Acoustic identification of Mexican bats based on taxonomic and ecological constraints on call design – Supporting Information

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Table S1. Metadata for the search-phase echolocation calls collected during field work in Mexico from June 2012 to May 2013. **Release Type:** FF-Free flying, HR-Hand release, LR-Leaving Roost, ZL-Zip line. **Surroundings:** C- Cluttered not over water, E- Edge not over water, O- Open not over water, RE- Roost emergence not over water.

Family	Species	Release Type	No. of Sequences	Surroundings
Emballonuridae	*Balantiopteryx plicata*	HR, FF	28	E, O, RE
Molossidae	*Nyctinomops femorosaccus*	HR, ZL	24	E, O
	Tadarida brasiliensis	HR, ZL, LR	140	E, RE, O
Mormoopidae	*Mormoops megalophylla*	HR, ZL	12	E, O
	Pteronotus davyi	HR	8	O
	Pteronotus parnellii	HR, ZL	50	E, O, RE
	Pteronotus personatus	HR, ZL	10	O
Natalidae	*Natalus stramineus*	HR, ZL	63	E, O
Phyllostomidae	*Anoura geoffroyi*	HR	2	C
	Artibeus hirsutus	HR	2	E
	Artibeus jamaicensis	HR, ZL	28	C, E, O
	Artibeus lituratus	HR	5	C, E
	Artibeus phaeotis	HR	44	C, E
	Artibeus toltecus	HR	2	C, E
	Chiroderma salvini	HR	4	C, E
	Desmodus rotundus	HR	7	C, E
	Glossophaga commissarisi	HR	4	E, O
	Glossophaga soricina	HR	3	E, O
	Leptonycteris yerbabuenae	HR	29	E, O
	Macrotus californicus	HR, ZL	11	E, O
	Macrotus waterhousii	HR, ZL	6	E
	Micronycteris microtis	HR	1	C
	Sturnira lilium	HR	7	C, E
	Sturnira ludovici	HR	61	C, E
Vespertilionidae	*Antrozous pallidus*	HR, ZL	71	E, O
	Corynorhinus townsendii	HR	4	E, O
	Eptesicus fuscus	HR, ZL	95	C, E, O
	Idionycteris phyllotis	HR	8	E
	Lasiurus blossevillii	HR	13	C, E, O
	Lasiurus cinereus	HR	6	O
	Lasiurus intermedius	HR	1	C
	Lasiurus xanthinus	HR, ZL	9	E, O
	Myotis auriculus	HR	2	E, O
	Myotis californicus	HR, ZL	22	E, O
	Myotis velifer	HR	3	O
	Myotis volans	HR	13	E, O
	Myotis yumanensis	HR, ZL	8	E, O
	Pipistrellus hesperus	HR, ZL	99	E, O
	Rhogeessa parvula	HR	2	E

Table S2. Metadata for the search-phase echolocation calls donated for this study. **Countries:** Br - Brazil, Ca - Canada, CR - Costa Rica, FG - French Guiana, France: Gp -Guadeloupe, Mq - Martinique, Mx - Mexico, Pa - Panama, US - U.S.A, Uk - Unknown. **Detector:** 1 - Avisoft Ultrasound Gate, 2 - Custome Device PC, 3 - Echometer 3, 4 - Pettersson 1000x, 5 - Pettersson D240, 6 - Pettersson D980, 7 - Tranquility Transect, 8 - Unknown. **Donors** (Researchers who donated the material): BR - Brock Fenton, CLG - Celia Lopez Gonzalez, CMG - Maria Cristina MacSwiney Gonzalez**,** DJ - David Jacobs , EK - Elizabeth Kalko, FL – Frédéric Leblanc, GJ - Gareth Jones, JCC - Juan Cruzado Cortes, MB – Michel Barataud, SP – Sebastien Puechmaille . **Release Type:** FC-Flight cage, FF-Free flying, HR-Hand release, IH-In hand, LR-Leaving Roost, LT-Light tagged, U-Unknown, ZL-Zip line. **Surroundings:** C-Cluttered not over water, CW-Cluttered over water, E-Edge not over water, EW- Edge over water, IR- In roost not over water, O- Open not over water, RE- Roost emergence not over water, Uk- Unknown. **Time Expansion (TE):** 1x, 8x, 10x, 15x.

