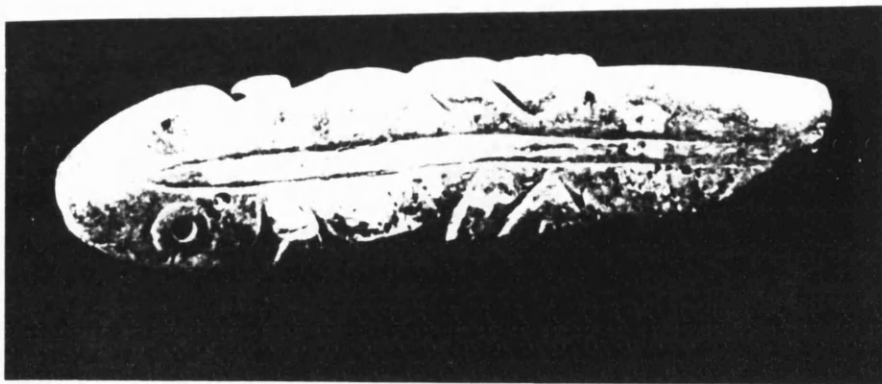
**Fig. 125.** Lizard figurine: two-dim. L: 3.90.  
 Provenance: Apatzingán, Mich  
 Museo Nacional de Antropología, Mexico D.F. No. 2.3.745.



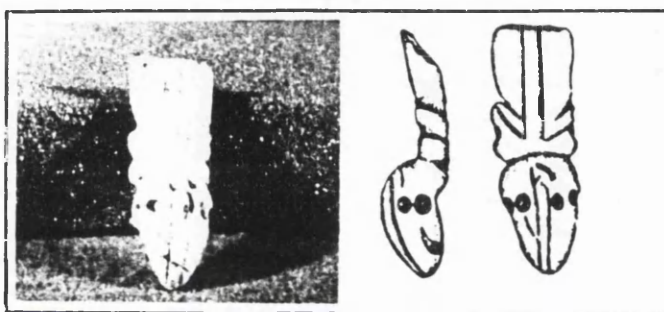
**Fig. 126.** Lizard figurine: three-dim. L: 13.-.  
Provenance: Michoacán or Colima.  
Museum für Völkerkunde, Berlin. No. IV.Ca 34832.



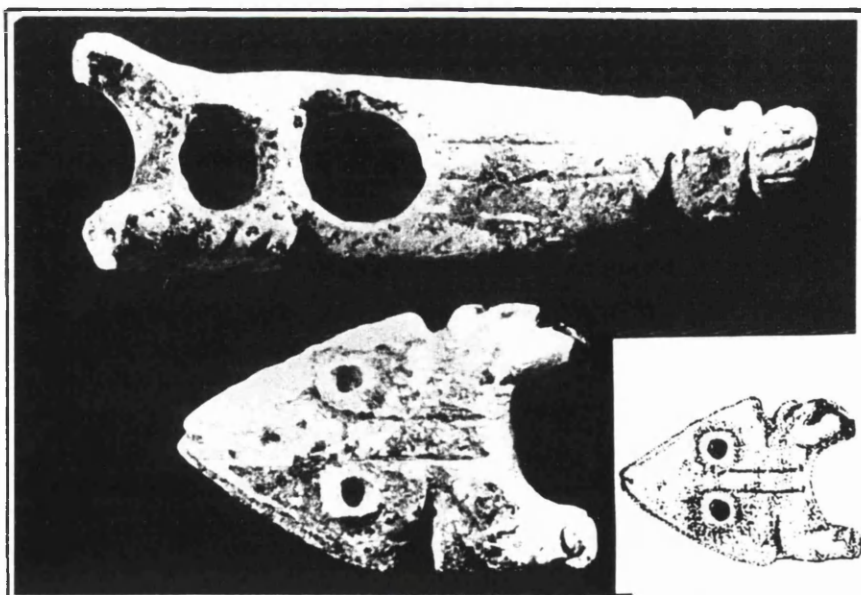
**Fig. 127.** Lizard figurine: three-dimensional. L: 17.-.  
Provenance: Occidente. (photo museum)  
Charles W. Bowers Museum, Santa Ana, Ca. No. EL 79.9.28.



**Fig. 128.** Lizard figurine: three-dim. L: 10.10.  
Provenance: Jalisco.  
Museo Regional, Guadalajara, Jal. No. 2822.D.1690.



**Fig. 129.** Lizard figurine: three-dim. L: 4.10.  
Provenance: Zacoalco, Jal. (photo museum)  
Southwest Museum, Los Angeles. No. 1956.G.6.  
(after von Winning, 1971: Fig. 3 a)

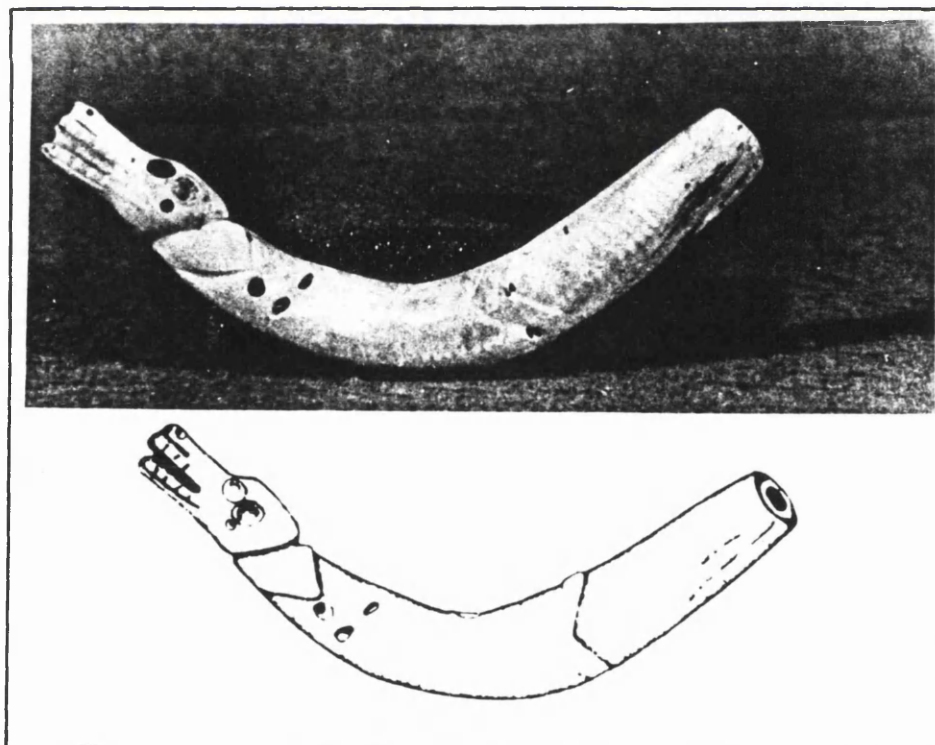


**Fig. 130.** Stone lizard figurine. L: 4.10 (head).  
Provenance: Jalisco.  
Museo Regional, Guadalajara, Jal. No. A 1673.2814.





**Fig. 131.** Crocodile figurine: two-dim. L: 16.-.  
Provenance: Michoacán or Colima.  
Museum für Völkerkunde, Berlin. No. IV.Ca 34831.



**Fig. 132.** Crocodile figurine: three-dim. L: 13.30.  
Provenance: Zacoalco, Jal. (photo museum)  
Southwest Museum, Los Angeles. No. 1956.G.18.  
(after von Winning, 1971: Fig. 2 d)

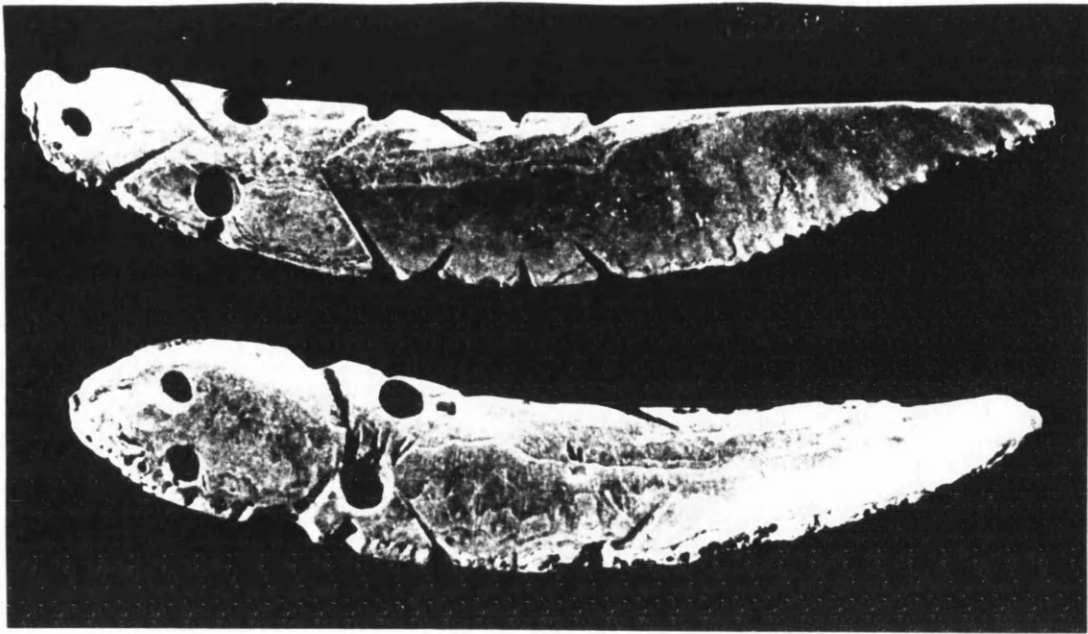


Fig. 133. Non-identified animal figurines: two-dim. L: 7.80/8.10.  
Provenance: Jalisco.  
Museo Regional, Guadalajara, Jal. No. D 1696/ 2121.

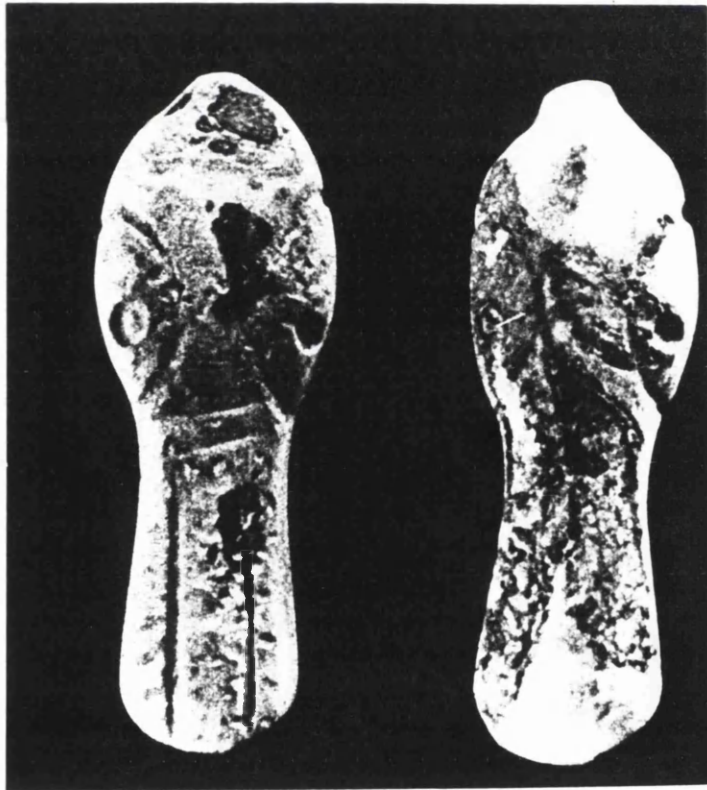
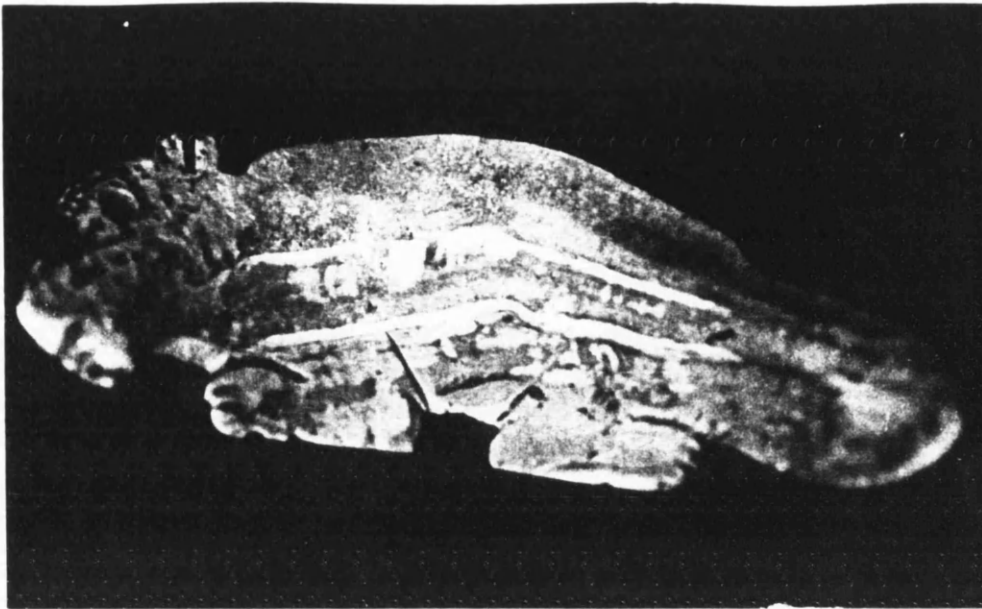


Fig. 134. Non-identified animal figurines: two-dim. L: 3.10.  
Provenance: Jalisco.  
Museo Regional, Guadalajara, Jal.



**Fig. 135.** Non-identified animal figurine: two-dim. L: c. 20.-.  
 Provenance: El Otero, Mich. (photo museum)  
 Centro de Estudios de la Revolución Mexicana, Jiquilpan, Mich.  
 No. 39. PJ.86.



**Fig. 136.** Non-identified animal figurine: two-dim. L: 5.20.  
 Provenance: Colima.  
 Musées Royaux d'Art et d'Histoire, Brussels.  
 No. AAM 39.180.



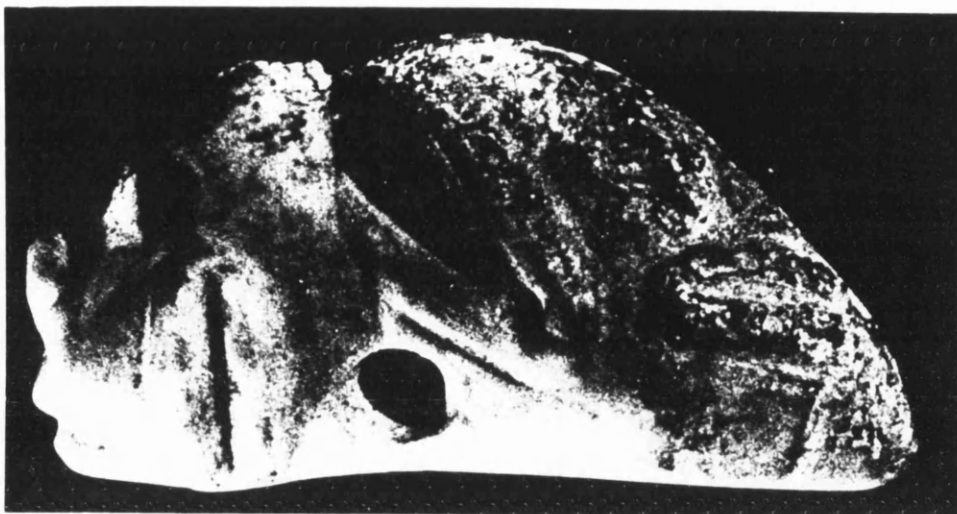


Fig. 137. Non-identified animal figurine: three-dim. L: 4.-.  
Provenance: Jalisco.  
Museo Regional, Guadalajara, Jal.

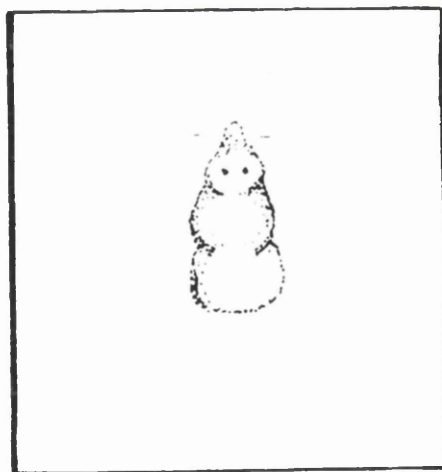
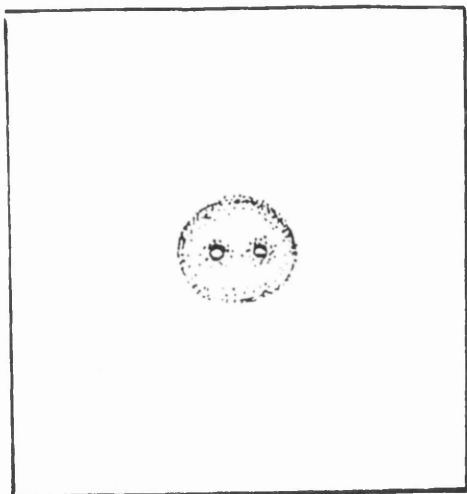


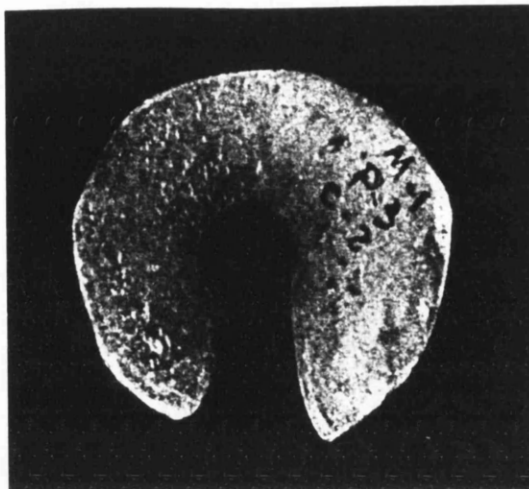
Fig. 138. Non-identified animal figurine: three-dim. L: 2.20.  
Provenance: Jalisco.  
Museo Regional, Guadalajara, Jal.



**Fig. 139.** Disc-shaped piece : no decoration, "a". D: 1.50.

Provenance: Jalisco.

Museo Regional, Guadalajara, Jal.

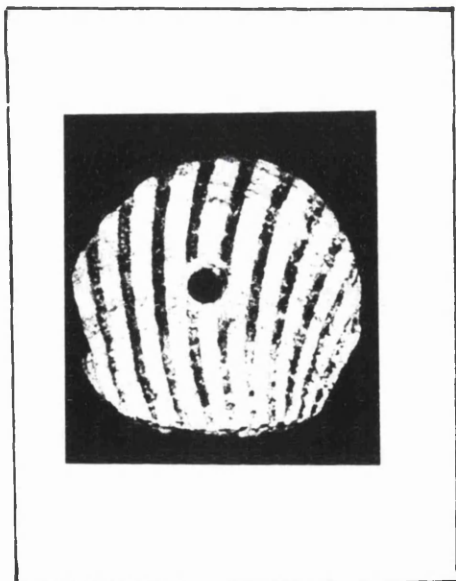


**Fig. 140.** Disc-shaped piece: no decoration, "a". D: 2.20.

Provenance: Playa del Tesoro, Co.

Centro Regional INAH, Colima, Co.

Cat. No. M1.P3.C2.



**Fig. 141.** Disc-shaped piece: no decoration, "b". D: 4.50.

Provenance: Jalisco.

Universidad Autónoma, Guadalajara.

No. UAG 01023.3.3.

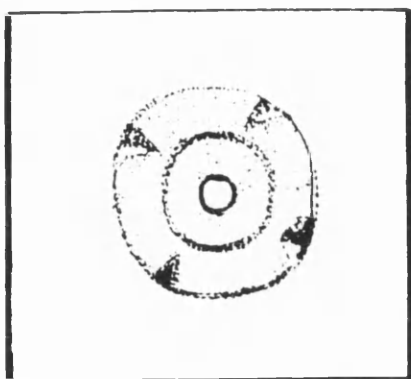


**Fig. 142.** Disc-shaped piece: no decoration, "b". D: 7.10.

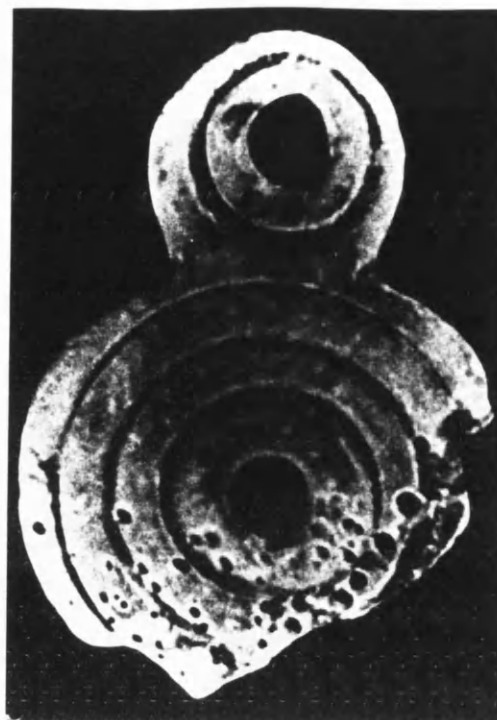
Provenance: Jalisco.

Museo Regional, Guadalajara, Jal.

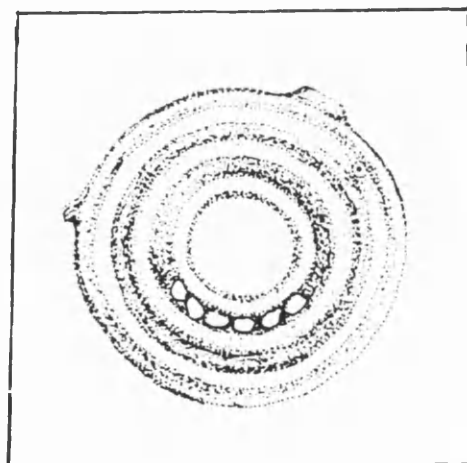
No. 939.



**Fig. 143.** Decorated disc-shaped piece,  
"a". D: 1.50.  
Provenance: Nayarit.  
Museo Municipal, Compostela, Nay.



**Fig. 144.** Decorated disc-shaped piece,  
"a". D: 1.80.  
Provenance: Jalisco.  
Museo Regional, Guadalajara, Jal.



**Fig. 145.** Decorated disc-shaped piece,  
"a". D: c. 4.50.  
Provenance: El Otero, Mich.  
Private Collection, Jiquilpan, Mich.



**Fig. 146.** Decorated disc-shaped piece,  
"a". D: 2.10.  
Provenance: Playa del Tesoro, Co.  
Centro Regional INAH, Colima, Co. Cat.  
No. M1.P19.

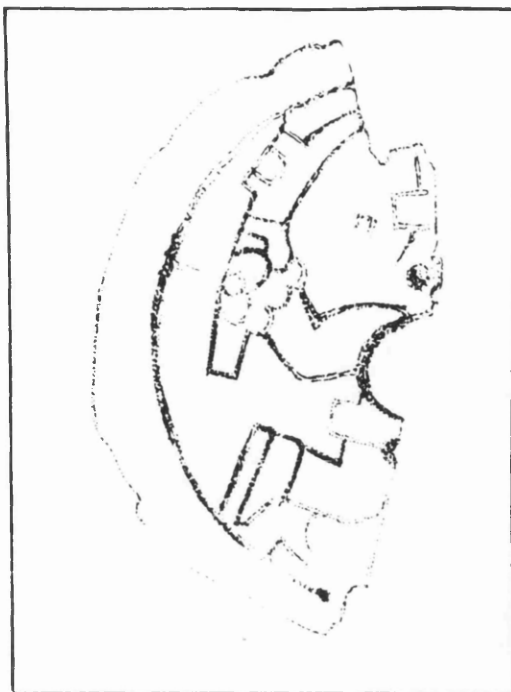


Fig. 147. Decorated disc-shaped piece, "b". D: 6.50.  
Provenance: Cuitzeo, Mich.  
Museo Nacional de Antropología, Mexico D.F.  
Cat. No. 14.

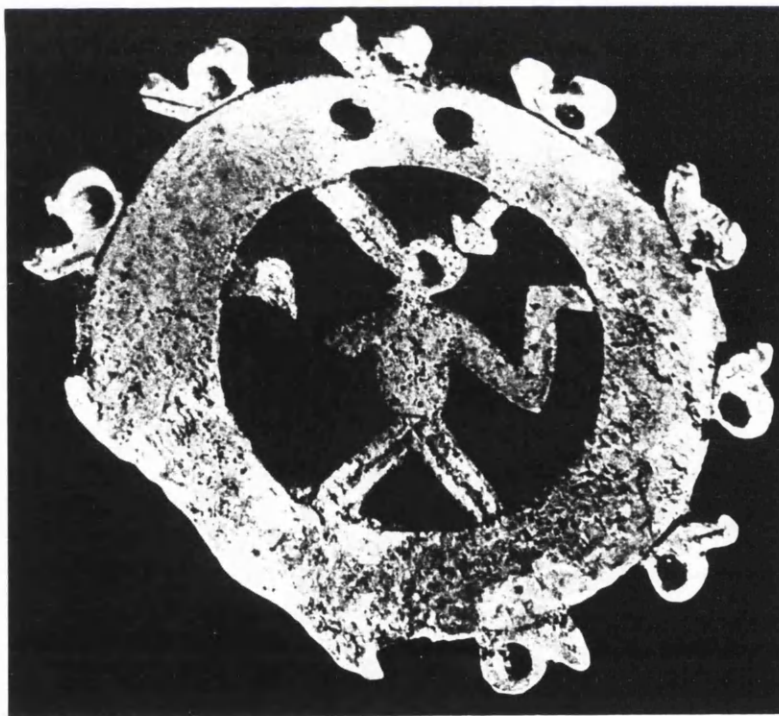


Fig. 148. Decorated disc-shaped piece, "b". D: 4.80.  
Provenance: Jalisco.  
Museo Regional, Guadalajara, Jal.