Family	Species	Countries	Detector	Donors	Release Type	No. of Sequences	Surroundings	TE
Emballonuridae	*Balantiopteryx io*	Mx	5	CMG	FF	5	O	10x
	Balantiopteryx plicata	CR, Mx	1, 7	EK, JCC	FF, HR	6	CW, O	1x, 10x
	Centronycteris centralis	Pa	2	EK	FF	3	E	10x
	Peropteryx macrotis	FG, Mx, Pa	2, 5, 6	CMG, EK, MB	FF, LT	36	C,E, O, RE	10x
	Rhynchonycteris naso	CR	1, 6	DJ, EK	FF	35	C, IR, O, RE	1x, 10x
	Saccopteryx bilineata	Br, CR, Mx, Pa	1, 2, 6, 8	BF, CMG, EK	FF, HR, Uk	49	C, CW,E, O, Uk	1x, 10x, 15x
	Saccopteryx leptura	Br, FG, Pa	2, 6, 8	EK, MB	FF, LT	15	C,E, O	10x, 15x
Molossidae	*Eumops perotis*	Mx	7	JCC	FF	22	EW, OW	10x
	Eumops underwoodi	Mx	5, 6	CMG	FF	15	C,E, O	10x
	Molossus molossus	Gp, Mq	4, 6	MB	FF, LT	15	C, O	1x, 10x
	Molossus rufus	FG, Mx	6	CMG, MB	FF, HR, LR, LT	9	C, O, RE	10x
	Molossus sinaloae	Mx	6	CMG	FF	7	E, O	10x
	Nyctinomops laticaudatus	Mx	5	CMG	FF, HR	11	O, RE	10x
	Nyctinomops macrotis	Mx	6	CMG	FF	11	O	10x
	Promops centralis	Mx	6	CMG	FF	8	O	10x
	Tadarida brasiliensis	Gp, Mq, Mx	4, 5, 6, 7	CLG, JCC, MB	FC, FF, HR	12	C,E, O	1x, 10x
Mormoopidae	*Mormoops megalophylla*	Mx	5, 6	CLG, CMG	FF, HR, IH	20	E, O, RE	10x
	Pteronotus davyi	FG, Gp, Mq, Mx	3, 4, 5, 6, 8	BF, CMG, FL, MB	FF, HR, Uk	65	C, CW,E, O, RE, Uk	1x, 10x
	Pteronotus gymnonotus	Mx	3, 5	CMG	FF	13	O	1x, 10x
	Pteronotus parnellii	Br, FG, Mx, Uk	3, 5, 6, 8	BF, CMG, EK, MB	FF, HR, LT, Uk	70	C,E, O, Uk	1x, 10x, 15x
	Pteronotus personatus	Mx	5, 6, 8	CMG, EK	FF, HR	11	C,E, O	1x, 10x
Natalidae	*Natalus stramineus*	Gp, Mx	6, 8	EK, MB	FF	21	C, RE	1x, 10x
Noctilionidae	*Noctilio leporinus*	Gp, Mq, Mx	4, 5, 6	CMG, MB	FF, HR	15	C, CW, O	1x, 10x
Phyllostomidae	*Anoura geoffroyi*	FG, Pa	6, 8	EK, MB	HR, LT	12	C	1x, 10x
	Artibeus jamaicensis	CR, FG, Gp, Mq, Mx, Pa	4, 6, 8	CMG, EK, FL, MB, SP	HR, LT	71	C, O, Uk	1x, 10x
	Artibeus lituratus	Br, FG, Pa	4, 6, 8	CMG, EK, MB, SP	HR, LT	10	C, O, Uk	1x, 10x, 15x
	Artibeus phaeotis	Pa	8	EK	HR	4	C	1x
	Artibeus toltecus	CR, Mx	6, 8	CMG, EK	HR	4	C, O	1x, 10x
	Artibeus watsoni	Pa	8	EK	HR	2	C	1x
	Carollia perspicillata	CR, FG, Pa	6, 8	DJ, EK, MB	HR, LT, Uk	11	C, O	1x, 10x
	Carollia sowelli	Mx	6	CMG	HR	5	E, O	10x
	Chiroderma villosum	FG, Pa	6, 8	EK, MB	HR, LT	3	C	1x, 10x
	Choeronycteris mexicana	US	8	GJ	HR	2	Uk	10x
	Desmodus rotundus	FG, Pa	6, 8	EK, MB	HR, LT	15	C	1x, 10x
	Diaemus youngi	FG	6	MB	LT	4	C	10x