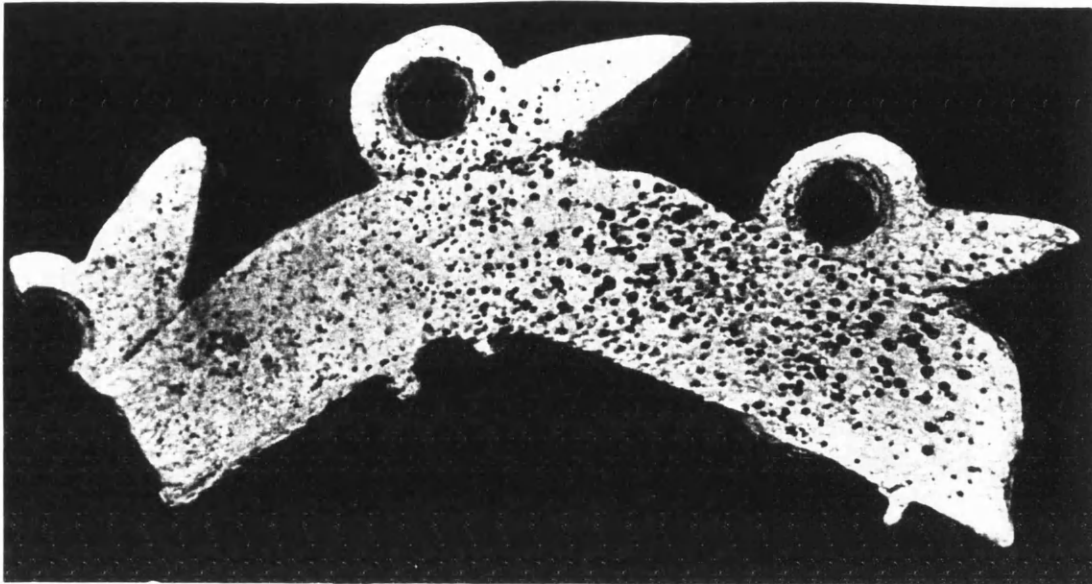


Fig. 149. Decorated disc-shaped piece, "b". L: 7.60.  
Provenance: Apatzingán, Mich.  
Museo Nacional de Antropología, Mexico D.F.  
No. 2.5.65.17.

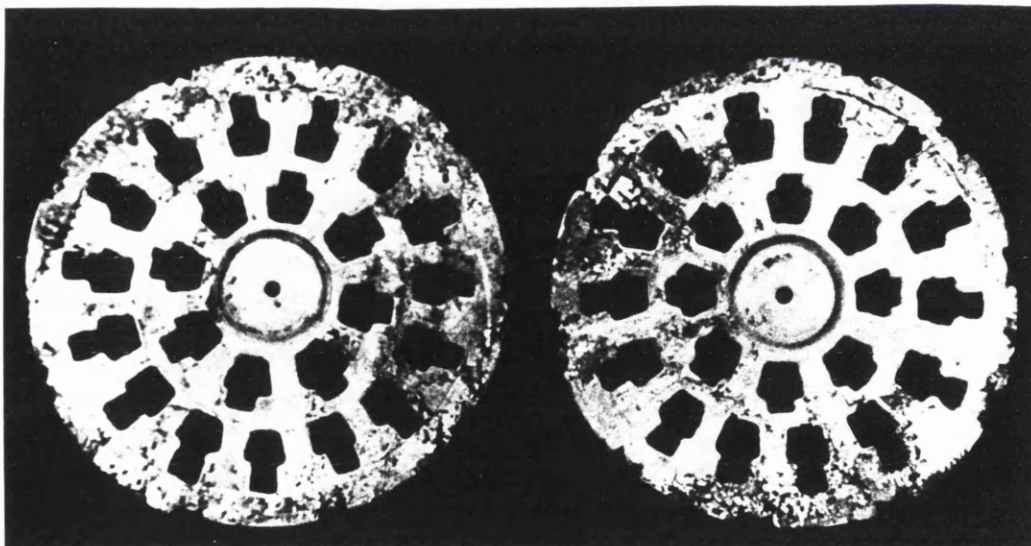
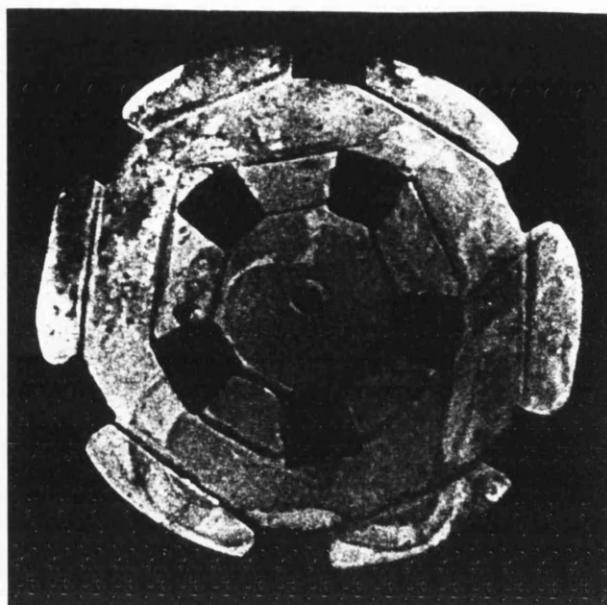
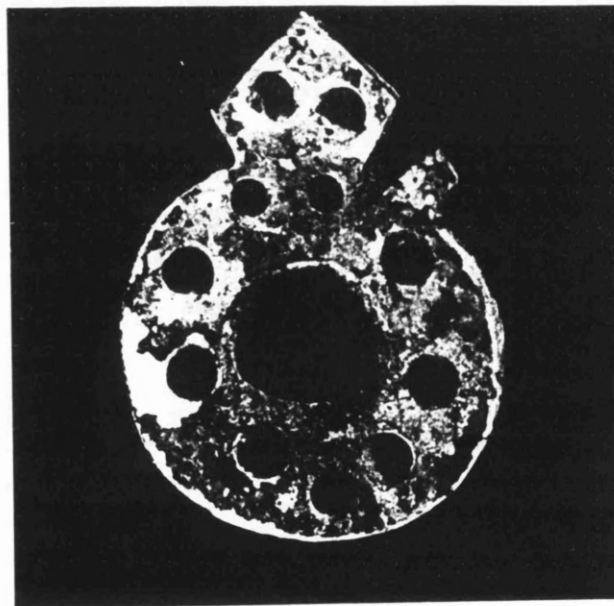


Fig. 150. Decorated disc-shaped pieces, "b". D: 6.90.  
Provenance: San Gregorio, Mich.  
Museo Nacional de Antropología, Mexico D.F.  
No. 2.5.6469.

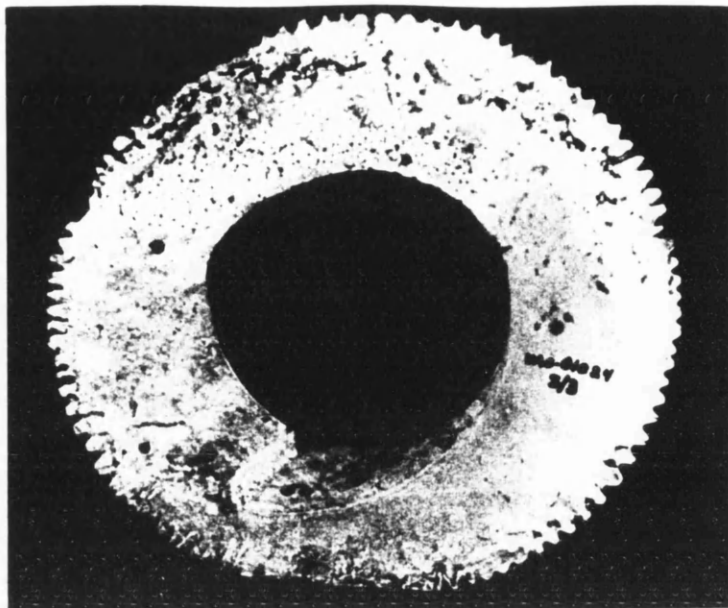




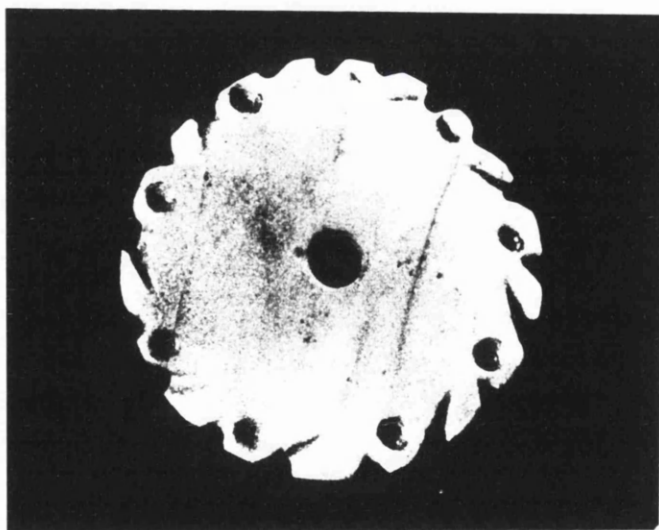
**Fig. 151.** Decorated disc-shaped piece, "b". D: 2.90.  
Provenance: Jalisco.  
Museo Regional, Guadalajara, Jal.



**Fig. 152.** Decorated disc-shaped piece, "b". L: 3.20.  
Provenance: Jalisco.  
Museo Regional, Guadalajara, Jal.



**Fig. 153.** Decorated disc-shaped piece, "b". D: 9.70.  
Provenance: Jalisco.  
Universidad Autónoma, Guadalajara.  
No. UAG 01024.3.3.



**Fig. 154.** Decorated disc-shaped piece, "b". D: 2.90.  
Provenance: Jalisco.  
Museo Regional, Guadalajara, Jal.

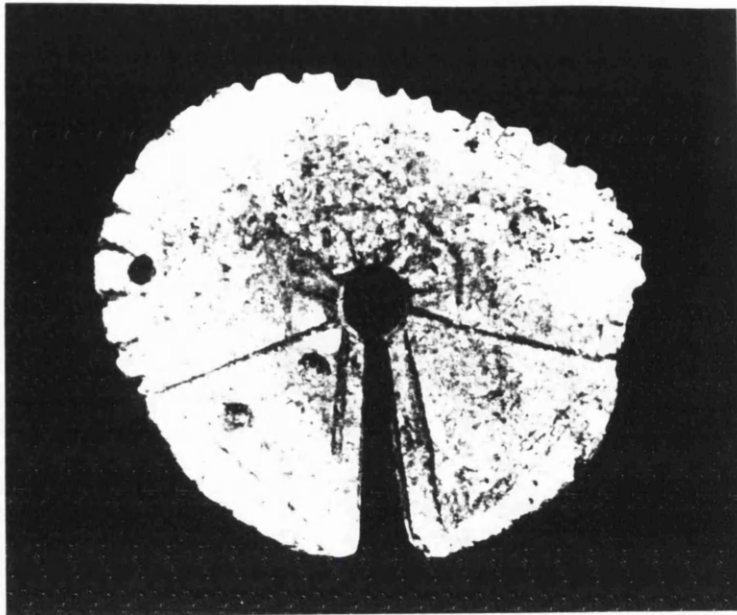


Fig. 155. Decorated disc-shaped piece, "b". D: 5.10.  
Provenance: unknown.  
Museo Nacional de Antropología, Mexico D.F.  
No. 20.132.

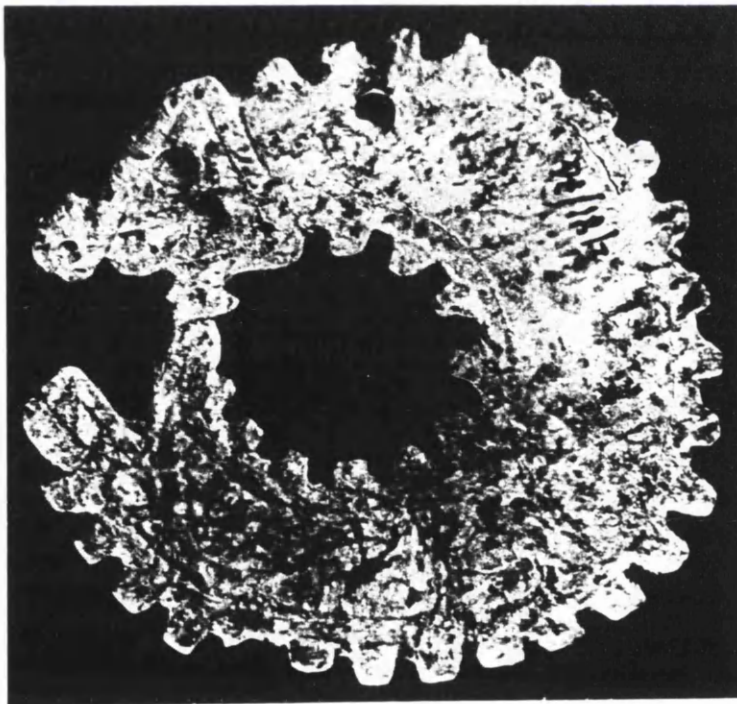
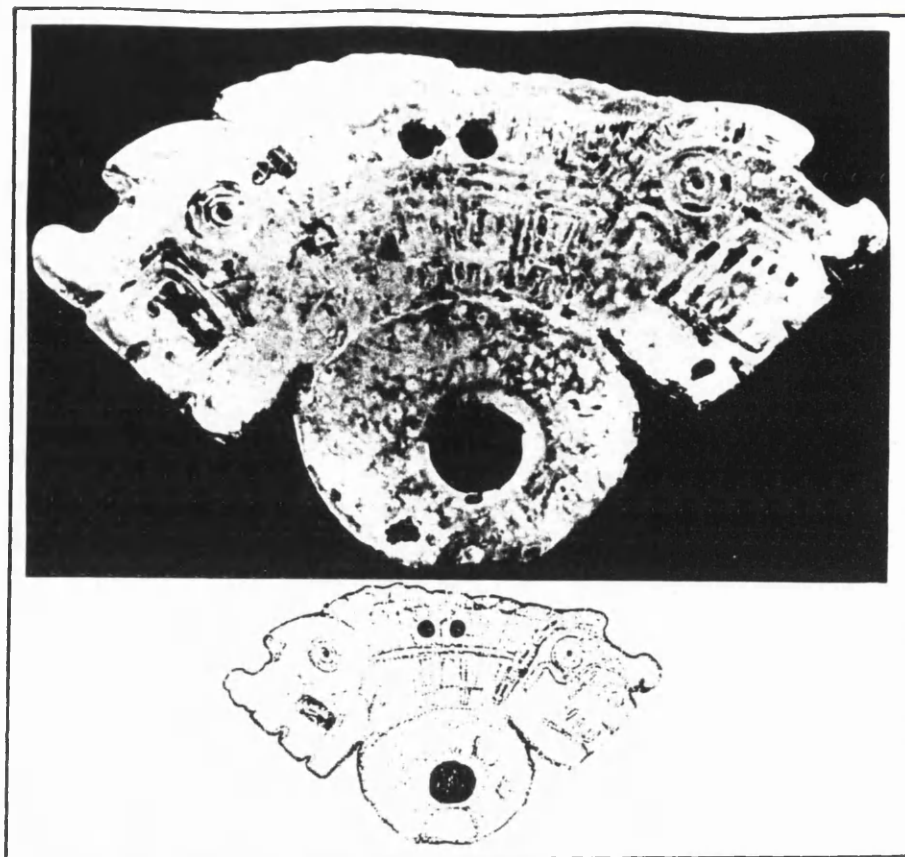


Fig. 156. Decorated disc-shaped piece, "b". D: 5.60.  
Provenance: Jalisco  
Museo Regional, Guadalajara, Jal.  
No. 2.81.76.

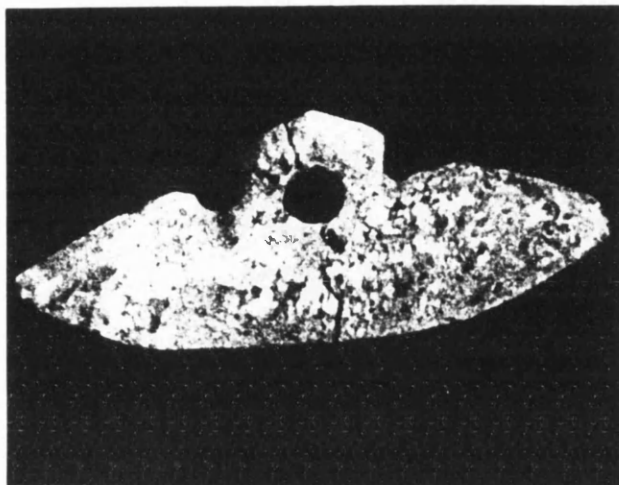




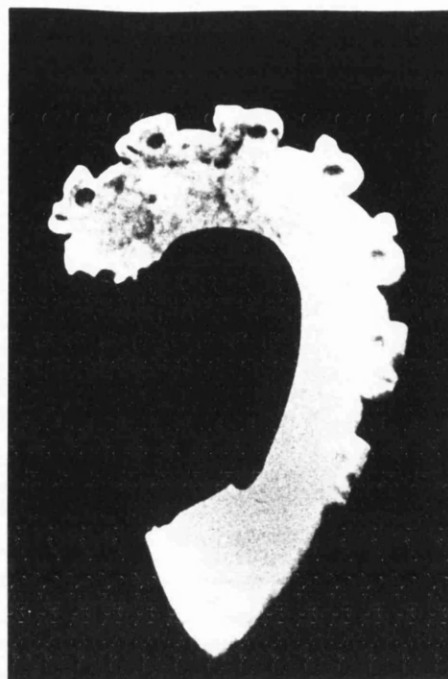
**Fig. 157.** Decorated disc-shaped piece, "b". L: 7.50.  
Provenance: Jalisco.  
Museo Regional, Guadalajara, Jal.



**Fig. 158.** Decorated disc-shaped piece, "b". L: 4.10.  
Provenance: Playa del Tesoro, Co.  
Centro Regional INAH, Colima, Co.



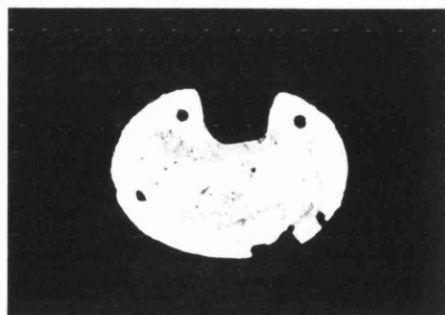
**Fig. 159.** Decorated disc-shaped piece,  
"b". L: 3.30.  
Provenance: Playa del Tesoro, Co.  
Centro Regional INAH, Colima, Co.



**Fig. 160.** Decorated drop-shaped piece,  
"b". L: 9.60.  
Provenance: Colima.  
Private Collection, Colima, Co.



**Fig. 161.** Decorated disc-shaped piece,  
"b". L: 2.50.  
Provenance: Jalisco.  
Museo Regional, Guadalajara, Jal.



**Fig. 162.** Crescent-shaped piece: no  
decoration, "a". L: 2.20 .  
Provenance: Apatzingán, Mich.  
Museo Nacional de Antropología,  
Mexico D.F. No. 2.3.672.

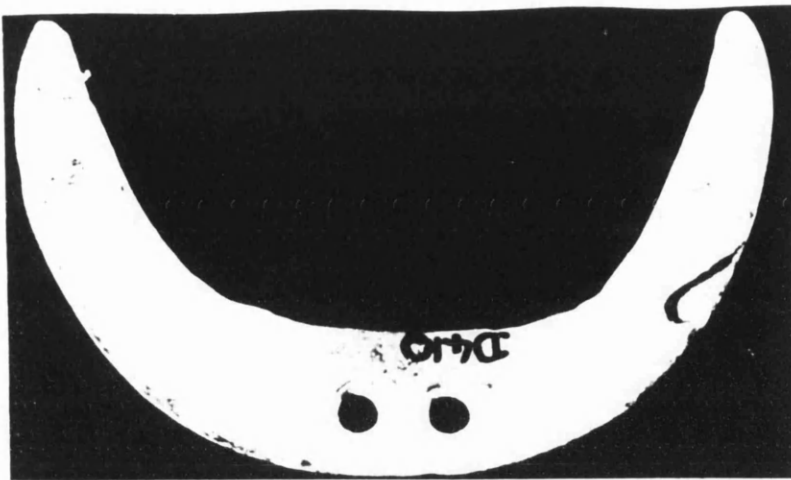


Fig. 163. Crescent-shaped piece: no decoration, "b". L: 4.20.  
Provenance: Jalisco. Museo Regional, Guadalajara, Jal. No. D 410.

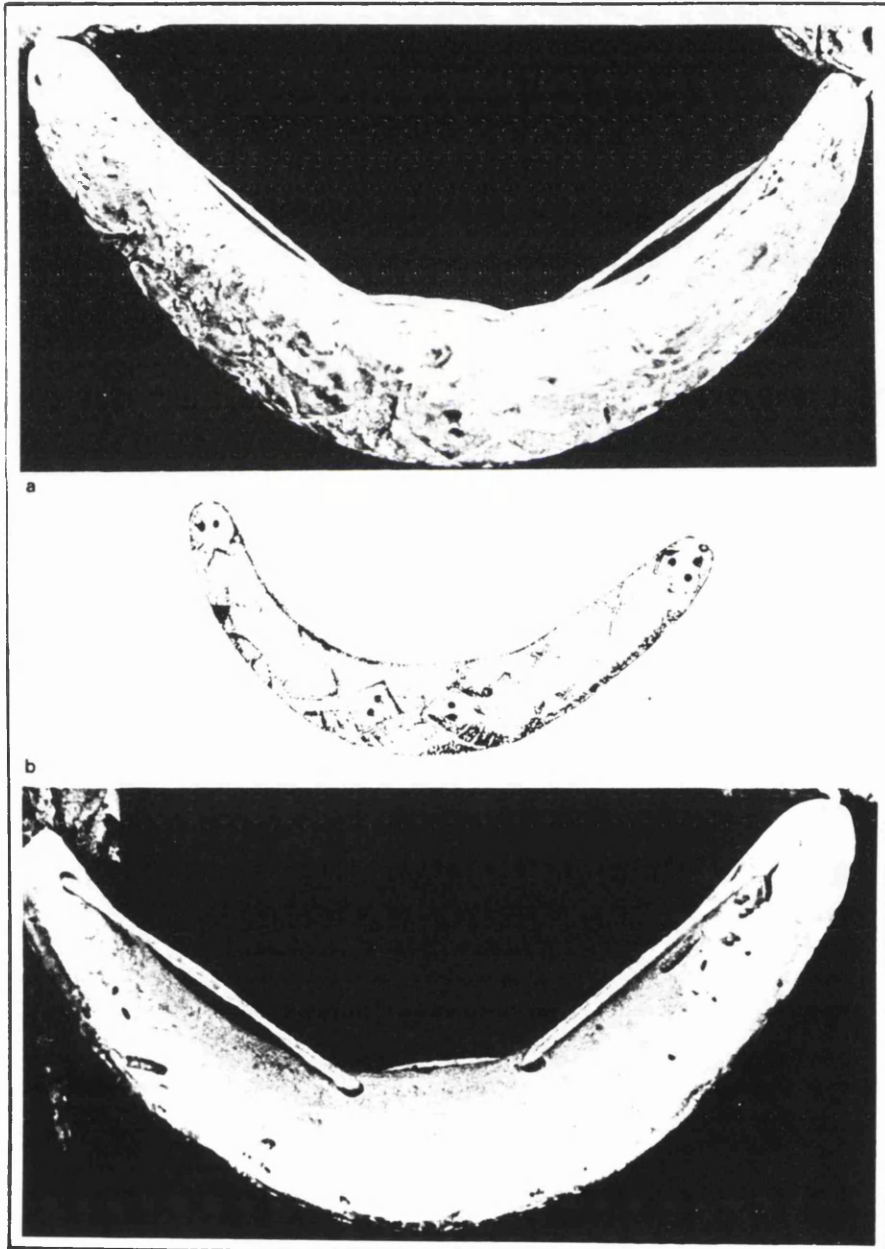
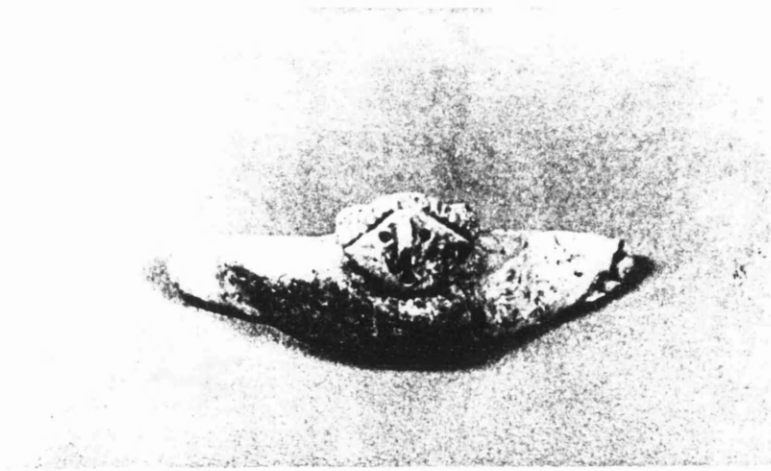


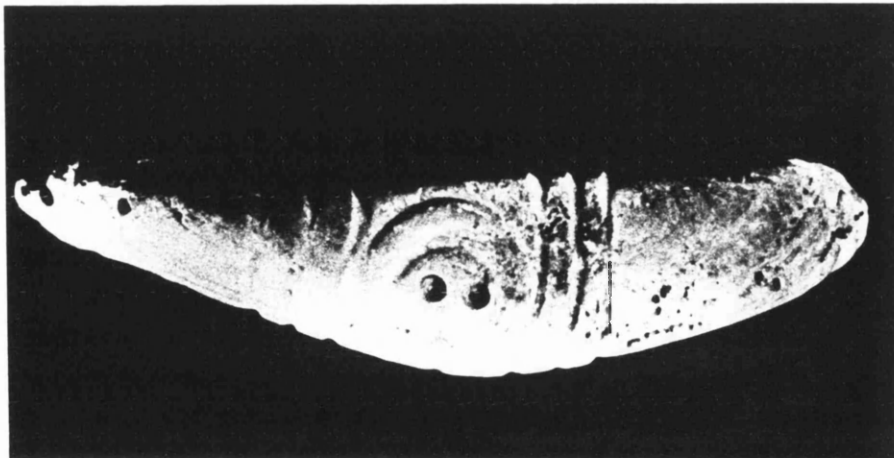
Fig. 164. Decorated crescent-shaped piece, "b". L: 13.20.