	Glossophaga commissarisi	Pa	8	EK	HR	1	C	1x
	Glossophaga soricina	FG, Mx, Pa	4, 6, 8	CMG, EK, MB, SP	HR, LT	10	C,E, Uk	1x, 10x
	Hylonycteris underwoodi	Mx	6	CMG	HR	1	O	10x
	Lampronycteris brachyotis	Br	8	EK	HR	1	C	15x
	Leptonycteris yerbabuenae	US	8	GJ	HR	1	Uk	10x
	Micronycteris microtis	FG	6	MB	LT	2	C	10x
	Mimon cozumelae	Mx	6	CMG	HR	2	C	10x
	Mimon crenulatum	FG, Pa	6, 8	EK, MB	HR, LT	6	C	1x, 10x
	Phylloderma stenops	FG	6	MB	LT	2	C	10x
	Phyllostomus discolor	Br, FG, Mx	3, 6, 8	CMG, DJ, EK, MB	HR, LT	9	C, O	1x, 10x, 15x
	Platyrrhinus helleri	FG	6	MB	LT	3	C	10x
	Sturnira lilium	CR, FG, Mq, Mx	4, 6, 8	CMG, EK, MB, SP	FF, HR, IH, LT	16	C,E, O, Uk	1x, 10x
	Sturnira ludovici	CR, Mx	6, 8	CMG, EK	HR	4	C,E, O	1x, 10x
	Tonatia saurophila	FG	6	MB	LT	3	C	10x
	Trachops cirrhosus	Br, FG, Pa	6, 8	EK, MB	FC, HR, LT	78	C	1x, 8x, 10x, 15x
	Trinycteris nicefori	FG, Pa	6, 8	EK, MB	HR, LT	2	C	1x, 10x
	Uroderma bilobatum	Br, FG, Mx, Pa	6, 8	CMG, EK, MB	HR, LT	5	C, O	1x, 10x, 15x
	Vampyrodes caraccioli	FG, Pa	6, 8	EK, MB	HR, LT	4	C	1x, 10x
Thyropteridae	*Thyroptera tricolor*	CR, FG	6	DJ. MB	FC, HR, LT	6	C, O	10x
Vespertilionidae	*Antrozous pallidus*	Mx, US	5, 7, 8	CLG, GJ, JCC	HR	20	CW, E, O	10x
	Bauerus dubiaquercus	Mx	3	CMG	HR	7	O	1x
	Corynorhinus mexicanus	Mx	5	CLG	HR, IH	9	C,E	10x
	Corynorhinus townsendii	Mx, US	5, 7, 8	CLG, GJ, JCC	FC, HR, IH	16	C, CW, O	10x
	Eptesicus brasiliensis	CR	8	EK	FF, HR, IH	7	C	1x
	Eptesicus furinalis	FG, Mx	6, 8	CMG, EK, MB	FF, HR, LT	30	C,E, O	1x, 10x
	Eptesicus fuscus	Br, Ca, Mx, Pa, US, Uk	5, 6, 7, 8	BF, CLG, DJ, EK, GJ, JCC	FF, HR, IH, Uk	117	C,E, EW, O, Uk	1x, 10x
	Euderma maculatum	Uk	8	BF	Uk	1	Uk	10x
	Idionycteris phyllotis	Mx, US	5, 8	CLG, GJ	HR	3	E, O	10x
	Lasionycteris noctivagans	Ca, Uk	8	BF	Uk	65	Uk	1x
	Lasiurus blossevillii	Mx	6, 7	CMG, JCC	HR	2	EW, O	10x
	Lasiurus borealis	Ca, Uk	8	BF	Uk	9	Uk	1x
	Lasiurus cinereus	Ca, Mx, Uk	5, 7, 8	BF, CLG, JCC	HR, IH, Uk	49	E, EW, Uk	1x, 10x
	Lasiurus ega	Mx	7	JCC	FC	5	C	10x
	Lasiurus intermedius	Mx	4	SP	HR	1	Uk	1x
	Lasiurus xanthinus	Mx	7	JCC	HR	1	C	10x
	Myotis thysanodes	Mx, US	5, 8	CLG, GJ	HR	7	C, O	10x
	Myotis albescens	Pa	8	EK	HR	2	C	1x
	Myotis auriculus	Mx, US	5, 8	CLG, GJ	HR	10	C,E, EW, O	10x
	Myotis californicus	Mx, US	5, 7, 8	CLG, GJ, JCC	FC, HR	13	C,E, O	10x
	Myotis keaysi	Mx, Pa	4, 6, 8	CMG, EK, SP	FF, HR	36	C, CW,E, O	1x, 10x
	Myotis melanorhinus	Mx	5, 7	CLG, JCC	FC, FF, HR, IH	13	CW, E, EW	10x
	Myotis nigricans	CR	8	EK	FF	2	C	1x
	Myotis planiceps	Mx	8	JCC	HR	24	O	1x
	Myotis velifer	Mx, US	3, 5, 6, 7, 8	BF, CLG, CMG, GJ, JCC	FC, FF, HR, Uk	85	C, CW,E, EW, O, Uk	1x, 10x
	Myotis volans	Mx, US	5, 8	BF, CLG, GJ	HR, Uk	16	E, O, Uk	10x
	Myotis yumanensis	Mx	5, 7	CLG, JCC	FC, HR	6	C, O	10x
	Nycticeius humeralis	Mx	6	CMG	FF, HR	13	E, O	10x
	Pipistrellus hesperus	US	8	GJ	HR	2	O	10x
	Pipistrellus subflavus	Ca	8	BF, GJ	FF, HR, Uk	35	O, Uk	1x, 10x

	Rhogeessa aeneus *Rhogeessa parvula* *Rhogeessa tumida*	Mx Mx Mx	4, 5, 6 7 6, 8	CMG, SP JCC CMG, EK	FF, HR FF, HR FF, HR	16 4 4	O, Uk CW C, O	1x, 10x 10x 1x, 10x

Table S3. Definitions of the 27 call parameters extracted by Sonobat v.3 used for training the Random Forest classifiers. Definitions were taken from the Sonobat user guide.

Parameter	Definition
BWdth	Total frequency spread of the call. Calculated from the difference between the highest and lowest frequency (kHz)
CumS	Average of the instantaneous slopes of the call (kHz/ms)
DomS	Slope of the longest sustained trend in slope of the call. Determined by finding the segment of the call having the minimum residue for a linear regression of a segment of the call of 20% the duration of the call (kHz/ms)
Dur	Duration of the call (ms)
EndF	Frequency of the end of the call. Typically the same point as the lowest frequency, but different if the call ends with a rise in frequency (kHz)
EndS	Slope at the end of the call, calculated from the final 5% of the call duration (kHz/ms)
Fc	Characteristic frequency of the call. Determined by finding the point in the final 40% of the call having the lowest slope or exhibiting the end of the main trend of the body of the call (kHz)
FCtr	Frequency at the center of the duration of the call (kHz)
FKn	Frequency at which the initial slope of the call most abruptly transitions to the slope of the body of the call (kHz)
FLed	Frequency of the ledge, i.e., the most abrupt transition to the most extended flattest slope section of the body of the call preceding the characteristic frequency, also referred to as the “ledge” of the call (kHz)
FMPwr	The frequency of the maximum amplitude of the call (kHz)
HFDmp	Damping parameter of an exponential fit of the call from the point of high frequency to the point of the characteristic frequency
HFKnS	Slope of the call calculated from the difference in frequency and time from the point of highest frequency to the point of the knee (kHz/ms)
HFreq	Highest apparent frequency of the call (kHz)
HKnDmp	Damping parameter of an exponential fit of the call from the point of the high frequency to the point of the characteristic frequency
KnDmp	Damping parameter of an exponential fit of the call from the point of the knee to the point if the characteristic frequency
KnFcS	Slope of the call calculated from the difference in frequency and time from the point of the knee to the point of the characteristic frequency (kHz/ms)
LDur	Duration of the ledge, i.e., the most extended flattest slope section of the body of the call preceding the characteristic frequency (ms)
LFreq	Lowest apparent frequency of the call (kHz)
LowS	Lowest slope of the call, calculated from a linear regression of a segment of 10% the duration of the call (kHz/ms)
PKDur	Percentage of the entire call duration at which the knee occurs, i.e., the point at which the initial slope of the call most abruptly transitions to the slope of the body of the call
SFc	Instantaneous slope at the point of the characteristic frequency (kHz/ms)
StartF	Frequency of the start of the call. Typically the same point as the highest frequency, but different if the call initially rises in frequency (kHz)
StartS	Slope at the start of the call, calculated from the first 5% of the call duration (kHz/ms)
StpS	Steepest slope of the call, calculated from a linear regression of a segment of 10% the duration of the call (kHz/ms)
TMFc	Time from the point at which the maximum amplitude occurs to the point in the call of the characteristic frequency (ms)
TotS	Total slope of the call, calculated from the difference in frequency and time from the point of highest frequency to the point of the characteristic frequency (kHz/ms)

Table S4. Number of classes (i.e., species, species with genera, species within family and species within guild) included in each hierarchy of the classifiers and number of calls used in the training process. Guild 1- Open space aerial foragers, Guild 2- Edge space aerial foragers, Guild 3- Edge space trawling foragers and Guild 4- Narrow space flutter detecting foragers. Guild 5 - Narrow space passive gleaning foragers, and Guild 6 - Narrow space passive/active gleaning foragers.