Provenance: Jalisco (?).

Museo de Arqueología del Occidente de Mexico, Guadalajara. No. MRG 01541.3.5.



**Fig. 165.** Decorated crescent-shaped piece, "b". L: 11.90.  
Provenance: unknown.  
Stiftung Altamerikanische Kulturen, Zurich.



**Fig. 166.** Decorated crescent-shaped piece, "b". L: 12.-.  
Provenance: Jalisco.  
Museo Regional, Guadalajara, Jal.  
No. D 1788.2822.



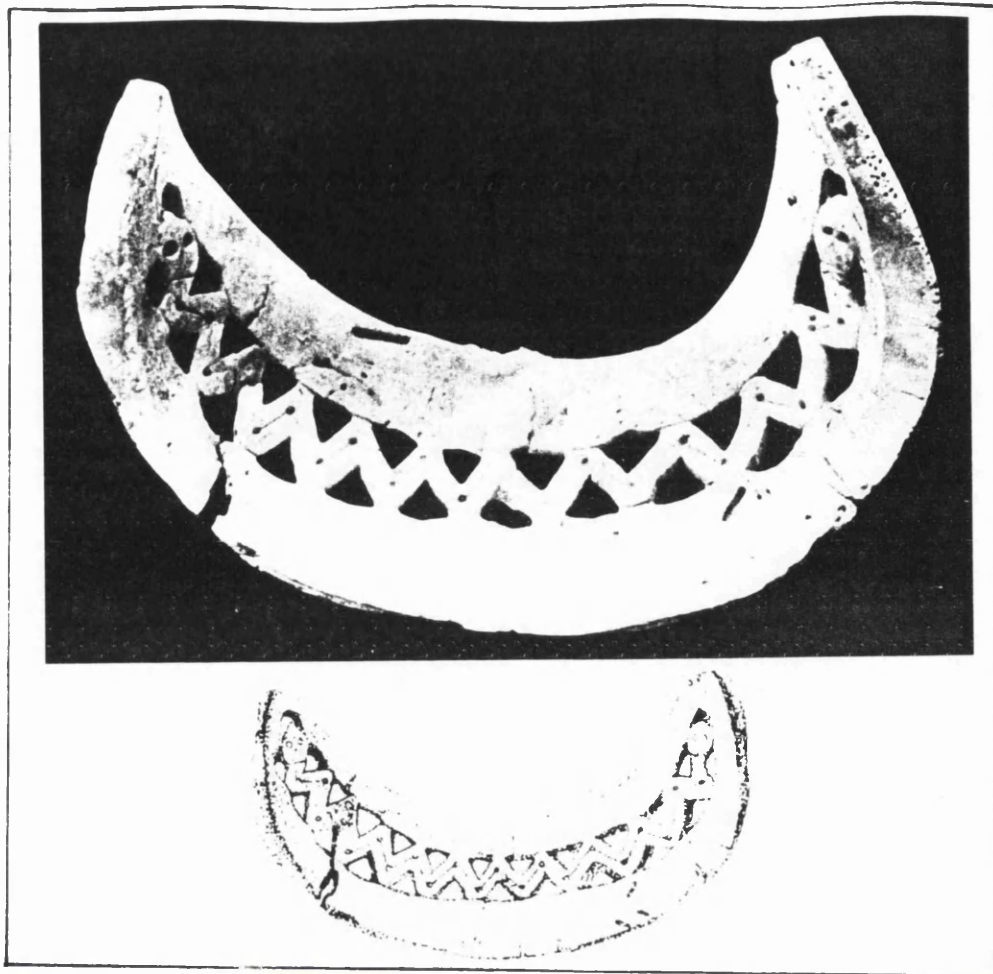


Fig. 167. Decorated crescent-shaped piece, "b". L: 10.70 .  
Provenance: Cerro de Locotero, Mich.  
Private Collection, Colima, Co.

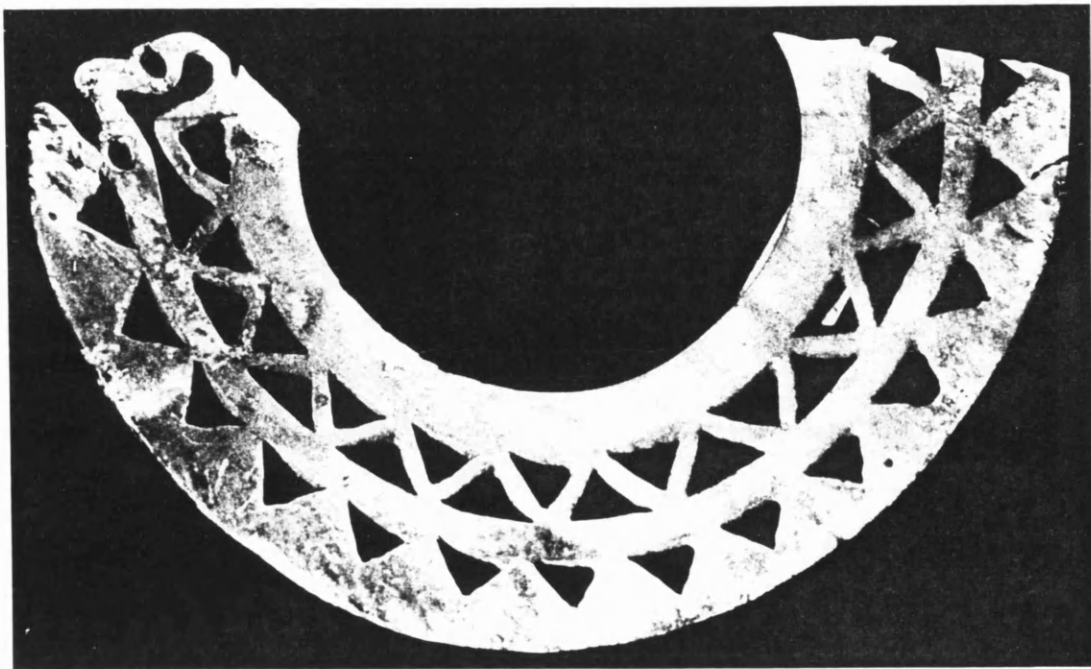
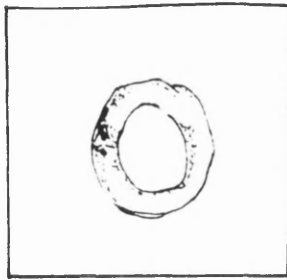
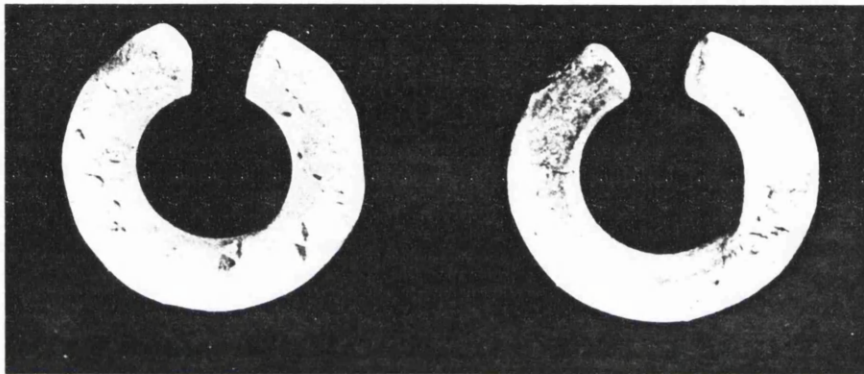


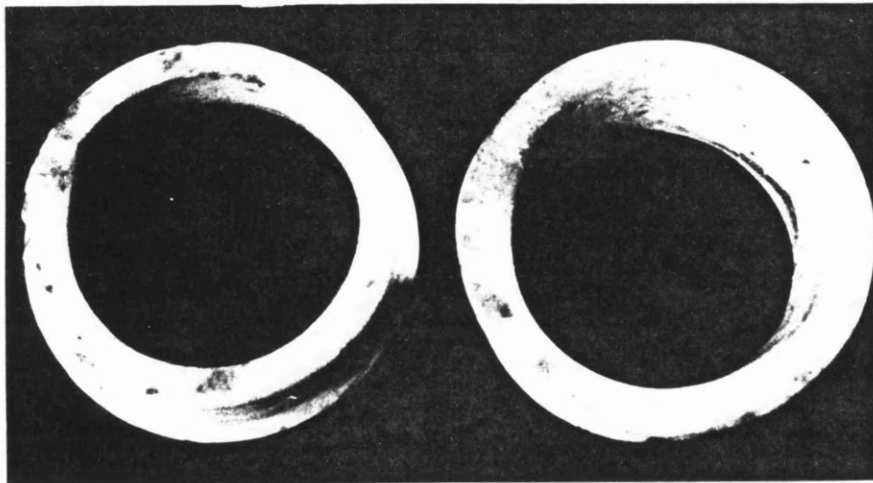
Fig. 168. Decorated crescent-shaped piece, "b". L: 2.20.  
Provenance: Jalisco.  
Museo Regional, Guadalajara, Jal.



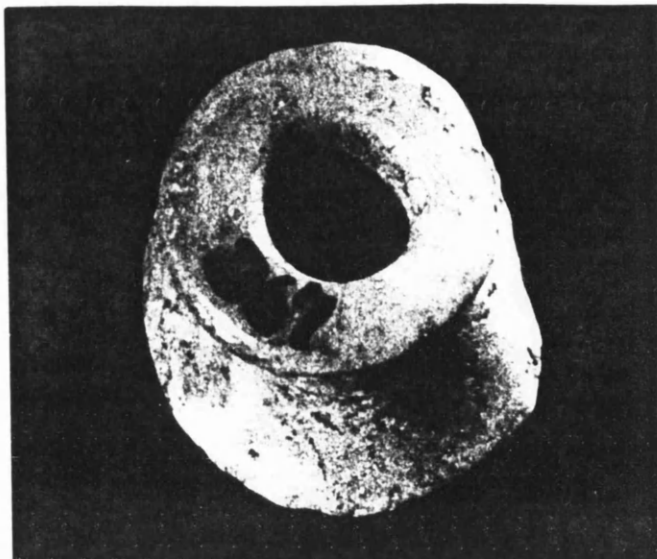
**Fig. 169.** Ring-shaped piece: no decoration, "a". D: n.a.  
Provenance: Michoacán.  
Museo del Estado, Morelia.



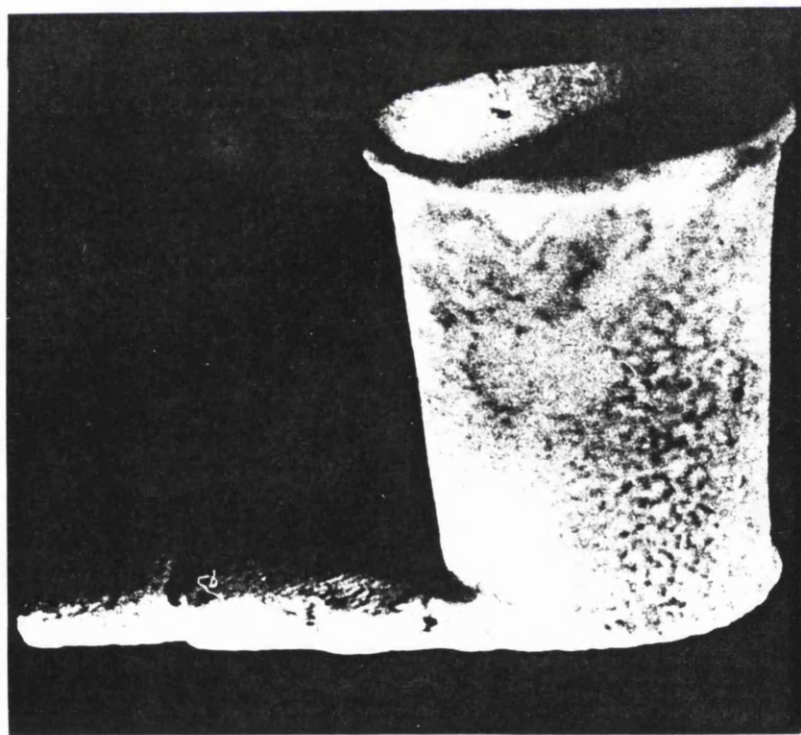
**Fig. 170.** Ring-shaped pieces: no decoration, "a". D: 1.50.  
Provenance: Jalisco.  
Museo Regional, Guadalajara, Jal. No. D 1451/1455.



**Fig. 171.** Ring-shaped pieces: no decoration, "a". D: 3.70.  
Provenance: Jalisco.  
Museo Regional, Guadalajara, Jal.



**Fig. 172.** Ring-shaped piece: no decoration, "a". D: 0.80.  
Provenance: Jalisco  
Museo Regional, Guadalajara, Jal. No. D 67.



**Fig. 173.** Ring-shaped piece: no decoration, "a". L: 3.60.  
Provenance: Jalisco.  
Museo Regional, Guadalajara, Jal. No.

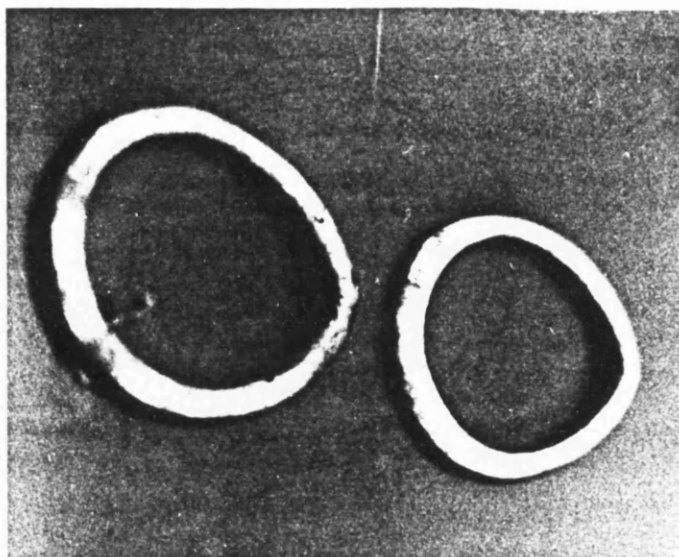


Fig. 174. Ring-shaped pieces: no decoration, "b". D: 10.80 (average).  
Provenance: Churumuco, Mich.  
Museum and Art Gallery, Bristol.  
No. E.5897.900.

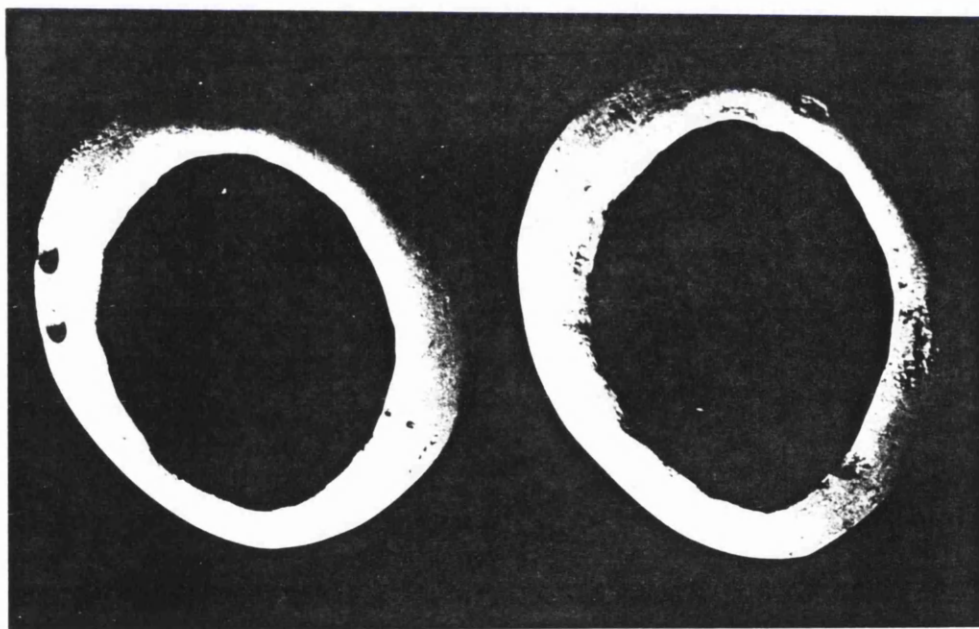


Fig. 175. Ring-shaped pieces: no decoration, "b". D: 12.30.  
Provenance: Jalisco.  
Museo Regional, Guadalajara, Jal.  
No. D 1415/1416.



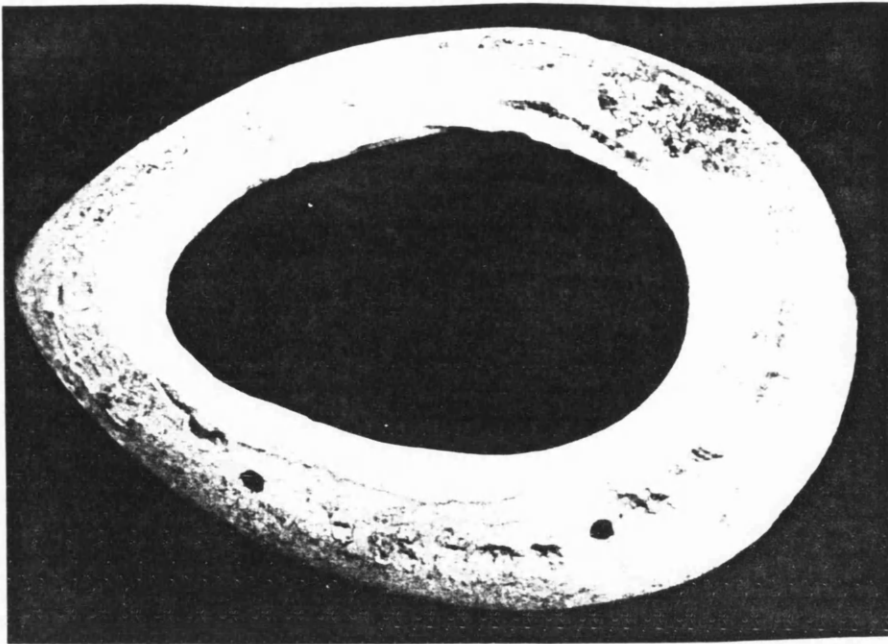


Fig. 176. Ring-shaped piece: no decoration, "b". L: 8.40.  
Provenance: Michoacán.  
Museo Nacional de Antropología, Mexico D.F.  
No. 2.5.6741.

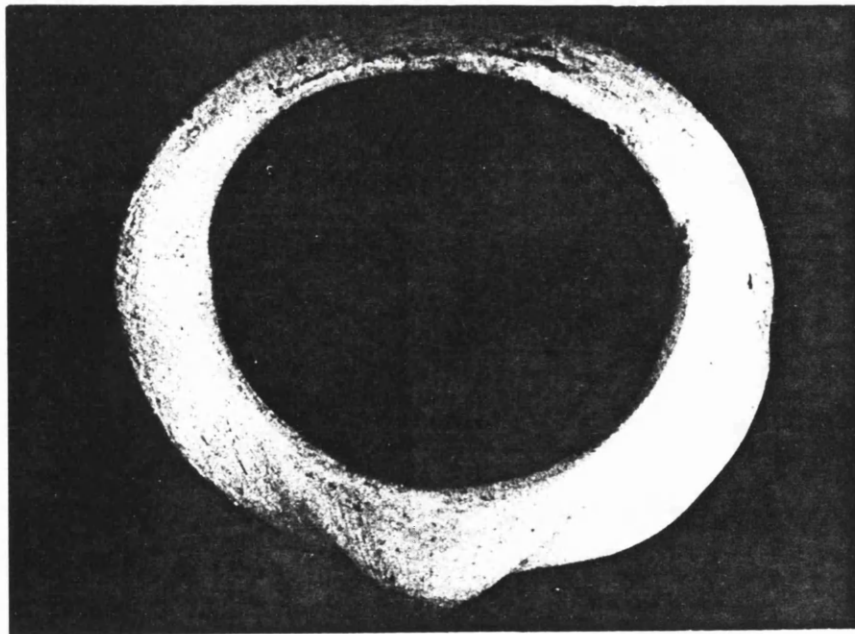


Fig. 177. Ring-shaped piece: no decoration, "b". D: 6.10.  
Provenance: Jalisco.  
Universidad Autónoma, Guadalajara.  
No. UAG 01036.1.2.



**Fig. 178.** Decorated ring-shaped piece, "a". L: 5.20.

Provenance: Jalisco.  
Museo Regional, Guadalajara, Jal.



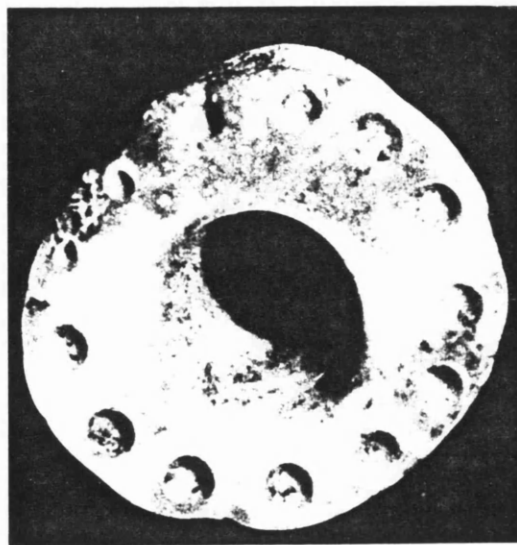
**Fig. 179.** Decorated ring-shaped piece, "a". D: 2.80.

Provenance: Jalisco.  
Museo Regional, Guadalajara, Jal.  
No. MGR 1.00971.



**Fig. 180.** Decorated ring-shaped piece, "a". L: n.a.

Provenance: Occidente.  
Museo Michoacano, Morelia, Mich.



**Fig. 181.** Decorated ring-shaped piece, "a". D: 1.90.

Provenance: Jalisco.  
Museo Regional, Guadalajara, Jal. No. D 11.



Fig. 182. Decorated ring-shaped piece, "b". D: 8.80.  
Provenance: Jalisco.  
Universidad Autónoma, Guadalajara.  
No. UAG 10506.2.

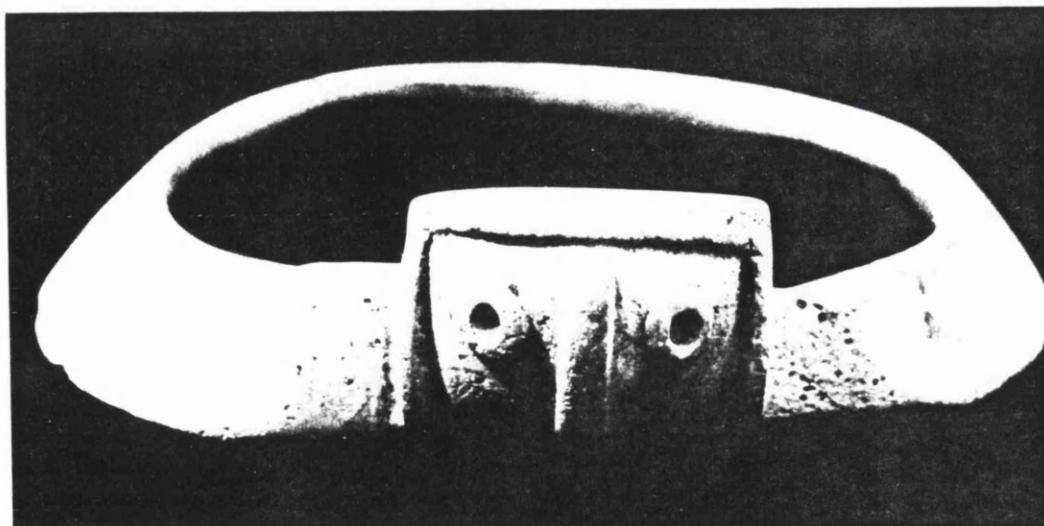
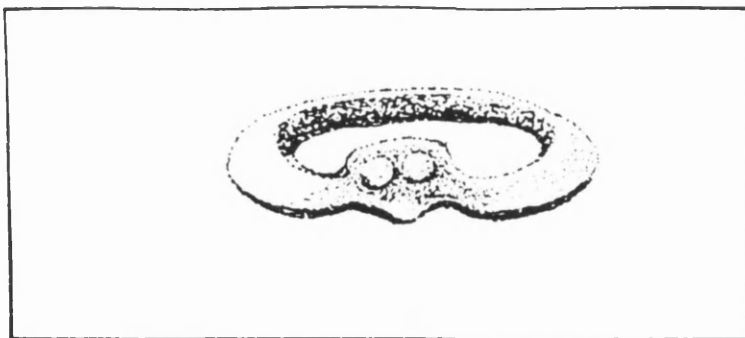
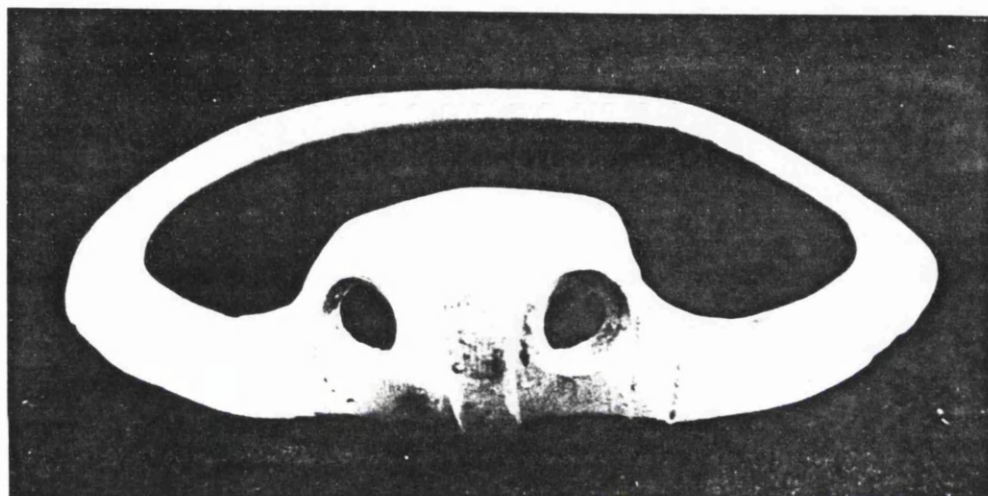


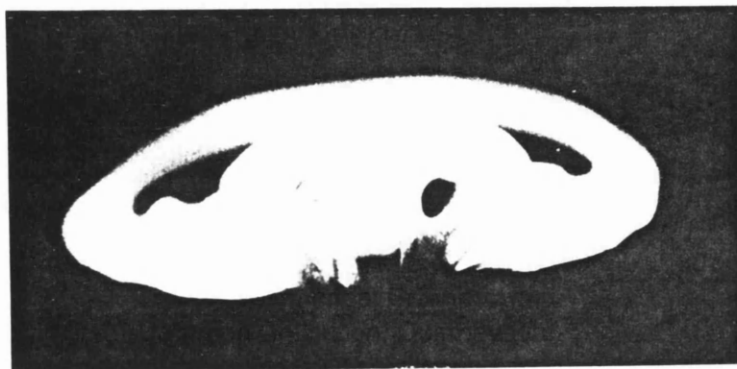
Fig. 183. Decorated ring-shaped piece, "b". D: 8.90.  
Provenance: Apatzingán, Mich.  
Museo Nacional de Antropología, Mexico D.F.  
No. 2.5.6506.



**Fig. 184.** Decorated ring-shaped piece, "b". D: 6.20.  
Provenance: Colima.  
Musées Royaux d'Art et d'Histoire, Brussels. No. AAM 39.192a.



**Fig. 185.** Decorated ring-shaped piece, "b". D: 5.80.  
Provenance: Michoacán.  
Museo Nacional de Antropología, Mexico D.F. No. 2.5.5593.



**Fig. 186.** Decorated ring-shaped piece, "b". D: 6.90.  
Provenance: Apatzingán, Mich.  
Museo Nacional de Antropología, Mexico D.F. No. 2.5.6504.



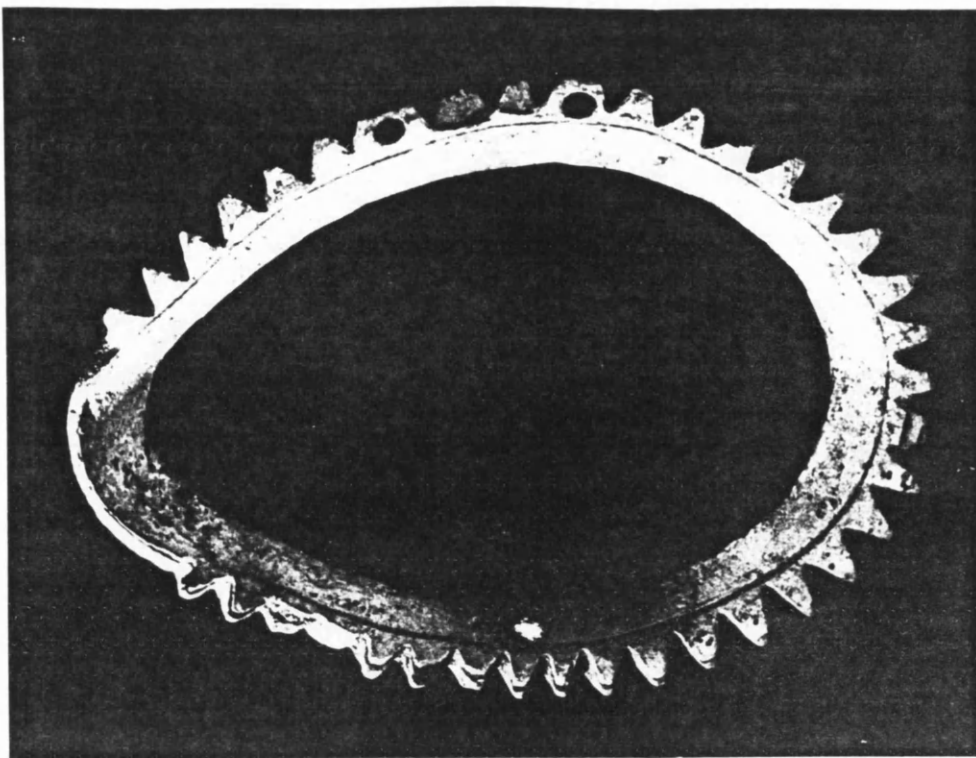


Fig. 187. Decorated ring-shaped piece, "b". L: 17.50.  
Provenance: Jalisco.  
Museo Regional, Guadalajara, Jal.

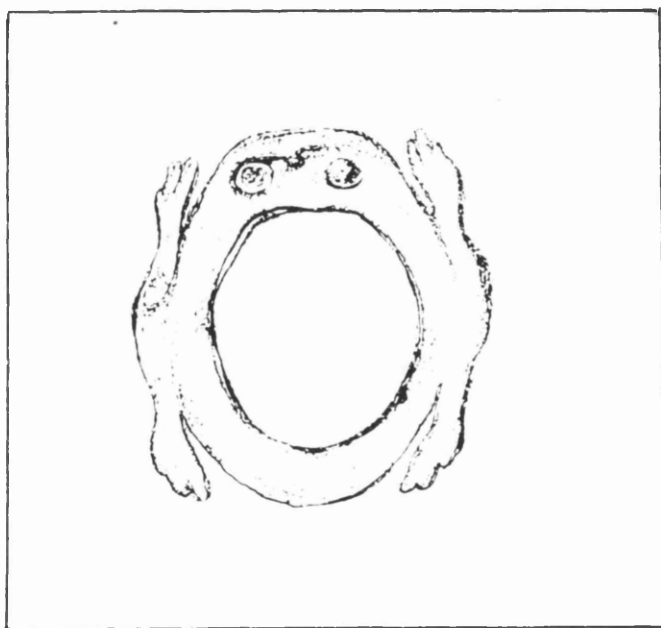
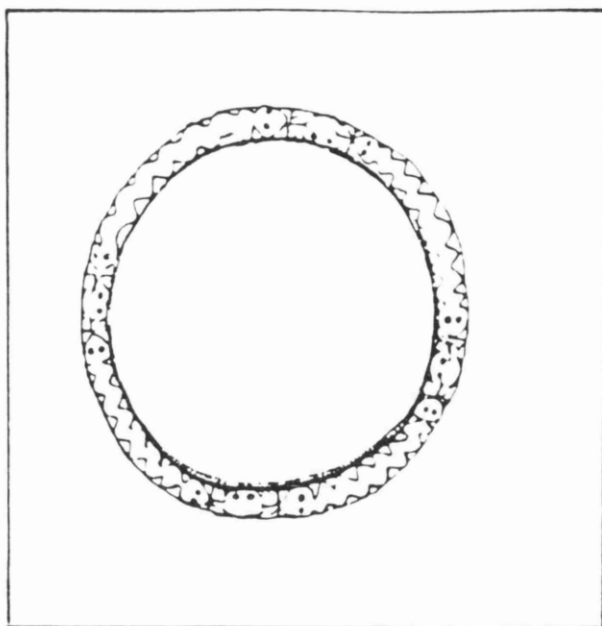
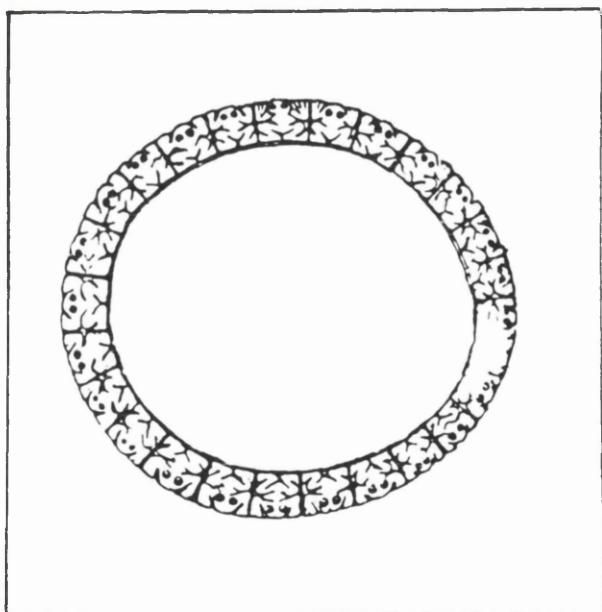


Fig. 188. Decorated ring-shaped piece, "c". L: 14.-.  
Provenance: Tumba Guallarita, Co.  
Museo de Arqueología, Colima, Co.



**Fig. 189.** Decorated ring-shaped piece, "b". D: 8.40.  
Provenance: Guadalupe Mound, Jal.  
Museum and Art Gallery, Bristol. No. E 4907.  
(after Breton, 1903: Fig. 5.8)



**Fig. 190.** Decorated ring-shaped piece, "b". D: 10.10.  
Provenance: Guadalupe Mound, Jal.  
Museum and Art Gallery, Bristol. No. E 5913.  
(after Breton, 1903: Fig. 5.7)

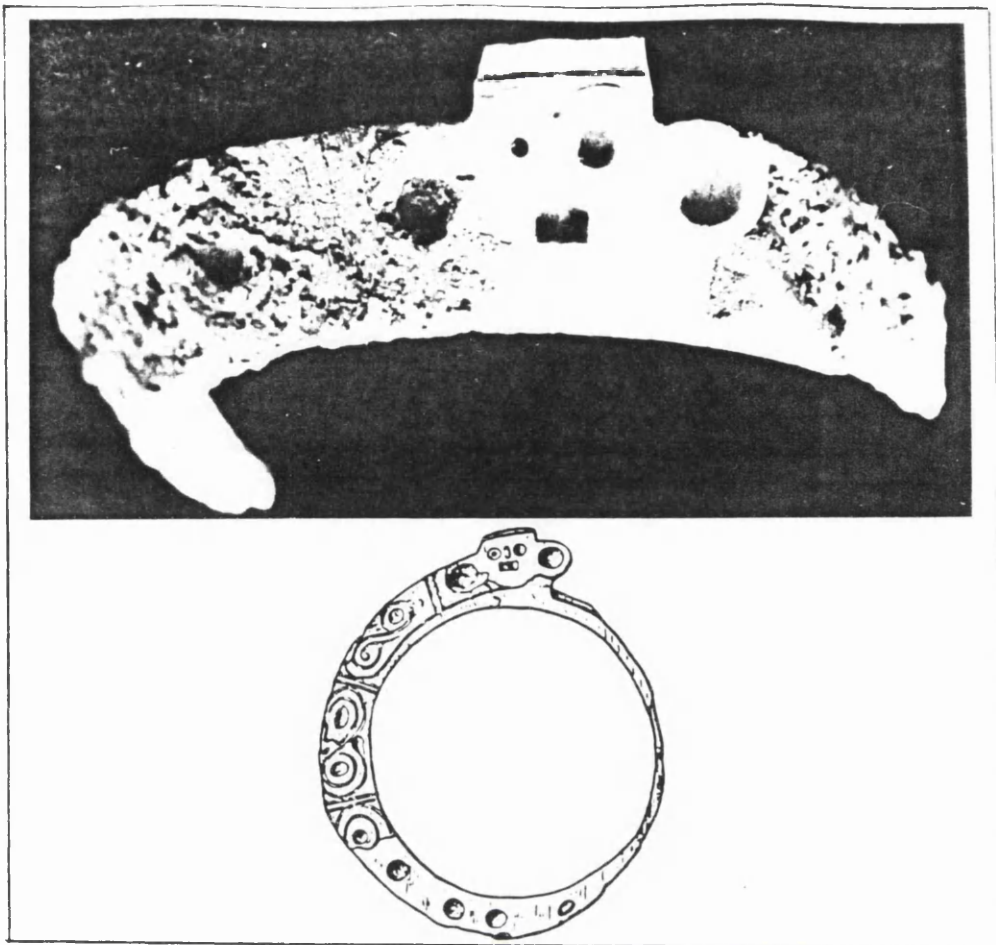


Fig. 191. Decorated ring-shaped piece, "b". D: 8.50.  
Provenance: Apatzingán, Mich.  
Museo Nacional de Antropología, Mexico D.F. No. 20.2024.  
(after Kelly, 1947: Fig. 69 b)

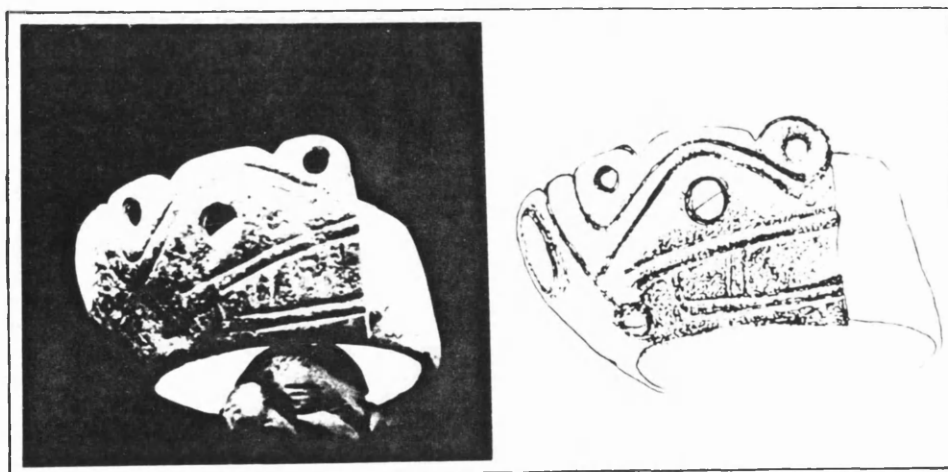


Fig. 192. Decorated ring-shaped piece, "t". D: 9.10.  
Provenance: Jalisco.  
Museo Regional, Guadalajara.

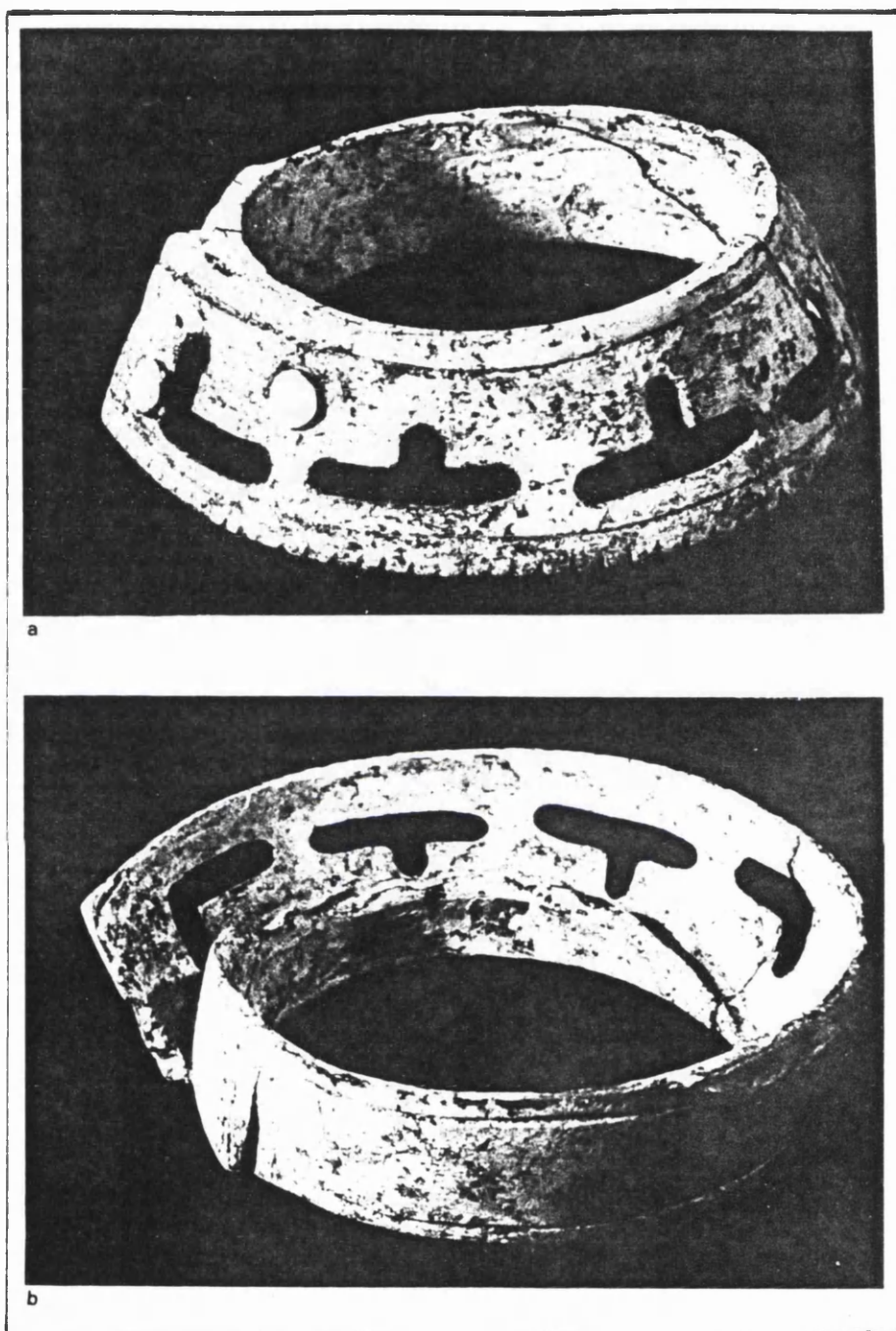


Fig. 193. Decorated ring-shaped piece, "b". D: 11.10.  
Provenance: Jalisco.  
Museo Regional, Guadalajara, Jal.



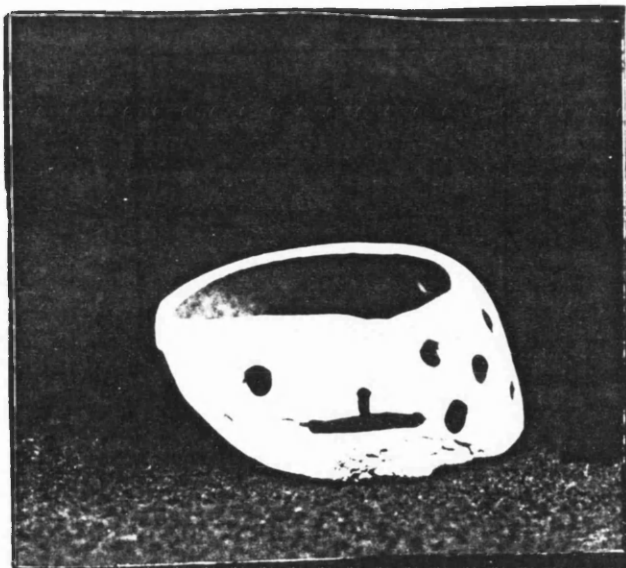


Fig. 194. Decorated ring-shaped piece, "b". D: 10.-.  
Provenance: Jalisco.  
Museo Regional, Guadalajara, Jal.

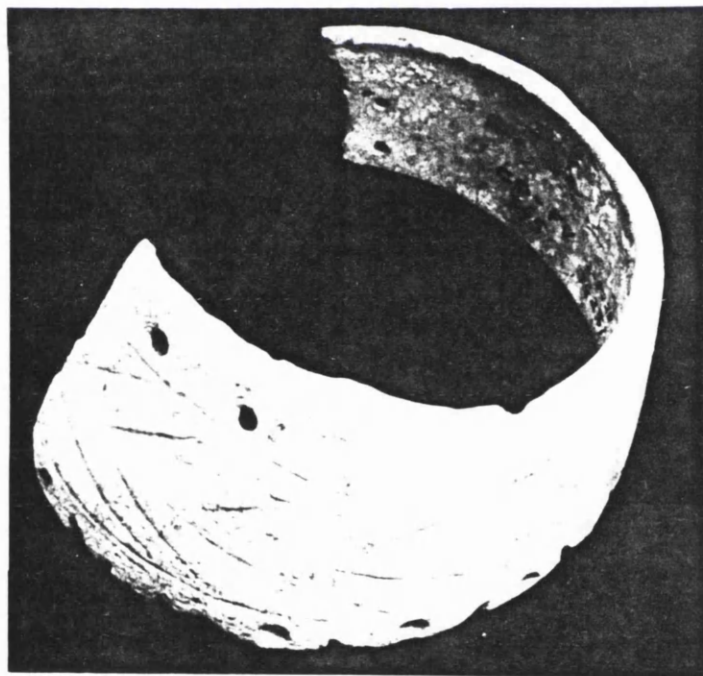
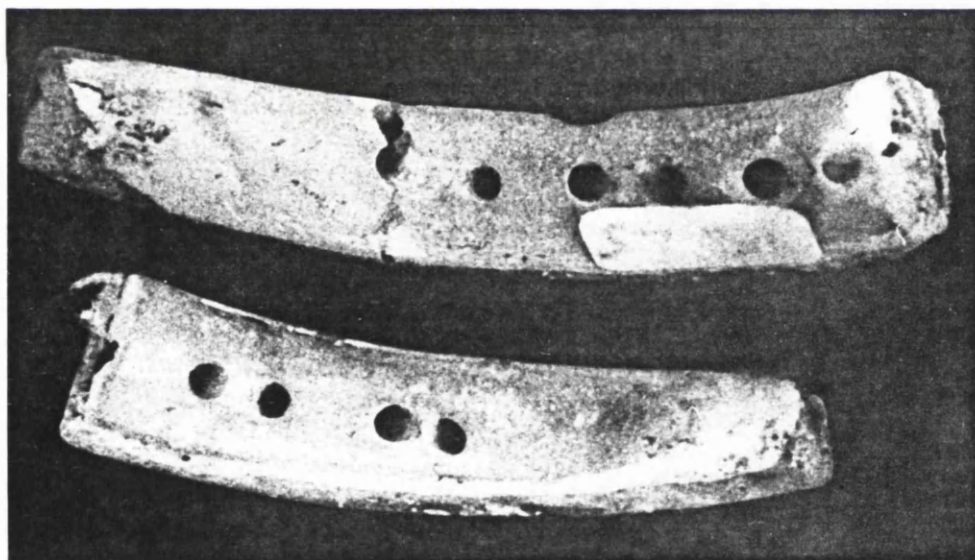


Fig. 195. Decorated ring-shaped piece, "b". D: 8.20.  
Provenance: Apatzingán, Mich.  
Museo Nacional de Antropología, Mexico D.F.  
No. 2.5.660.