Classifier	Hierarchy	Species Acronym	Total Classes	Total Sequences	Total Calls	Minimum No. of Calls	Maximum No. of Calls
Species	*Anoura geoffroyi*	Anogeo	1	10	48	48	48
	Antrozous pallidus	Antpal	1	79	100	100	100
	Artibeus jamaicensis	Artjam	1	26	100	100	100
	Artibeus lituratus	Artlit	1	11	24	24	24
	Balantiopteryx io	Balio	1	5	22	22	22
	Balantiopteryx plicata	Balpli	1	23	100	100	100
	Carollia perspicillata	Carper	1	5	22	22	22
	Corynorhinus mexicanus	Cormex	1	9	100	100	100
	Corynorhinus townsendii	Cortow	1	17	100	100	100
	Desmodus rotundus	Desrot	1	19	41	41	41
	Eptesicus brasiliensis	Eptbra	1	6	64	64	64
	Eptesicus furinalis	Eptfur	1	21	100	100	100
	Eptesicus fuscus	Eptfus	1	100	100	100	100
	Eumops underwoodi	Eumund	1	10	16	16	16
	Idionycteris phyllotis	Idiphy	1	7	100	100	100
	Lasionycteris noctivagans	Lasnoc	1	65	100	100	100
	Lasiurus blossevillii	Lasblo	1	13	100	100	100
	Lasiurus borealis	Lasbor	1	7	47	47	47
	Lasiurus cinereus	Lascin	1	13	100	100	100
	Lasiurus ega	Lasega	1	5	15	15	15
	Lasiurus xanthinus	Lasxan	1	10	100	100	100
	Leptonycteris yerbabuenae	Lepyer	1	27	100	100	100
	Macrotus californicus	Maccal	1	8	69	69	69
	Molossus molossus	Molmol	1	14	91	91	91
	Molossus rufus	Molruf	1	6	36	36	36
	Molossus sinaloae	Molsin	1	7	33	33	33
	Mormoops megalophylla	Mormeg	1	29	100	100	100
	Myotis auriculus	Myoaur	1	10	100	100	100
	Myotis californicus	Myocal	1	11	100	100	100
	Myotis keaysi	Myokea	1	35	100	100	100
	Myotis melanorhinus	Myomel	1	8	73	73	73
	Myotis thysanodes	Myothy	1	7	100	100	100
	Myotis velifer	Myovel	1	79	100	100	100
	Myotis volans	Myovol	1	21	100	100	100
	Myotis yumanensis	Myoyum	1	13	100	100	100
	Natalus stramineus	Natstr	1	32	97	97	97
	Noctilio leporinus	Noclep	1	11	52	52	52
	Nycticeius humeralis	Nychum	1	13	100	100	100
	Nyctinomops femorosaccus	Nycfem	1	20	100	100	100
	Nyctinomops laticaudatus	Nyclat	1	10	57	57	57
	Nyctinomops macrotis	Nycmac	1	8	22	22	22
	Peropteryx macrotis	Permac	1	26	100	100	100
	Pipistrellus hesperus	Piphes	1	89	100	100	100