**Fig. 196.** Cylindrical-shaped piece: no decoration. L: 5.20.  
 Provenance: Guadalajara, Jal. (photo museum)  
 Smithsonian Institute, Washington D.C.  
 No. 11.58.20.



**Fig. 197.** Cylindrical-shaped piece: no decoration. L: 7.80.  
 Provenance: Colima.  
 Brenman Collection, Cuernavaca.  
 No. 252.L5.

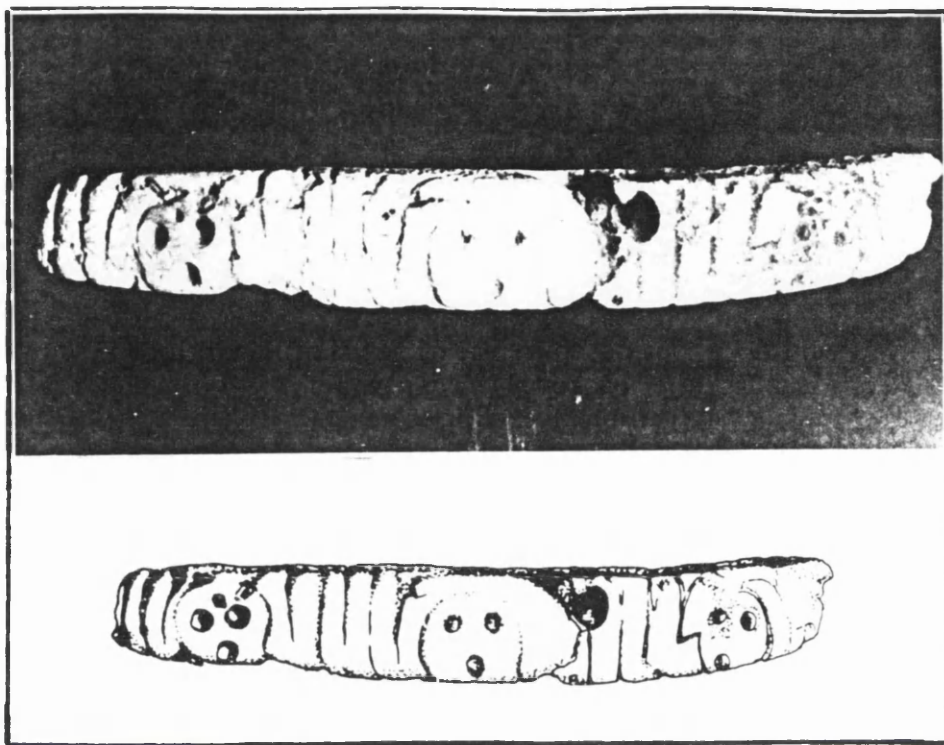


Fig. 198. Decorated cylindrical-shaped piece. L: 11.20.  
Provenance: Colima.  
Musées Royaux d'Art et d'Histoire, Brussels.  
No. AAM 39.200.

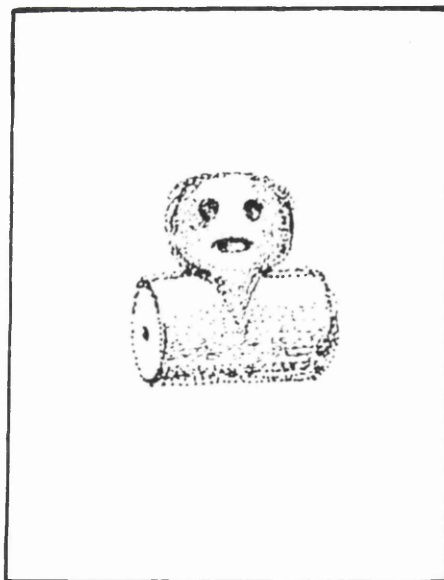
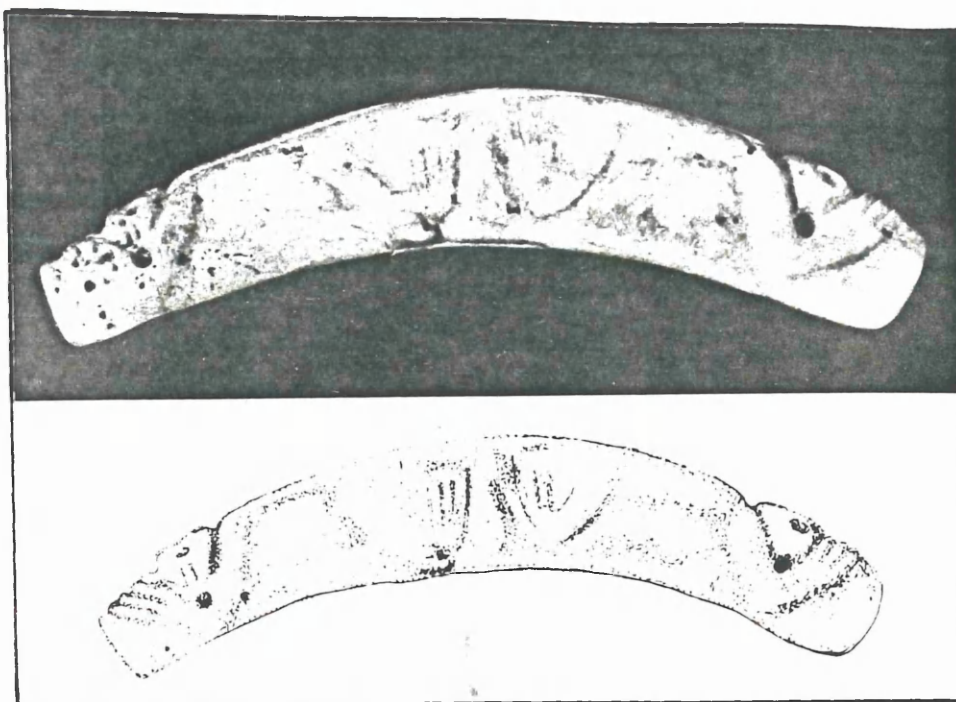


Fig. 199. Decorated cylindrical-shaped piece. L: 3.60.  
Provenance: Apatzingán, Mich.  
Museo Nacional de Antropología, Mexico D.F.  
No. 2.5.5624.



200. Decorated cylindrical-shaped piece. L: 11.-.  
Provenance: Colima.  
Brenman Collection, Cuernavaca.  
No. 782.L5.

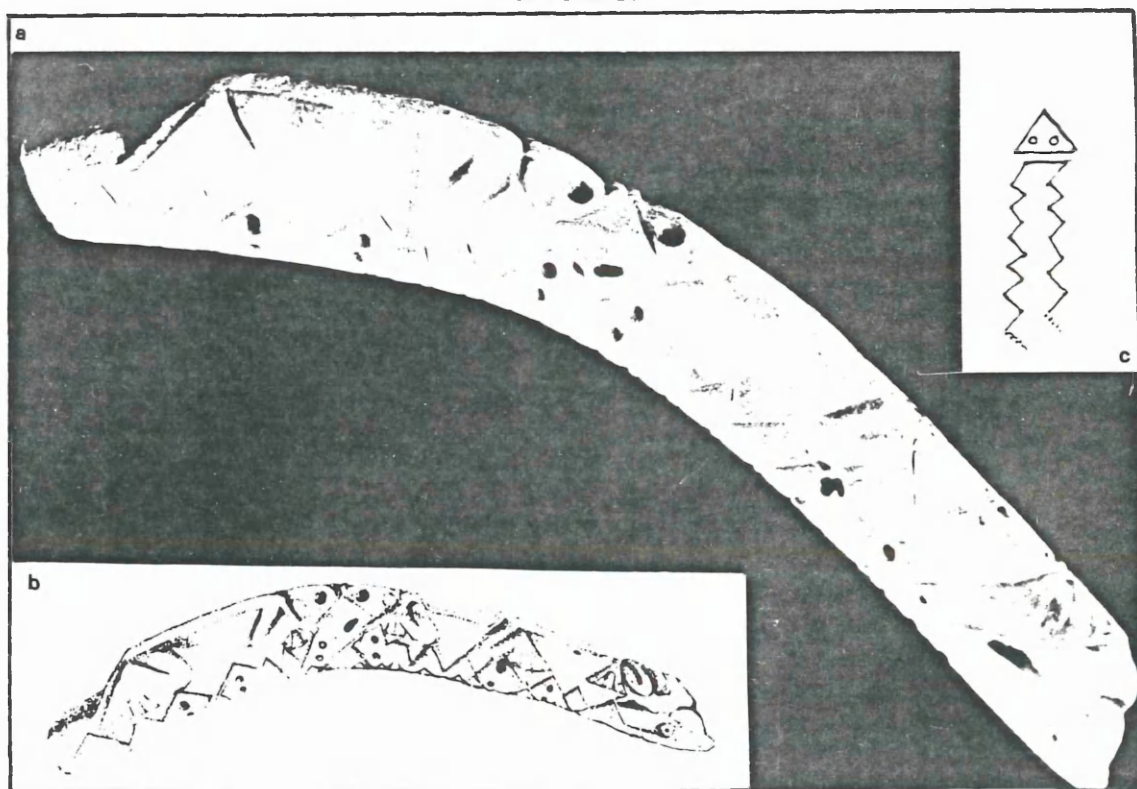
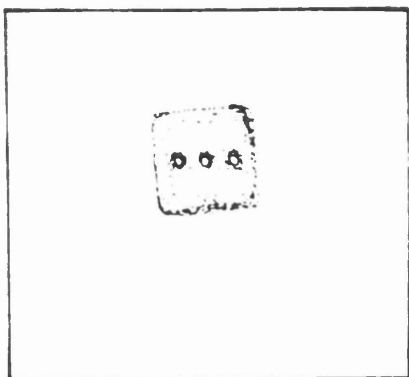
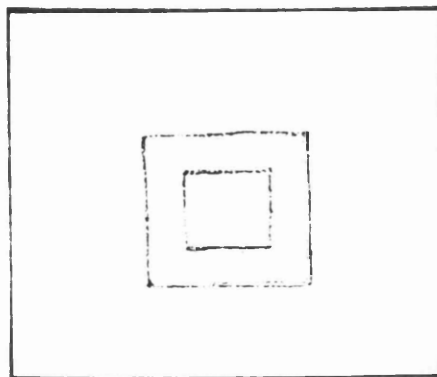


Fig. 201. Decorated cylindrical-shaped piece. L: 10.40.  
Provenance: Jalisco.  
Museo Regional, Guadalajara, Jal.  
No. MRG 5.01527.

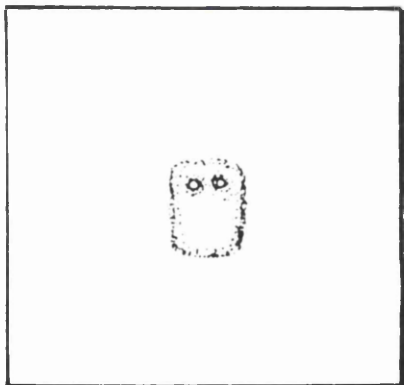




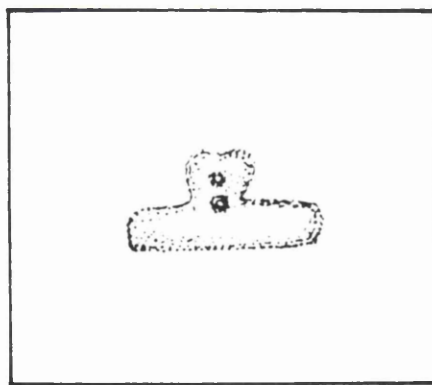
**Fig. 202.** Quadrangular-shaped piece:  
decoration. L: 0.80.  
Provenance: Jalisco.  
Museo Regional, Guadalajara, Jal.



**Fig. 203.** Quadrangular-shaped  
piece: no decoration. L: 1.50.  
Provenance: Playa del Tesoro, Co.  
Centro Regional INAH, Colima, Co.



**Fig. 204.** Quadrangular-shaped piece:  
decoration. L: 1.30.  
Provenance: Jalisco.  
Museo Regional, Guadalajara, Jal.



**Fig. 205.** Quadrangular-shaped  
piece: no decoration. L: 3.30.  
Provenance: Jalisco.  
Museo Regional, Guadalajara, Jal.

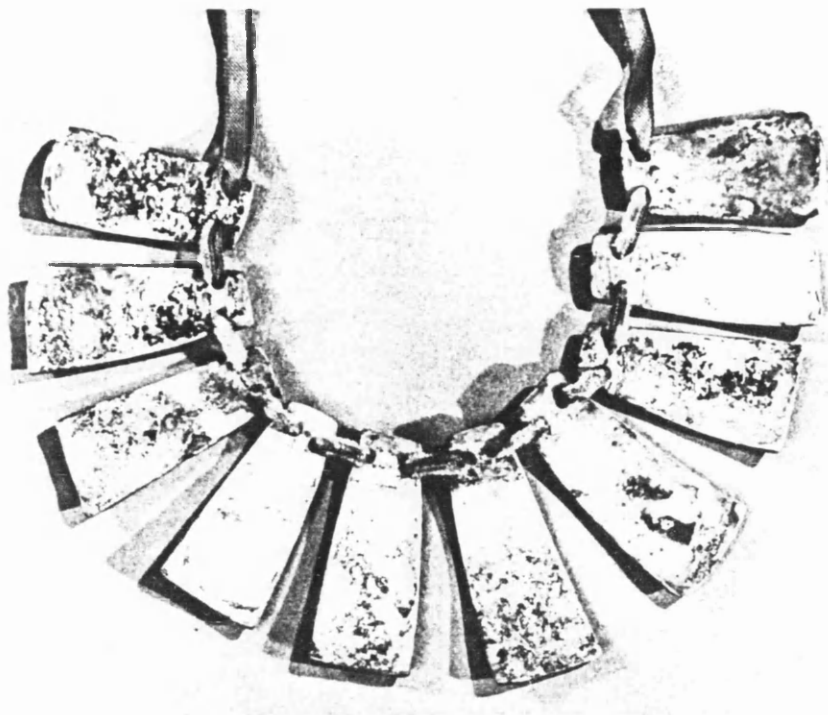


Fig. 206. Quadrangular-shaped pieces: no decoration. L: n.a.  
Provenance: Colima. (photo museum)  
Los Angeles County Museum of Art, Los Angeles.  
No. M 86.296.203.

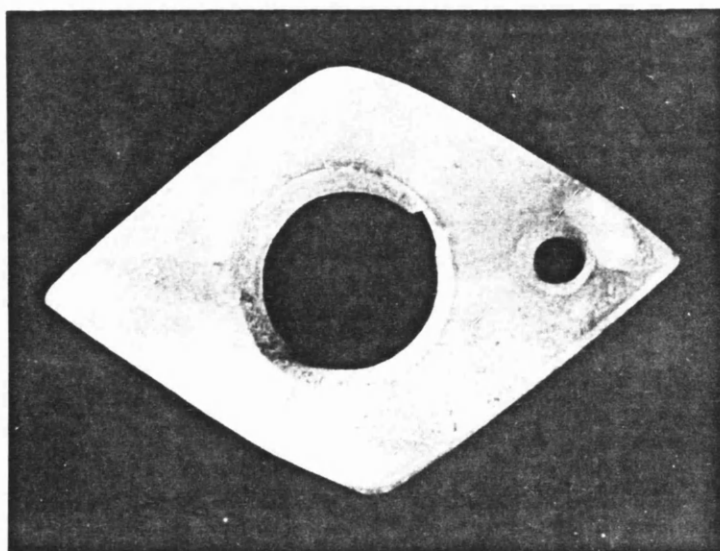
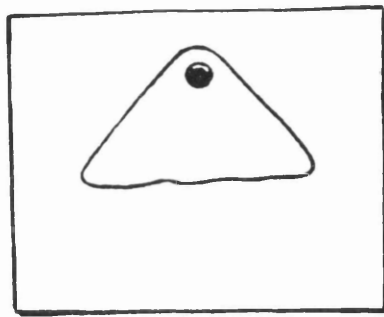
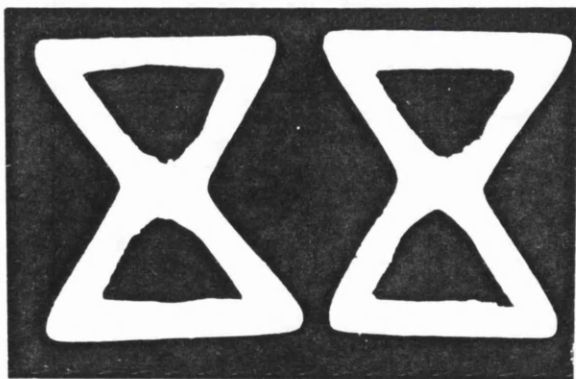


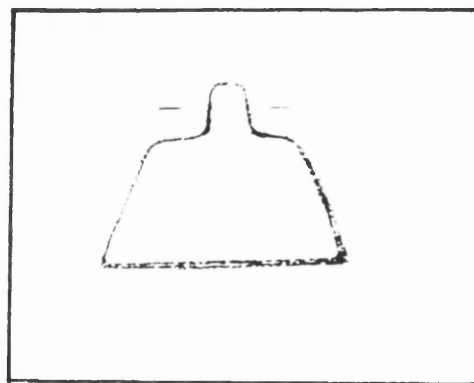
Fig. 207. Quadrangular-shaped piece: no decoration. L: 5.90.  
Provenance: Jalisco.  
Museo Regional, Guadalajara, Jal.



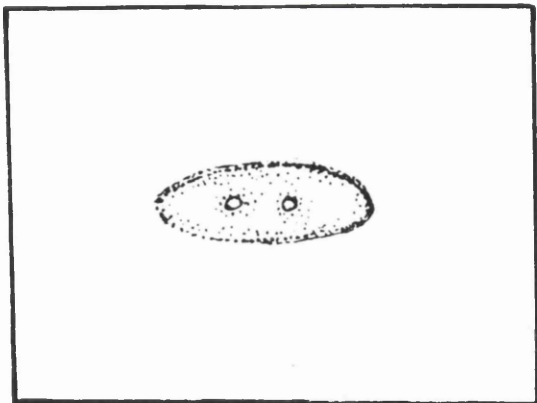
**Fig. 208.** Triangular-shaped piece: no decoration. L: 3.-.  
Provenance: Apatzingán.  
(after Kelly, 1947: Fig. 69 n)



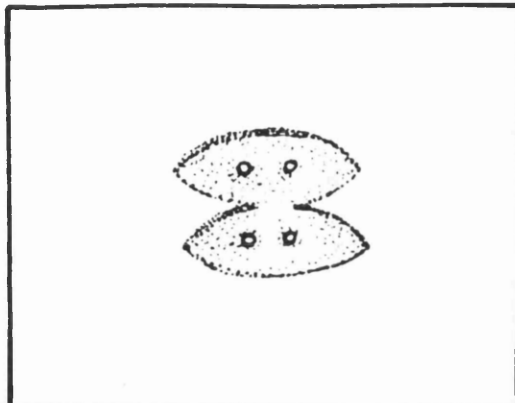
**Fig. 209.** Triangular-shaped pieces:  
decoration. L: 2.50.  
Provenance: Jalisco.  
Museo Regional, Guadalajara, Jal.



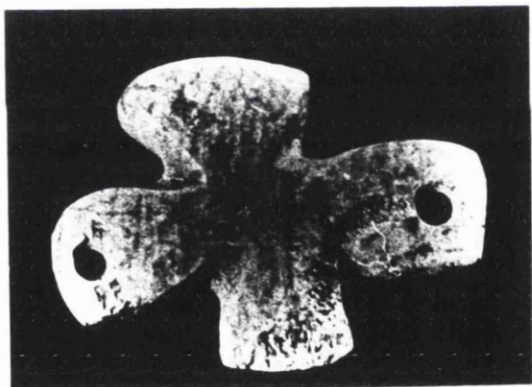
**Fig. 210.** Triangular-shaped no  
piece: no decoration. L: 1.50.  
Provenance: Playa del Tesoro, Co.  
Centro Regional INAH, Colima, Co.



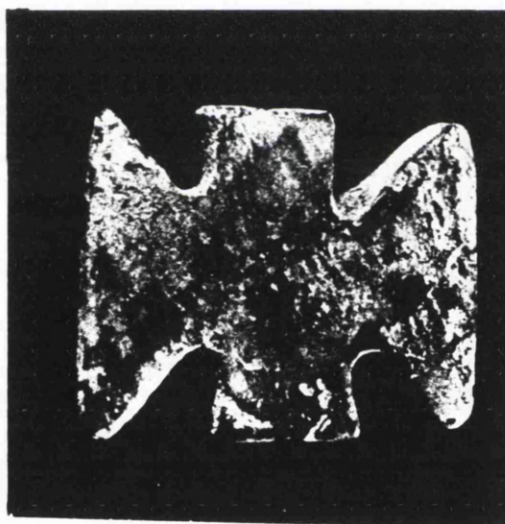
**Fig. 211.** Oval-shaped piece: no decoration.  
L: 2.30.  
Provenance: Jalisco.  
Museo Regional, Guadalajara, Jal.



**Fig. 212.** Oval-shaped piece: no decoration. L: 2.30.  
Provenance: Jalisco.  
Museo Regional, Guadalajara, Jal.

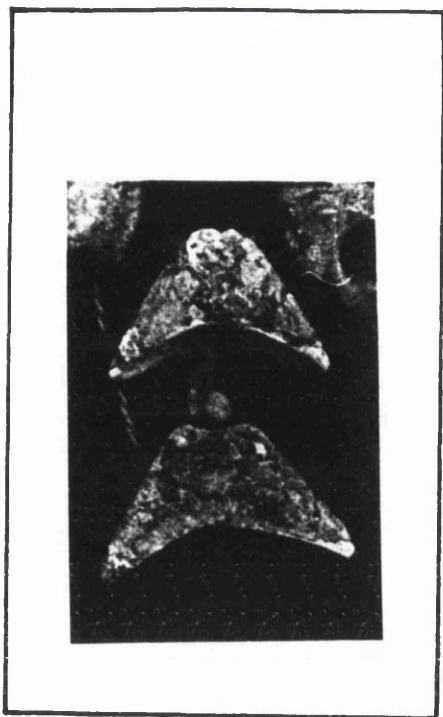


**Fig. 213.** Cross-shaped piece: no decoration.  
L: 3.50.  
Provenance: Jalisco.  
Museo Regional, Guadalajara, Jal.

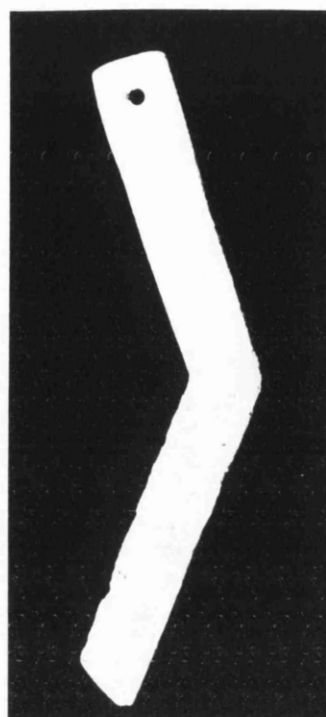


**Fig. 214.** Cross-shaped piece: no decoration. L: 1.80.  
Provenance: Jalisco.  
Museo Regional, Guadalajara, Jal.

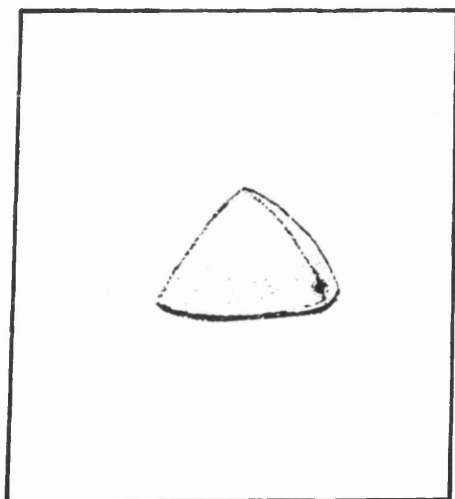




**Fig. 215.** V-shaped pieces: no decoration. L: 3.-.  
Provenance: Chupícuaro, Mich.  
Museo Nacional de Antropología, Mexico D.F.  
Mexico D.F.  
No. 2.7.2269.



**Fig. 216.** V-shaped piece: no decoration. L: 5.60.  
Provenance: Tuxcacuesco, Jal.  
Museo Nacional de Antropología,  
No. 2.3.661.



**Fig. 217.** Pyramidal-shaped piece: decoration. L: 2.10.  
Provenance: Jalisco.  
Museo Regional, Guadalajara, Jal.  
No. D 1509.



**Fig. 218.** Spherical-shaped no pieces: no decoration. D: 1.-.  
Provenance: Colima.  
Musées Royaux d'Art et d'Histoire,  
Brussels. No. AAM 39.195.



Fig. 219. Spherical-shaped pieces: no decoration. D: 2.70.  
Provenance: Churumuco, Mich.  
Museum and Art Gallery, Bristol.  
No. E 4959.

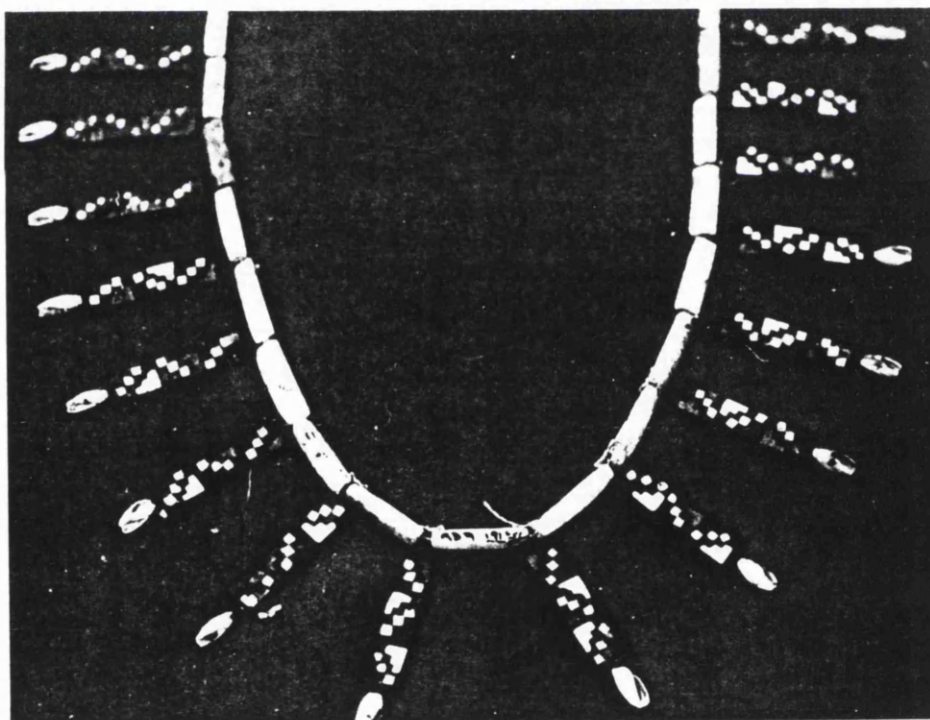
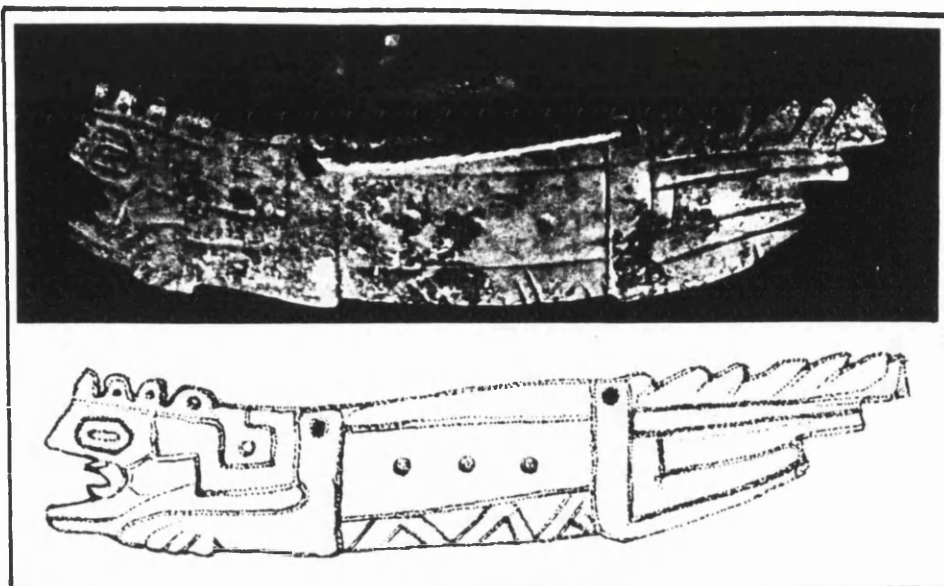
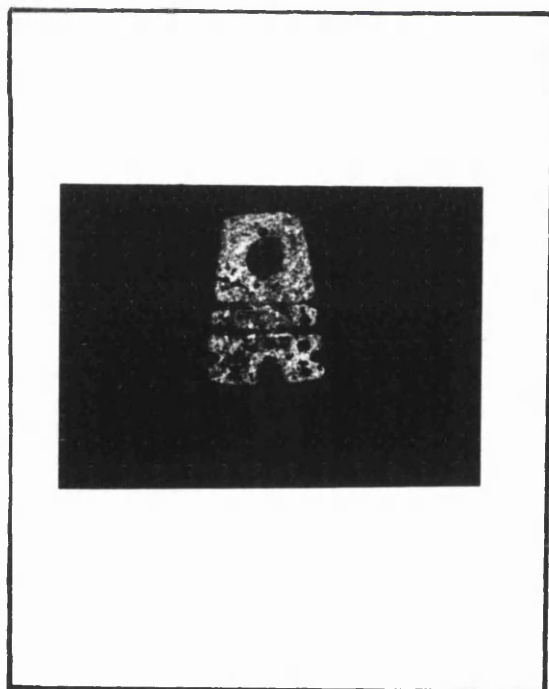


Fig. 220. "Mosaic" pieces: no decoration. L: c. 0.90.  
Provenance: El Otero, Mich. (photo museum)  
Centro de Estudios de la Revolución Mexicana, Jiquilpan, Mich.  
No. 39.PJ.191.



**Fig. 221.** Decorated quadrangular-shaped piece. L: 17.50.  
Provenance: Jalisco.  
Museo Regional, Guadalajara, Jal.

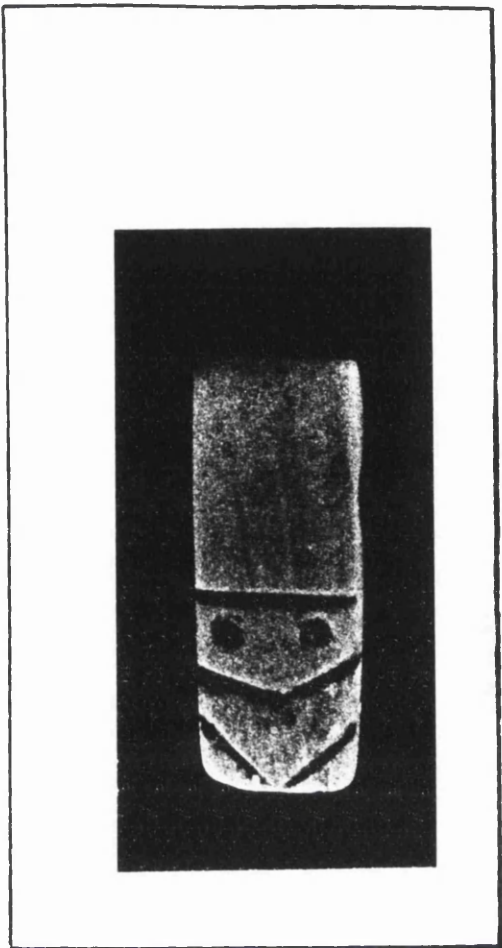


**Fig. 222.** Decorated quadrangular-shaped piece. L: 2.40.  
Provenance: Jalisco (?).  
Museo de Arqueología del Occidente de Mexico, Guadalajara. No. MRG 01886.2.3.

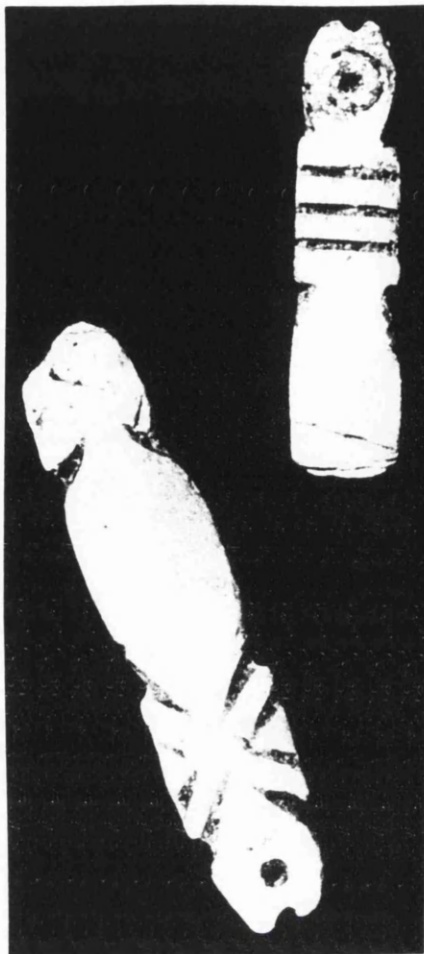


**Fig. 223.** Decorated quadrangular-shaped piece. L: 3.40.  
Provenance: Jalisco.  
Museo Regional, Guadalajara, Jal.

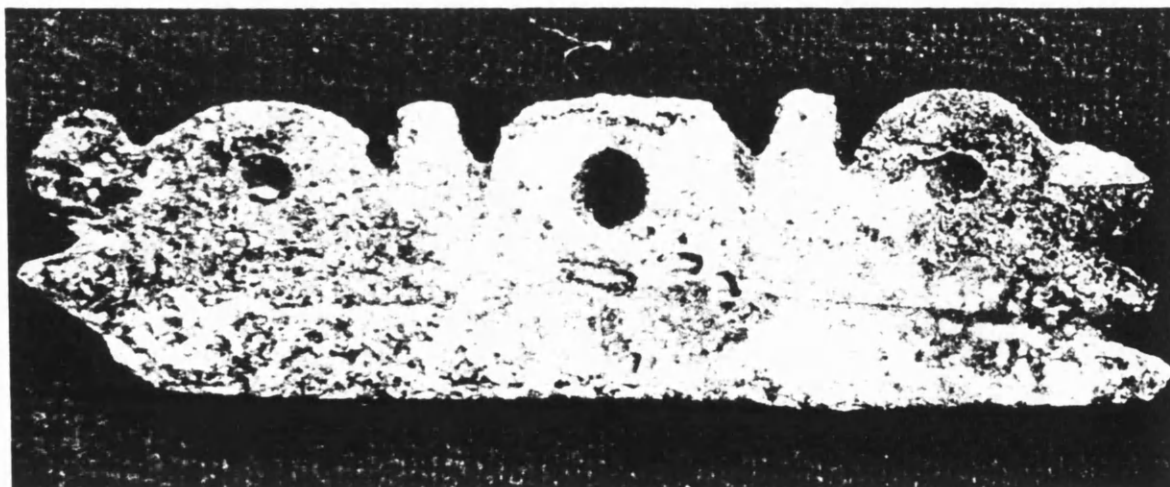




**Fig. 224.** Decorated quadrangular-shaped piece. L: 1.90.  
Provenance: Jalisco.  
Museo Regional, Guadalajara, Jal.



**Fig. 225.** Decorated quadrangular-shaped pieces. L: 5.80.  
Provenance: Colima.  
No. AAM 39.205.



**Fig. 226.** Decorated quadrangular-shaped piece. L: 6.20 .  
Provenance: Playa del Tesoro, Co.  
Centro Regional INAH, Colima, Co. Cat. No. P8.12D.

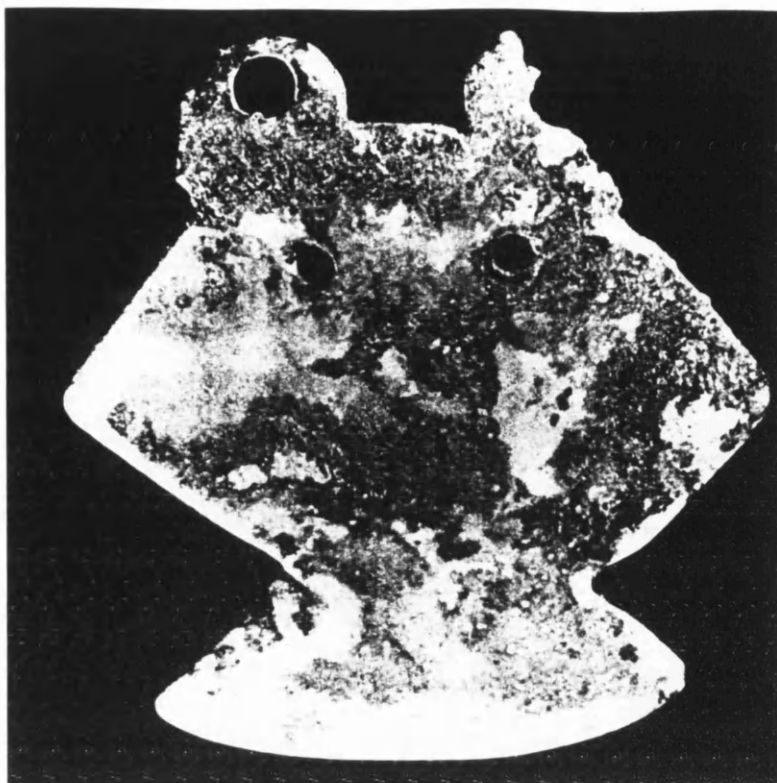


Fig. 227. Decorated quadrangular-shaped piece. L: 5.10.  
Provenance: Jalisco.  
Museo Regional, Guadalajara, Jal.

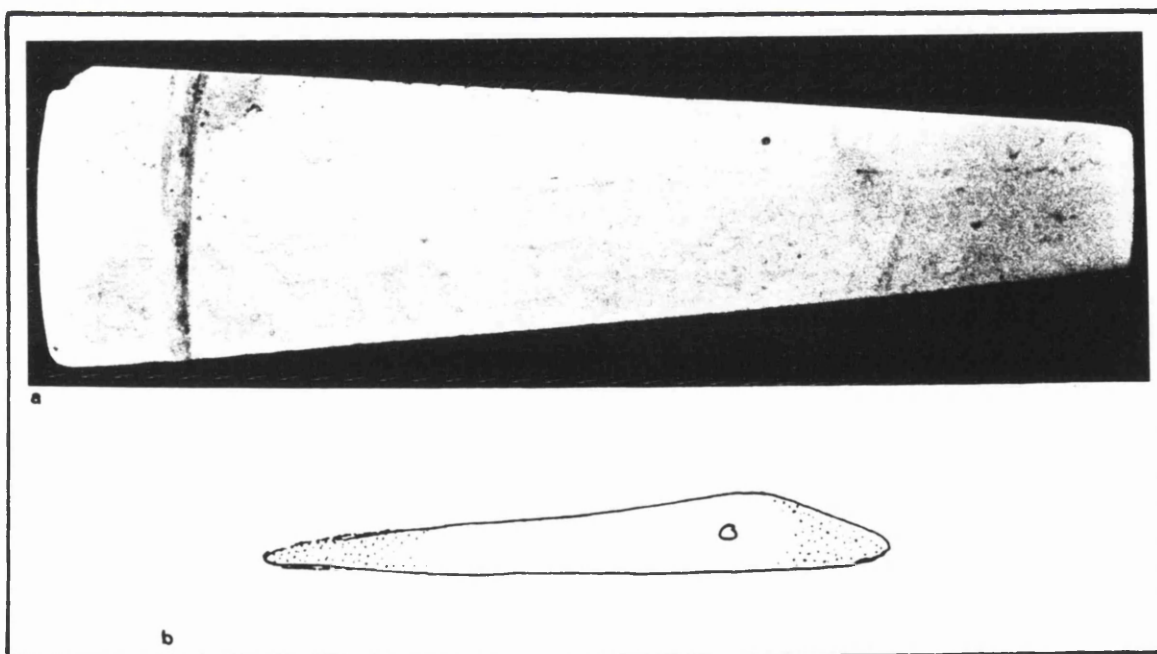
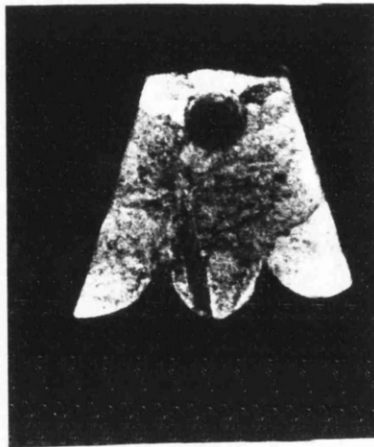
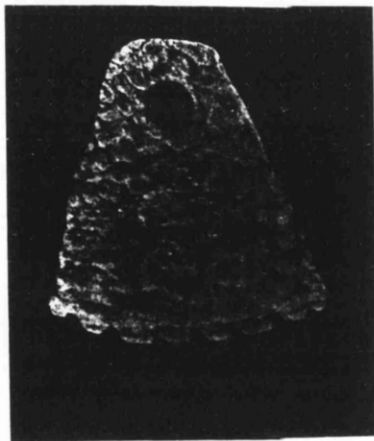


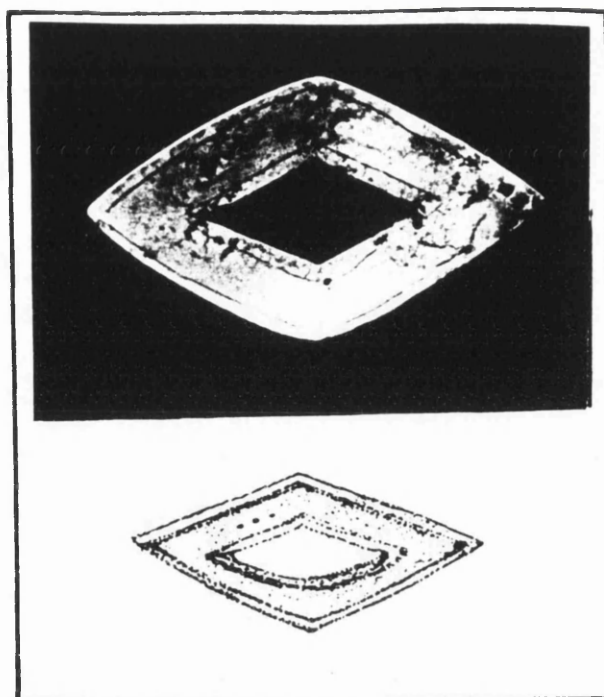
Fig. 228. Decorated quadrangular-shaped piece. L: 8.-.  
Provenance: Apatzingán, Mich.  
Museo Nacional de Antropología, Mexico D.F.  
No. 2.5.6519.



**Fig. 229.** Decorated quadrangular-shaped piece.  
L: 2.50.  
Provenance: Occidente.  
Museo Nacional de Antropología, Mexico D.F.  
No. 20.2048.



**Fig. 230.** Decorated quadrangular-shaped piece.  
L: 2.90.  
Provenance: Jalisco.  
Museo Regional, Guadalajara, Jal.



**Fig. 231.** Decorated quadrangular-shaped piece. L: c. 12.-.  
Provenance: Jalisco.  
Museo Regional, Guadalajara, Jal.



**Fig. 232.** Decorated triangular-shaped piece. L: 1.60.  
Provenance: Jalisco.  
Museo Regional, Guadalajara, Jal.



**Fig. 233.** Decorated oval-shaped piece. L: 3.60.  
Provenance: Jalisco.  
Museo Regional, Guadalajara, Jal.



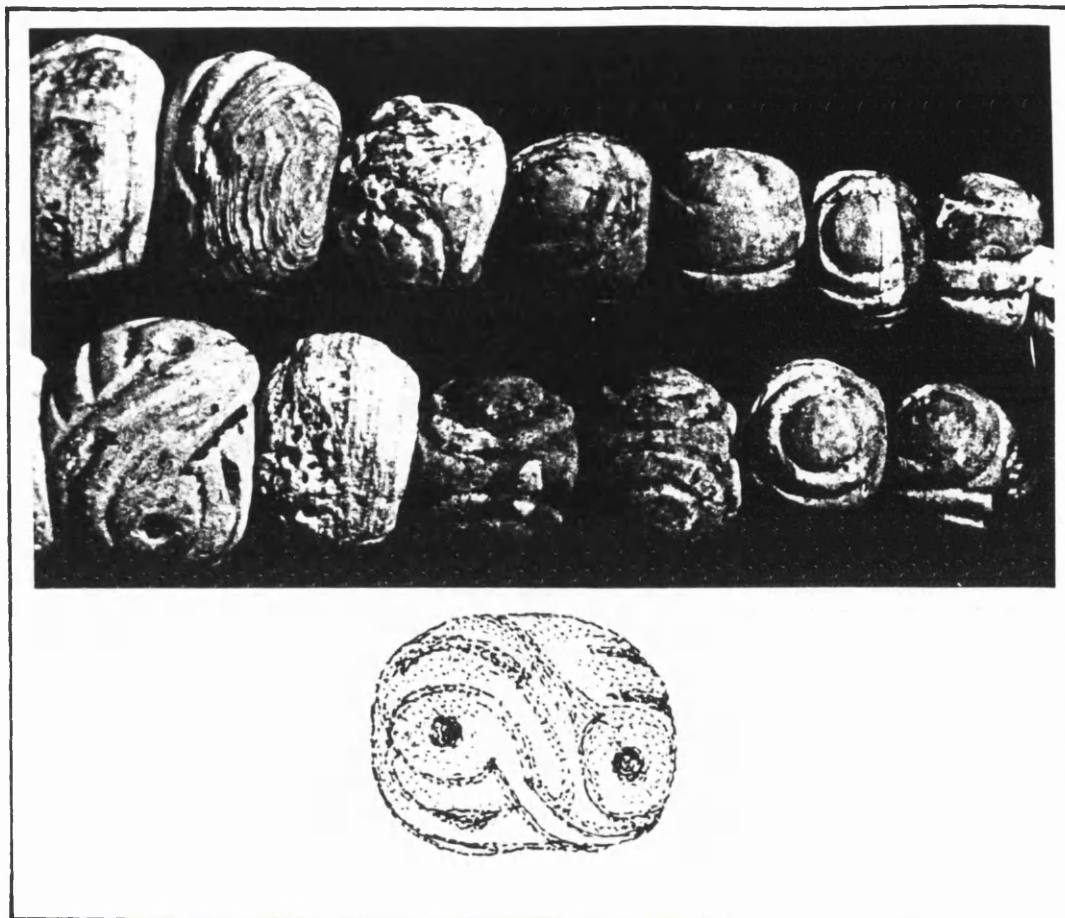


Fig. 234. Decorated spherical-shaped pieces. D: 2.30.  
Provenance: Apatzingán, Mich.  
Museo Nacional de Antropología, Mexico D.F.  
No. 2.5.6524.

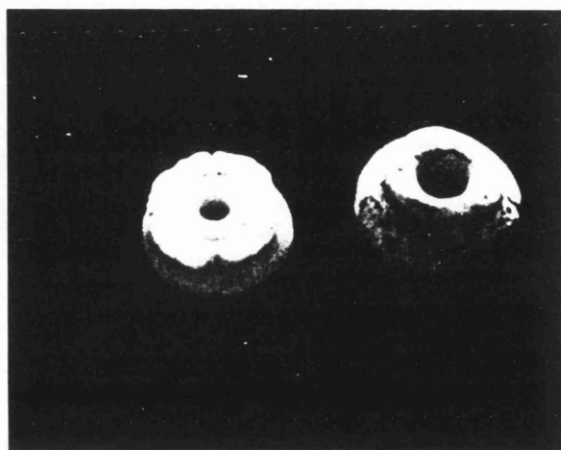


Fig. 235. Decorated spherical-shaped pieces. D: 1.50.  
Provenance: Nayarit.  
Museo Municipal, Compostela, Nay.