	Pipistrellus subflavus	Pipsub	1	35	100	100	100
	Promops centralis	Procen	1	8	18	18	18
	Pteronotus davyi	Ptedav	1	53	100	100	100
	Pteronotus gymnonotus	Ptegym	1	13	47	47	47
	Pteronotus parnellii	Ptepar	1	95	100	100	100
	Pteronotus personatus	Pteper	1	17	100	100	100
	Rhogeessa aeneus	Rhoaen	1	14	100	100	100
	Rhogeessa parvula	Rhopar	1	6	27	27	27
	Rhynchonycteris naso	Rhynas	1	35	100	100	100
	Saccopteryx bilineata	Sacbil	1	34	100	100	100
	Saccopteryx leptura	Saclep	1	12	100	100	100
	Sturnira lilium	Stulil	1	13	36	36	36
	Sturnira ludovici	Stulud	1	16	95	95	95
	Tadarida brasiliensis	Tadbra	1	57	100	100	100
	Thyroptera tricolor	Thytri	1	5	31	31	31

	Trachops cirrhosus	Tracir	1	20	74	74	74
Family	Emballonuridae		6	135	515	22	99
	Molossidae		9	140	515	16	121
	Mormoopidae		5	207	515	47	117
	Natalidae		1	46	184	184	184
	Noctilionidae		1	11	81	81	81
	Phyllostomidae		10	155	515	22	57
	Thyropteridae		1	5	31	31	31
	Vespertilionidae		26	349	515	15	20
Genus	*Anoura*		1	10	48	48	48
	Antrozous		1	79	160	160	160
	Artibeus		2	37	160	55	105
	Balantiopteryx		2	28	160	22	138
	Carollia		1	5	22	22	22
	Corynorhinus		2	26	160	80	80
	Desmodus		1	19	94	94	94
	Eptesicus		3	81	160	53	54
	Eumops		1	10	16	16	16
	Idionycteris		1	7	160	160	160
	Lasionycteris		1	65	160	160	160
	Lasiurus		5	48	160	15	37
	Leptonycteris		1	27	160	160	160
	Macrotus		1	8	69	69	69
	Molossus		3	27	160	33	91
	Mormoops		1	29	160	160	160
	Myotis		8	109	160	20	20
	Natalus		1	46	160	160	160
	Noctilio		1	11	81	81	81
	Nycticeius		1	13	156	156	156
	Nyctinomops		3	38	160	22	81
	Peropteryx		1	31	160	160	160
	Pipistrellus		2	115	160	80	80
	Promops		1	8	18	18	18
	Pteronotus		4	110	160	40	40
	Rhogeessa		2	20	160	27	133
	Rhynchonycteris		1	35	160	160	160
	Saccopteryx		2	46	160	80	80
	Sturnira		2	29	146	51	95
	Tadarida		1	57	160	160	160
	Thyroptera		1	5	31	31	31
	Trachops		1	20	74	74	74
Guild	1		14	196	460	16	40
	2		23	339	460	15	20
	3		5	155	460	81	95
	4		1	95	460	460	460
	5		9	148	460	51	52
	6		7	108	460	22	95