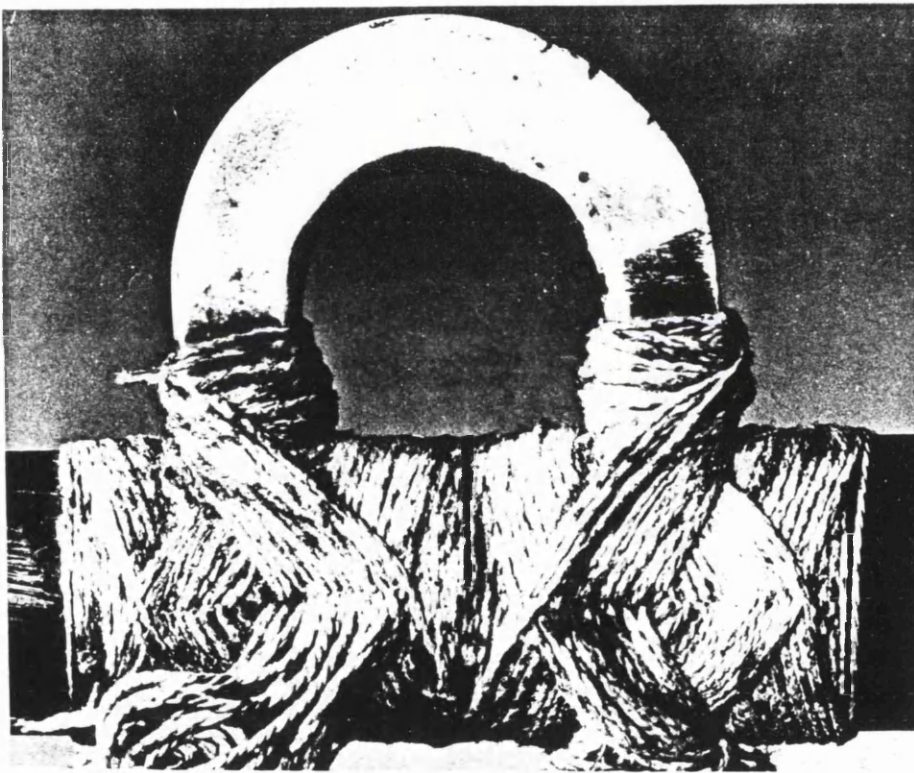
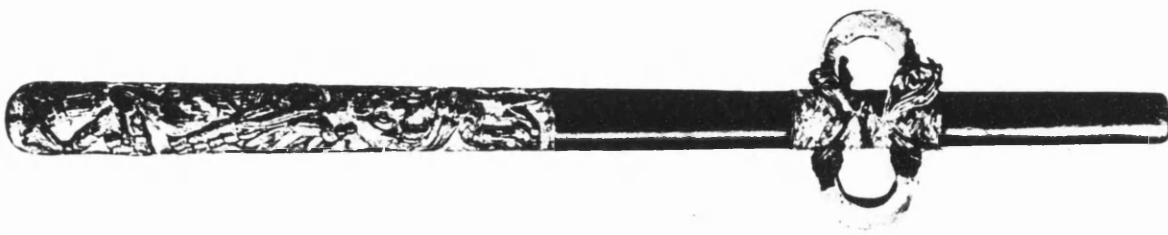
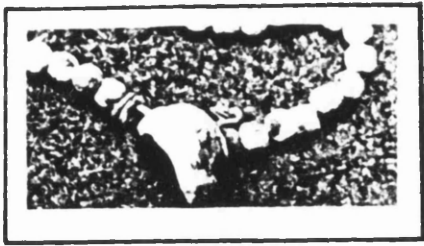
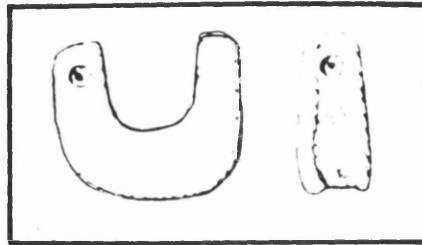


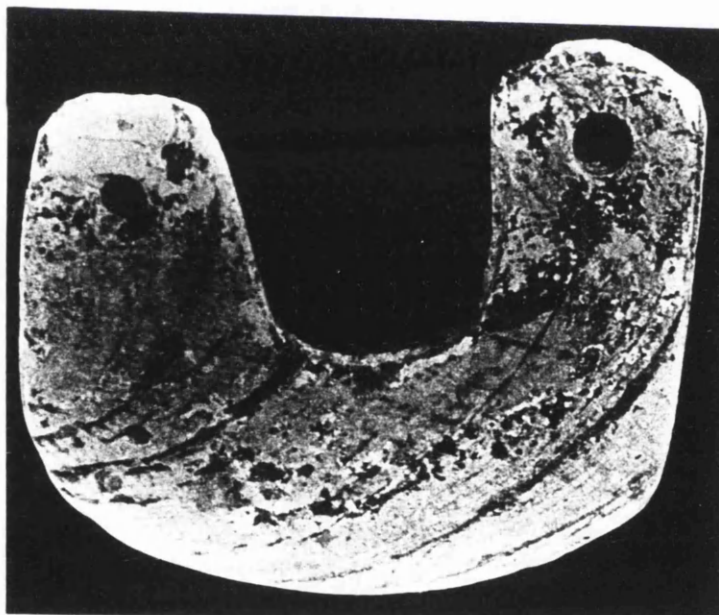
Fig. 236. Wooden "atlatl" with attached finger-loop. L: n.a.  
Provenance: Aztec. (photo museum)  
British Museum, London.  
No. CC 5226.



**Fig. 237.** Finger-loop: no decoration.  
L: 3.50.  
Provenance: Colima.  
Musées Royaux d'Art et d'Histoire, Brussels.  
No. AAM 39.195.



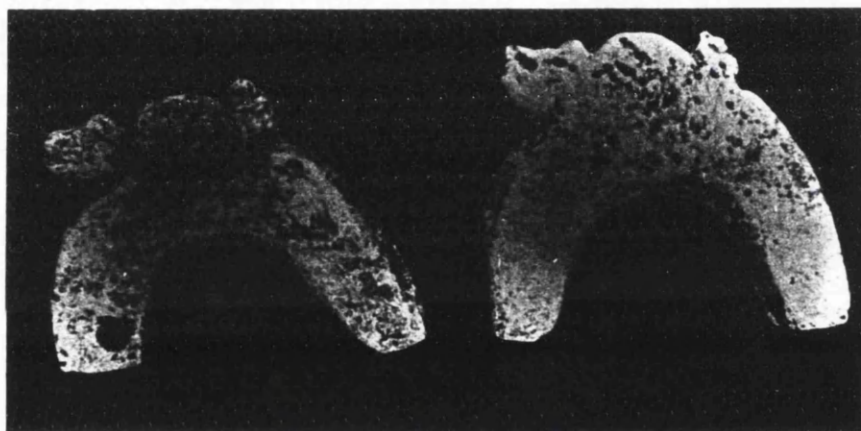
**Fig. 238.** Finger-loop: no decoration.  
L: c. 4.-.  
Provenance: Apatzingán, Mich.  
(after Kelly, 1947: Fig. 69 p)



**Fig. 239.** Finger-loop: no decoration.  
L: 3.40.  
Provenance: Jalisco.  
Museo Regional, Guadalajara, Jal.



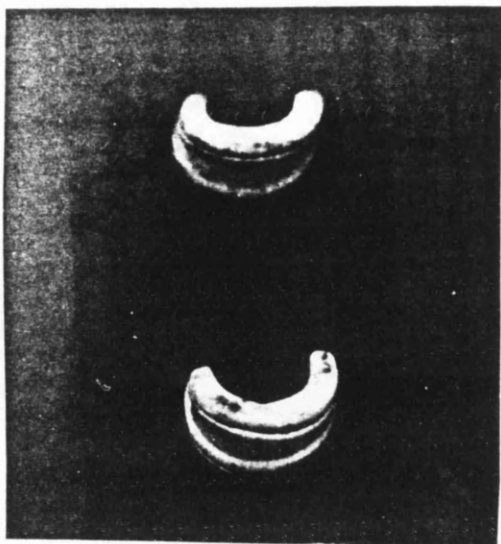
**Fig. 240.** Decorated finger-loop. L: 4.20.  
Provenance: Occidente.  
Museo Nacional de Antropología, Mexico D.F. No. 20.666.



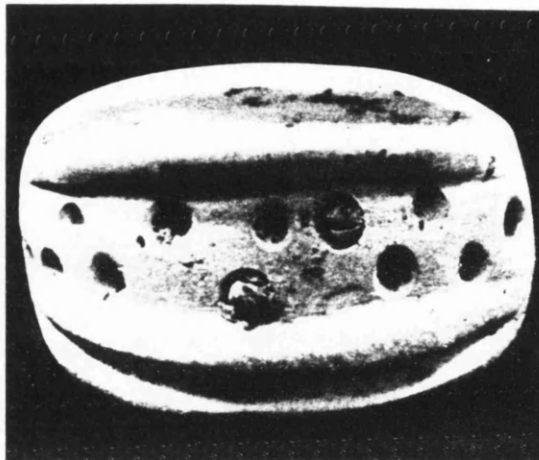
**Fig. 241.** Decorated finger-loops. L: 4.90.  
Provenance: Occidente.  
Museo de Arqueología del Occidente de Mexico, Guadalajara. No. MRG. 01589.2/2.



**Fig. 242.** Decorated finger-loops. L: 3.-.  
Provenance: Jalisco.  
Museo Regional, Guadalajara, Jal.



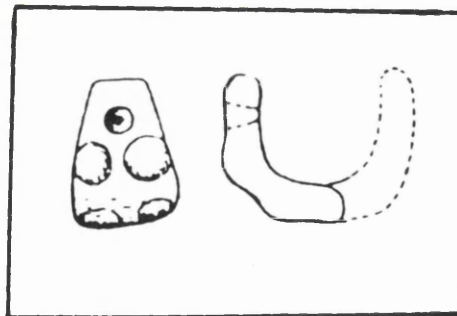
**Fig. 243.** Decorated finger-loops.  
L: 3.30.  
Provenance: Michoacán (?).  
Museum and Art Gallery, Bristol.  
No. Ea. 8474.



**Fig. 244.** Decorated finger-loop.  
L: 3.60.  
Provenance: San Gregorio, Mich.  
Museo Nacional de Antropología,  
Mexico D.F.  
No. 2.5.6468.

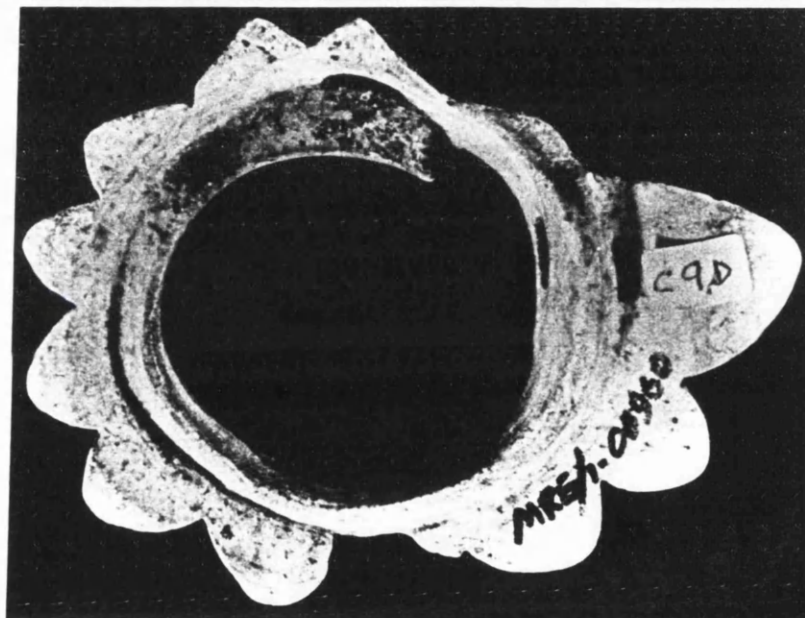
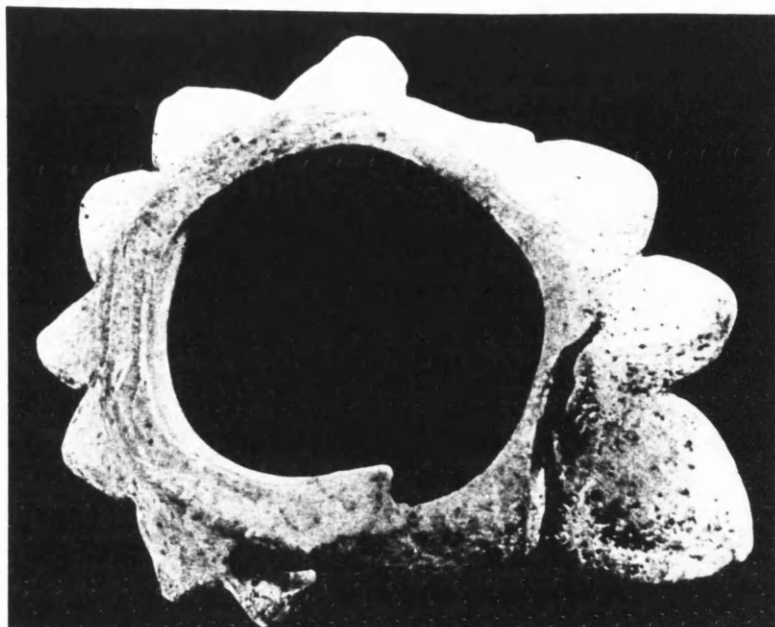


**Fig. 245.** Decorated finger-loops.  
L: 3.50.  
Provenance: Apatzingán, Mich.  
Museo Nacional de Antropología, Mexico D.F.  
No. 2.5.6740.



**Fig. 246.** Decorated finger-loop.  
L: c. 4.-.  
Provenance: Apatzingán, Mich.  
(after Kelly, 1947: Fig. 69 r)

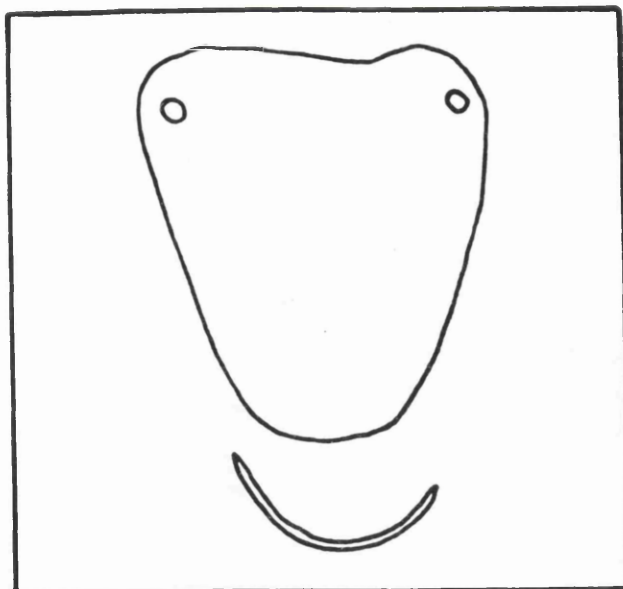




**Fig. 247.** Spiral-shaped ornament. L: 10.20.  
Provenance: Jalisco.  
Museo Regional, Guadalajara, Jal. No. MRG 1.05960.



**Fig. 248.** Spiral-shaped ornament. L: 5.50.  
Provenance: Apatzingán, Mich.  
Museo Nacional de Antropología, Mexico D.F. No. 2.5.6532.



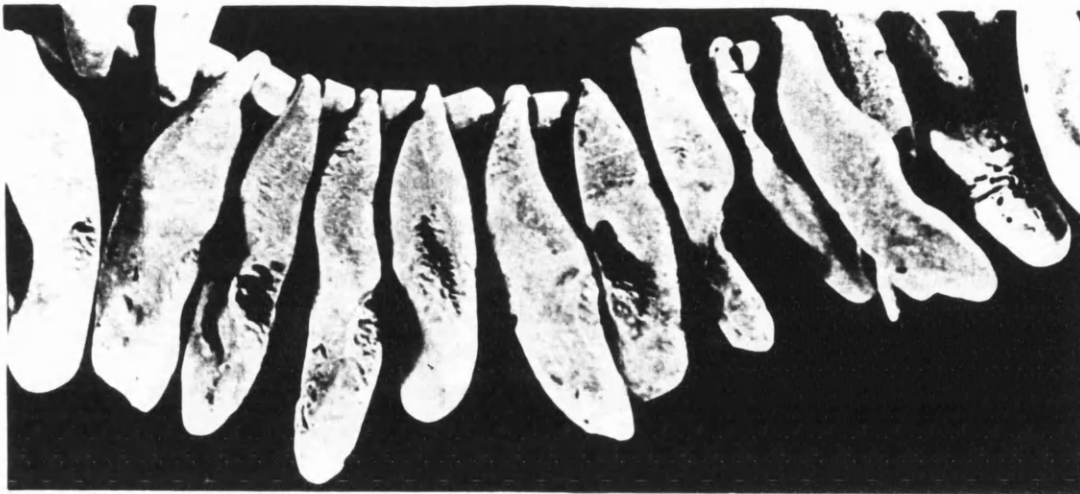
**Fig. 249.** Spoon-shaped ornament: no decoration. L: c. 4.-.  
Provenance: Cerro de Huistle, Jal.  
(after Olguin, 1983: Fig. 18 a)



**Fig. 250.** Columella piece. L: 6.20.  
Provenance: Occidente.  
Museo Nacional de Antropología, Mexico D.F.  
No. 20.2046.



**Fig. 251.** Columella piece. L: 14.50.  
Provenance: Jalisco.  
Museo Regional, Guadalajara, Jal.



**Fig. 252.** Columella pieces. L: 1.20.  
Provenance: Jalisco.  
Museo Regional, Guadalajara, Jal.



**Fig. 253.** Miscellaneous ornament. L: 10.20.  
Provenance: Jalisco.  
Museo Regional, Guadalajara, Jal. No. MRG 1.00956.



**Fig. 254.** Miscellaneous ornament. L: 8.40.  
Provenance: Jalisco.  
Museo Regional, Guadalajara, Jal.



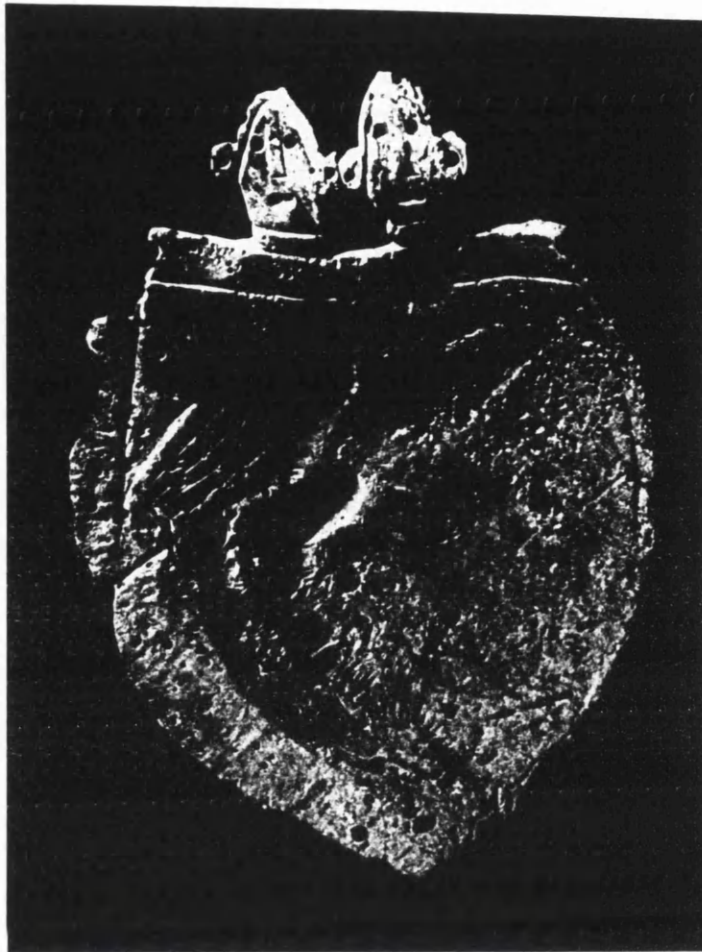


Fig. 255. Decorated spoon-shaped ornament. L: 12.20.  
Provenance: Jalisco.  
Museo Regional, Guadalajara, Jal. No. 2813.D 1659.

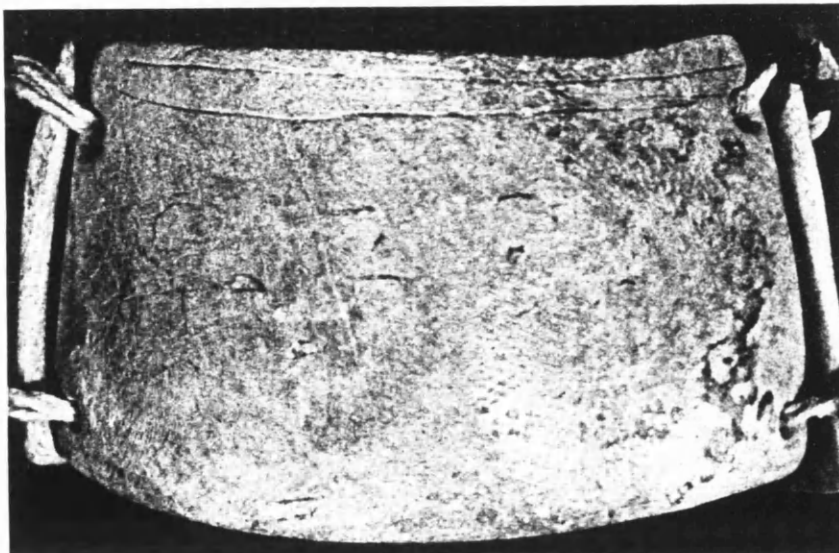
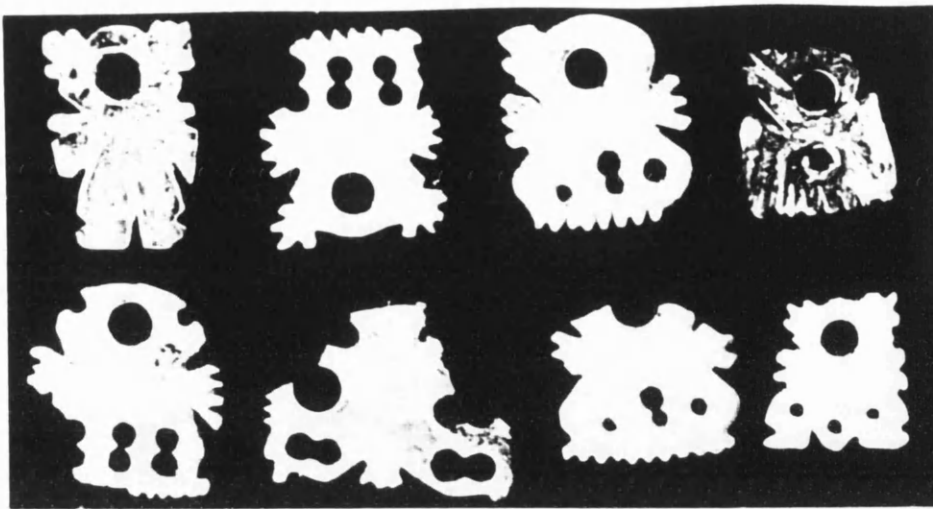
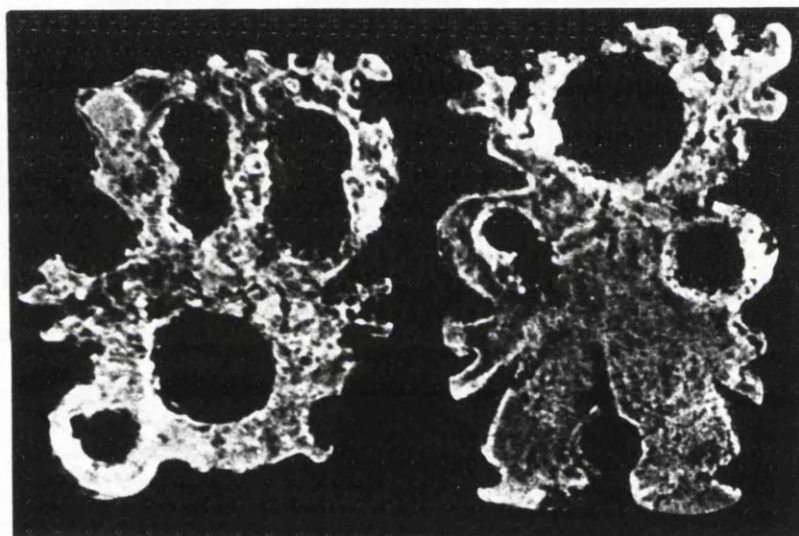


Fig. 256. Decorated rectangular convex plate. L: 6.90.  
Provenance: Apatzingán, Mich.  
Museo Nacional de Antropología, Mexico D.F. No. 2.5.6523.

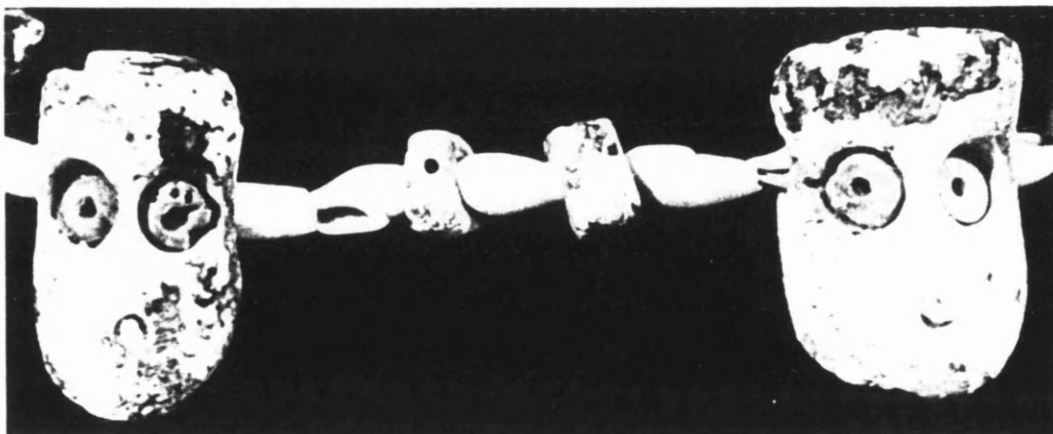




**Fig. 257.** "Mosaic" pieces. L: 3.20.  
Provenance: Jalisco.  
Museo Regional, Guadalajara, Jal. No. C 8.g.477.76.

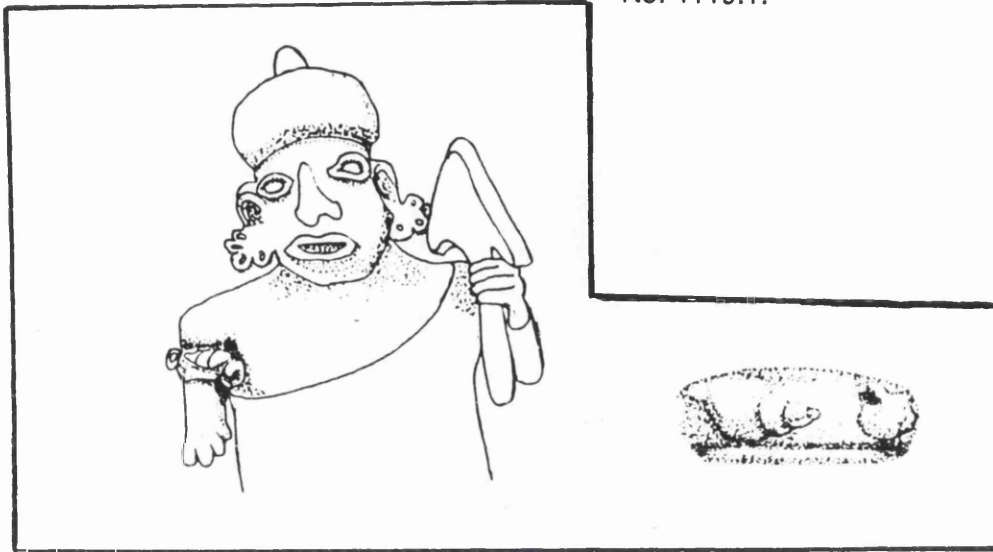


**Fig. 258.** "Mosaic" pieces. L: 1-1.90.  
Provenance: Jalisco.  
Museo Regional, Guadalajara, Jal.

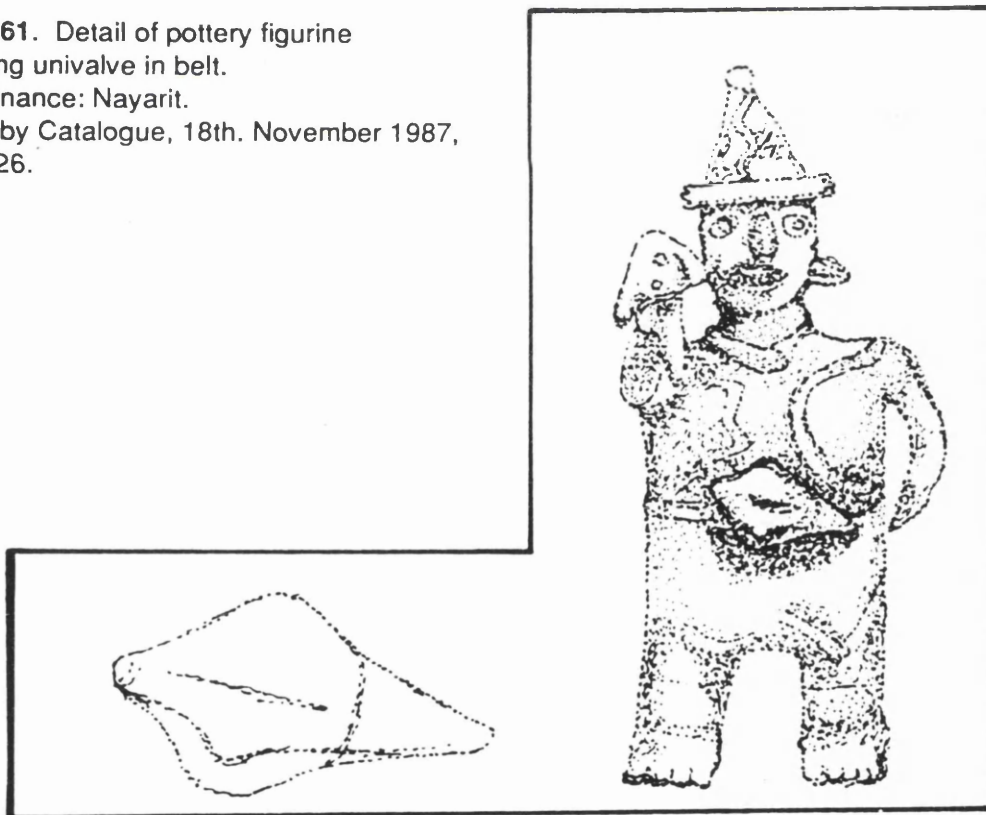


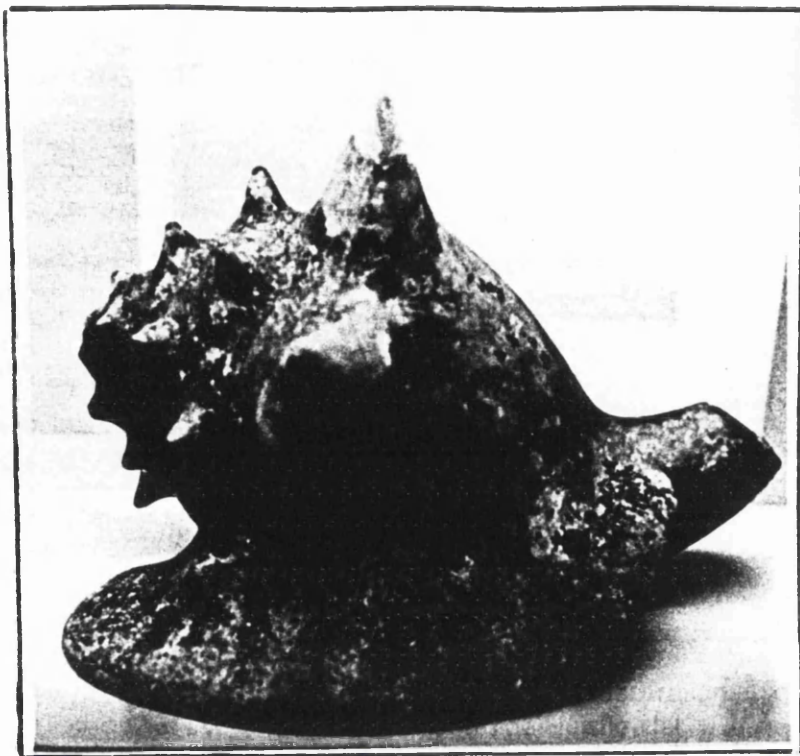
**Fig. 259.** Anthropomorphic representations. L: 3.-.  
Provenance: San Gregorio, Mich.  
Museo Nacional de Antropología, Mexico D.F. No. 2.5.6459.

**Fig. 260.** Detail of pottery figurine wearing univalve in armband.  
Provenance: Nayarit.  
Rijksmuseum voor Völkerkunde, Leiden.  
No. 4119.1.

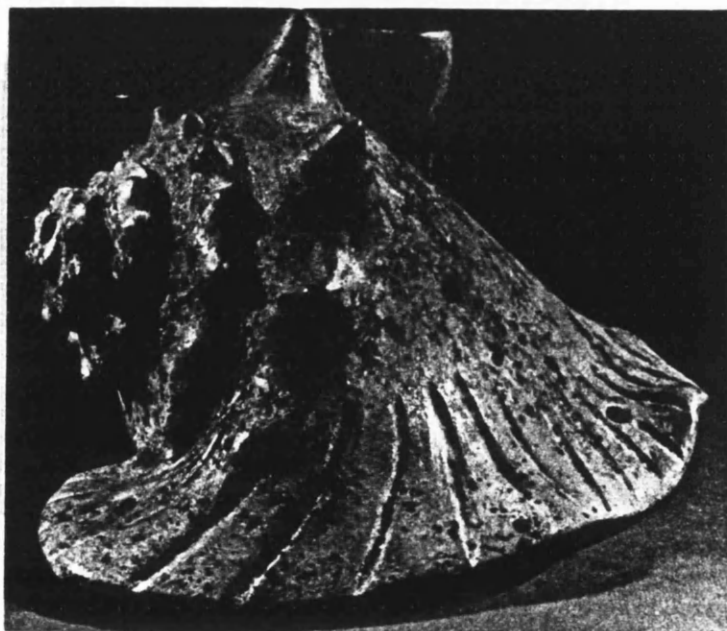


**Fig. 261.** Detail of pottery figurine wearing univalve in belt.  
Provenance: Nayarit.  
Sotheby Catalogue, 18th. November 1987,  
No. 126.

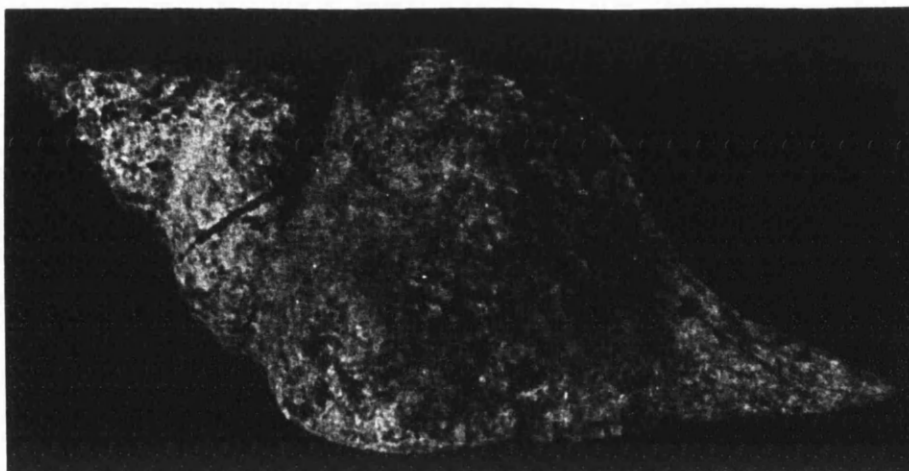




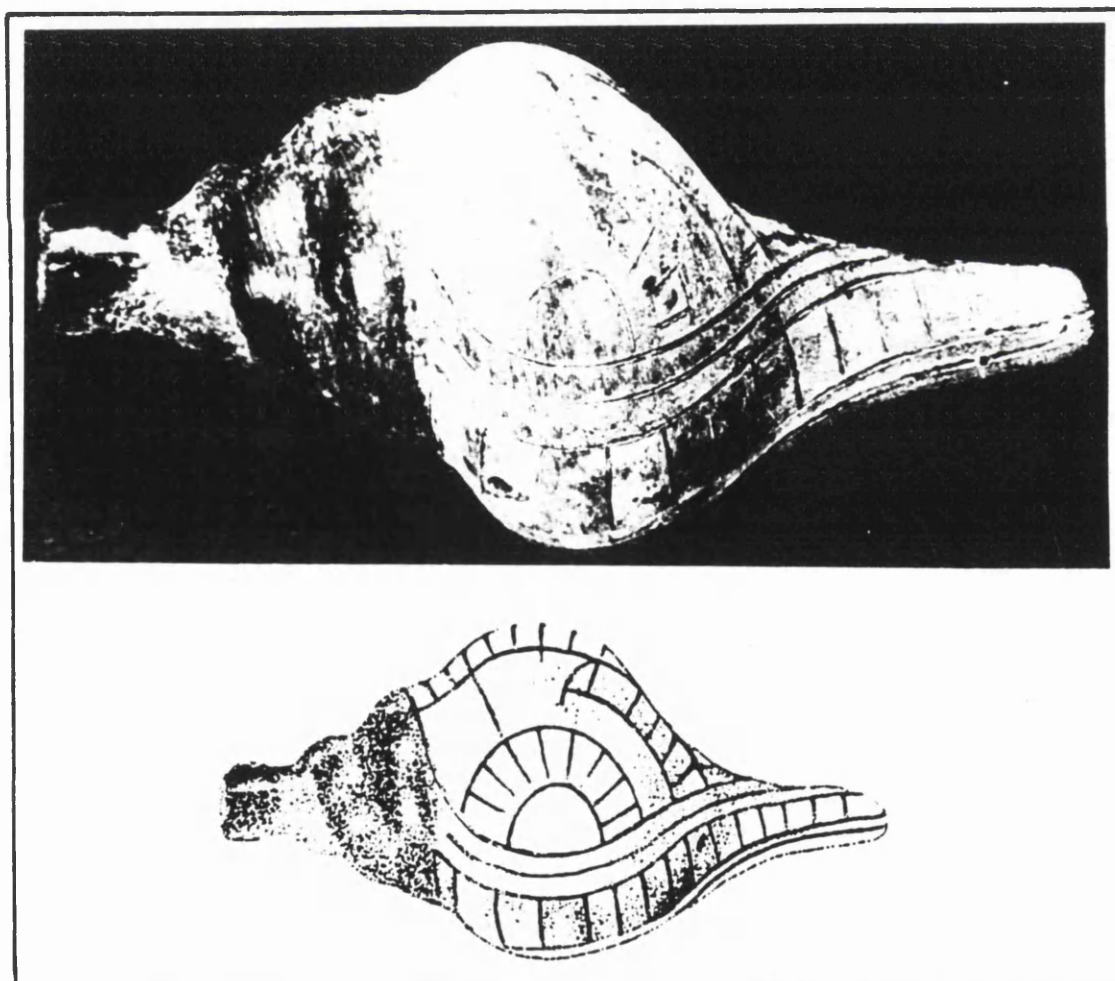
**Fig. 262.** Pottery representation of univalve. L: n.a.  
Provenance: Colima.  
Museo Nacional de Antropología, Mexico D.F. No. 2.4. 333.



**Fig. 263.** Pottery representation of univalve. L: 24.90.  
Provenance: Colima.  
Cleveland Museum of Art, Chicago. No. CMA 66 127.



**Fig. 264.** Pottery representation of univalve. L: 43.-.  
Provenance: Colima.  
Charles W. Bowers Museum, Santa Ana, Ca. No. EL 78.14.46.



**Fig. 265.** Decorated pottery representation of univalve. L: c. 20.-.  
Provenance: Valle de Atemajac, Jal. (photo museum)  
Museo de Arqueología del Occidente de México, Guadalajara.



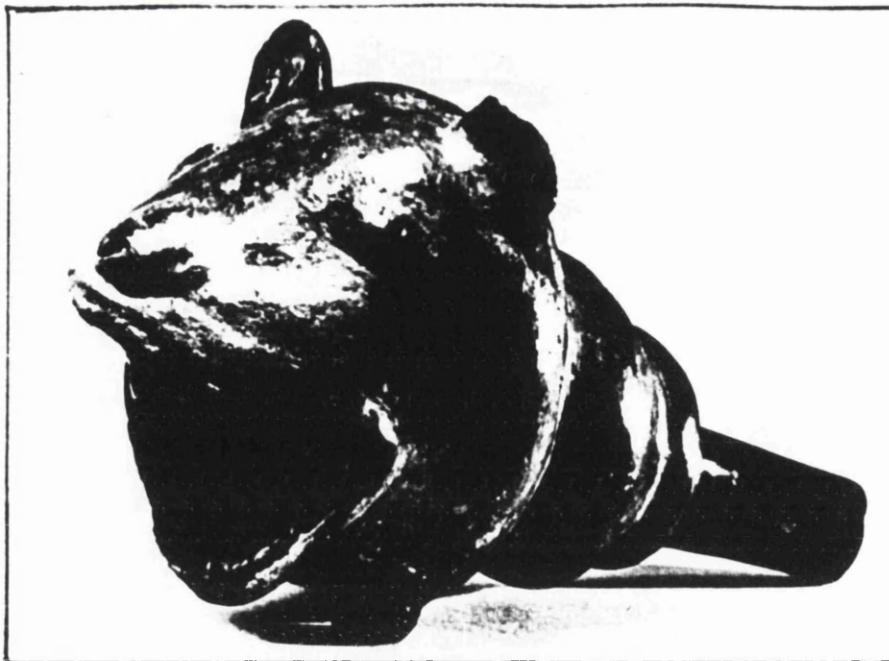


Fig. 266. "Composite piece": pottery. L: 26.30.  
Provenance: Jalisco/ Colima. (photo museum)  
Musée de l'Homme, Paris. No. MH 87.101.345.

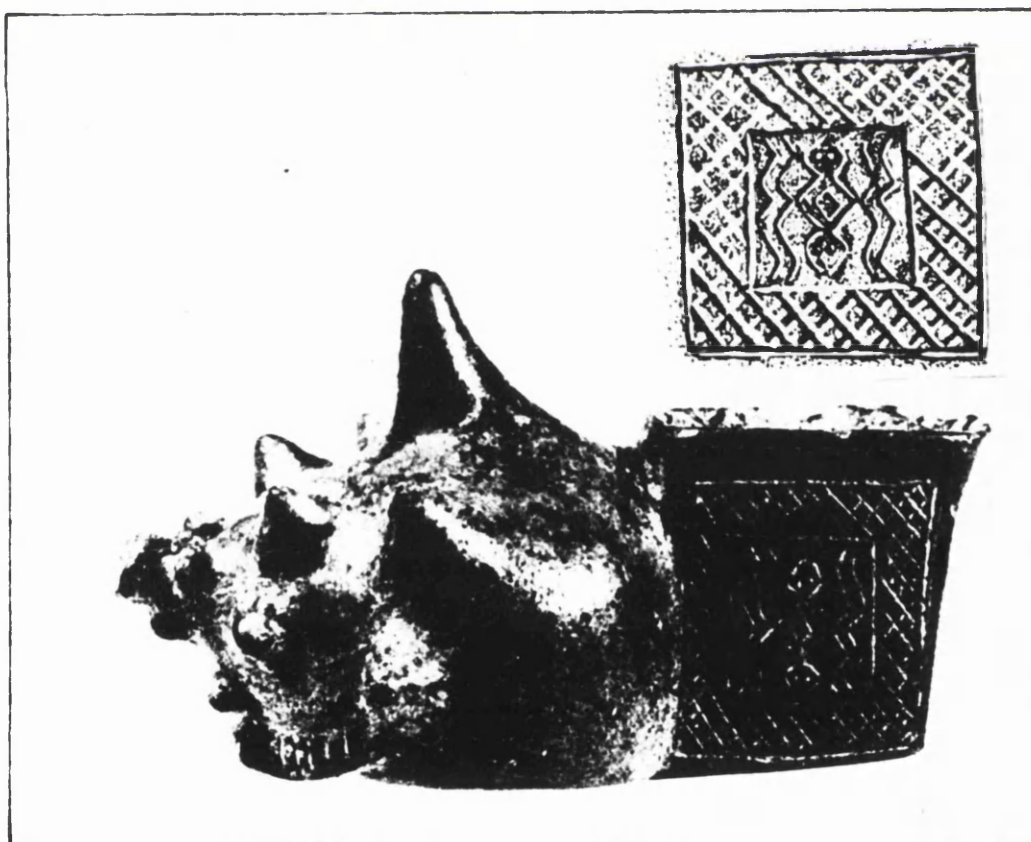


Fig. 267. "Composite piece": pottery. L: 20.50.  
Provenance: Colima. (photo museum)  
Museum of Cultural History, UCLA. No. 71.00497.



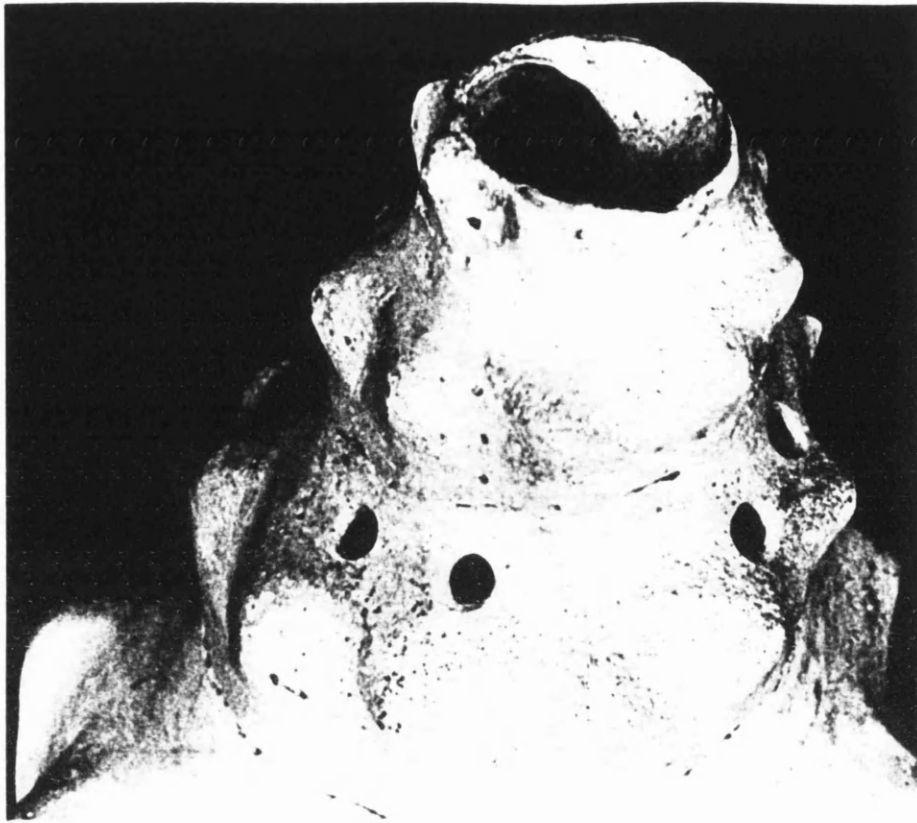
**Fig. 268.** Pottery figurines blowing shell trumpets. L: n.a.  
Provenance: Colima. (photo museum)  
Museum of Cultural History, UCLA.



**Fig. 269.** Pottery figurine holding  
a shell trumpet.  
Provenance: Colima.  
(after Piña Chan, 1960: Fig. 47)



**Fig. 270.** Pottery figurine carrying  
a shell trumpet.  
Provenance: Colima.  
(after Bell, 1971: Fig. 31 c)



**Fig. 271.** Holes around the spire of a univalve.  
Provenance: Veracruz.  
Pitt Rivers Museum, Oxford. No. 1893.69.1.



**Fig. 272.** Holes around the spire of a univalve.  
Provenance: Churumuco, Mich.  
Museum and Art Gallery, Bristol. No. E 8103.



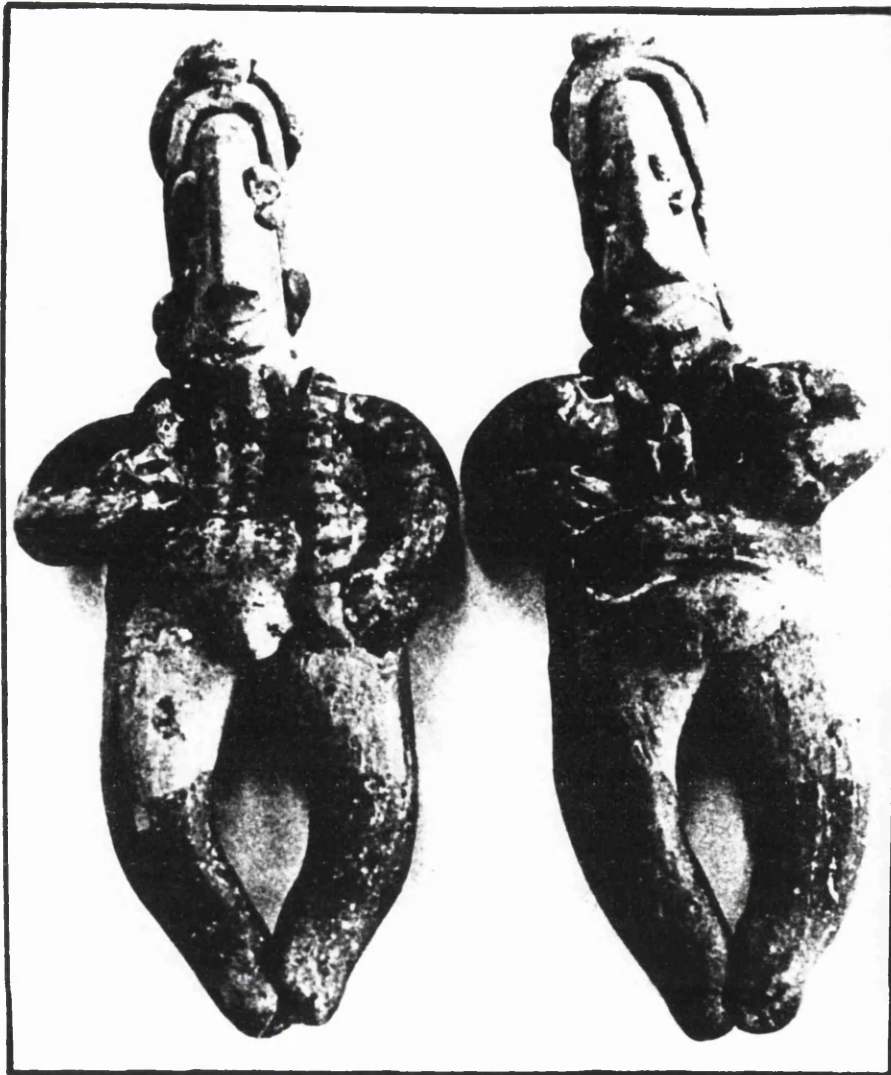


Fig. 273. Pottery figurines. L: 17.-.  
Provenance: Jalisco.  
British Museum, London. No. HM 26127.

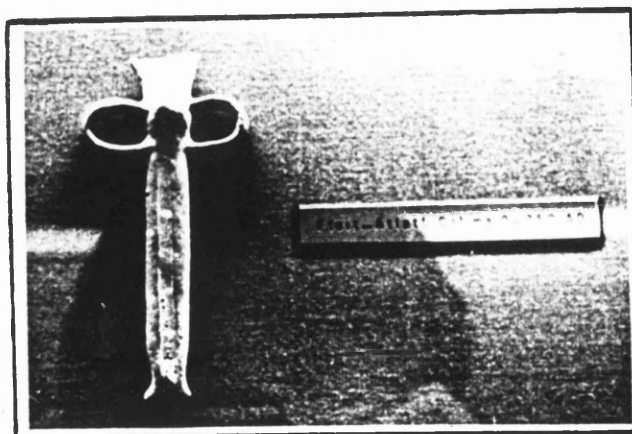


Fig. 274. Pottery whistle in the shape of an atlatl. L: 14.50.  
Provenance: Colima.  
Rijksmuseum voor Völkerkunde, Leiden. No. 4445.3.