Table S5. Taxonomic coverage of the bat call library within each family for the number of genera and species recorded / used in the classifiers. The total number occurring in Mexico is given in parenthesis. Taxonomy followed Simmons (2005).

Family	**No. Genera**	**No. Species**
Emballonuridae	5/4 (6)	7/6(9)
Molossidae	5/5 (6)	10/9 (19)
Mormoopidae	2/2 (2)	5/5 (5)
Natalidae	1/1 (1)	1/1 (1)
Noctilionidae	1/1 (1)	1/1 (2)
Phyllostomidae	23/8 (34)	34/10 (54)
Thyropteridae	1/1 (1)	1/1 (1)
Vespertilionidae	12/10 (12)	33/26 (44)
Total	**50/32 (63)**	**92/59 (135)**

Table S6. Descriptive statistics (mean and standard deviation) for the 16 most important call parameters ranked by Random Forest Gini Coefficient measured by Sonobat for the 59 species. Coefficient of variation is shown in parenthesis. Definitions of parameter abbreviations are given in Table S3 and for the species acronyms in Table S4.

Species	BWdth	DomS	Dur	EndF	Fc	FCtr	FKn	Fled	FMPwr	HFKnS	HFreq	LFreq	LowS	StartF	StartS	TotS
Anogeo	39.57±6.11 (15.44)	18.09±11.76 (65.01)	2.08±0.76 (36.54)	66.3±6.06 (9.14)	70.68±5.78 (8.18)	82.81±7.36 (8.89)	85.05±7.11 (8.36)	82.33±7.75 (9.41)	83.08±6.17 (7.43)	28.24±12.04 (42.63)	105.87±5.50 (5.20)	66.3±6.06 (9.14)	14.56±6.05 (41.55)	105.87±5.50 (5.2)	-35.04±14.84 (42.35)	20.78±8.01 (38.55)
Antpal	34.02±5.97 (17.55)	4.02±2.22 (55.22)	5.63±1.81 (32.15)	28.22±2.88 (10.21)	30.12±3.09 (10.26)	36.99±3.49 (9.43)	41.49±4.52 (10.89)	35.05±4.58 (13.07)	36.46±7.02 (19.25)	12.25±5.41 (44.16)	62.23±7.17 (11.52)	28.21±2.88 (10.21)	2.58±1.42 (55.04)	62.23±7.17 (11.52)	-16.83±7.85 (46.64)	6.59±2.86 (43.4)
Artjam	25.24±4.40 (17.43)	9.06±3.85 (42.49)	2.45±0.80 (32.65)	44.02±3.65 (8.30)	46.67±3.35 (7.18)	53.71±3.36 (6.26)	57.07±4.28 (7.50)	55.39±4.91 (8.86)	57.04±5.83 (10.22)	17.23±6.39 (37.09)	69.25±4.39 (6.34)	44.01±3.64 (8.27)	6.95±2.93 (42.16)	69.25±4.39 (6.34)	-21.82±9.10 (41.7)	10.93±3.61 (33.03)
Artlit	26.76±3.82 (14.28)	13.86±6.46 (46.61)	2.04±0.71 (34.8)	49.92±4.39 (8.80)	52.64±4.25 (8.07)	60.09±4.87 (8.1)	62.34±5.65 (9.06)	60.11±6.30 (10.48)	61.44±5.06 (8.24)	20.30±5.65 (27.83)	76.68±4.38 (5.71)	49.92±4.39 (8.79)	8.35±4.67 (55.93)	76.68±4.38 (5.71)	-22.45±7.89 (35.14)	14.49±4.37 (30.16)
Balio	8.00±1.78 (22.25)	0.40±0.17 (42.5)	5.54±0.81 (14.62)	44.82±1.92 (4.29)	49.61±1.86 (3.75)	51.83±1.51 (2.91)	51.67±1.54 (2.98)	52.2±1.73 (3.31)	51.29±1.75 (3.41)	0.61±0.72 (118.03)	52.82±1.66 (3.14)	44.82±1.92 (4.28)	0.19±0.16 (84.21)	52.46±1.64 (3.13)	-0.64±1.12 (175)	0.67±0.22 (32.84)
Balpli	4.73±2.35 (49.68)	0.30±0.64 (213.33)	7.94±2.40 (30.23)	39.10±1.79 (4.58)	42.34±1.68 (3.97)	43.08±1.17 (2.72)	43.14±1.23 (2.85)	43.35±1.39 (3.21)	43.26±1.23 (2.84)	0.34±0.72 (211.76)	43.79±1.54 (3.52)	39.06±1.80 (4.61)	0.13±0.49 (376.92)	43.72±1.57 (3.59)	-0.52±1.01 (194.23)	0.35±0.72 (205.71)
Carper	29.69±3.61 (12.16)	11.15±6.14 (55.07)	2.42±0.85 (35.12)	45.67±3.28 (7.18)	49.21±2.71 (5.51)	56.70±2.94 (5.19)	61.21±3.79 (6.19)	57.66±5.50 (9.54)	62.66±2.78 (4.44)	21.14±5.76 (27.25)	75.37±2.78 (3.69)	45.67±3.28 (7.18)	8.11±3.88 (47.84)	75.37±2.78 (3.69)	-26.83±7.45 (27.77)	12.84±4.44 (34.58)
Cormex	21.31±2.83 (13.28)	6.53±2.57 (39.36)	3.66±1.85 (50.55)	23.77±3.23 (13.59)	26.80±5.18 (19.33)	35.12±3.43 (9.77)	36.37±5.41 (14.87)	34.07±8.59 (25.21)	34.92±3.73 (10.68)	6.92±3.59 (51.88)	45.07±3.84 (8.52)	23.77±3.23 (13.59)	5.17±2.81 (54.35)	45.06±3.84 (8.52)	-7.69±4.58 (59.56)	6.87±2.50 (36.39)
Cortow	17.06±3.35 (19.64)	7.62±2.46 (32.28)	2.27±1.11 (48.9)	24.47±3.52 (14.40)	28.28±3.95 (13.97)	33.45±3.41 (10.19)	35.16±5.85 (16.64)	34.48±6.47 (18.76)	33.75±3.70 (10.96)	8.81±3.54 (40.18)	41.53±3.38 (8.14)	24.47±3.52 (14.38)	5.92±2.33 (39.36)	41.52±3.38 (8.14)	-9.55±4.37 (45.76)	7.78±2.20 (28.28)
Desrot	28.37±3.97 (13.99)	11.33±6.50 (57.37)	2.54±0.98 (38.58)	44.00±3.97 (9.02)	47.98±3.89 (8.11)	54.63±3.79 (6.94)	58.42±4.10 (7.02)	55.89±4.82 (8.62)	56.87±6.06 (10.66)	18.24±5.76 (31.58)	72.35±4.98 (6.88)	43.98±3.93 (8.94)	7.95±3.21 (40.38)	72.35±4.98 (6.88)	-21.39±7.15 (33.43)	12.78±4.61 (36.07)
Eptbra	22.89±8.93 (39.01)	4.55±7.70 (169.23)	7.80±3.77 (48.33)	33.30±3.46 (10.40)	33.23±3.52 (10.59)	37.29±6.45 (17.3)	39.59±5.85 (14.78)	34.91±5.16 (14.78)	37.12±6.07 (16.35)	10.76±11.55 (107.34)	55.83±11.48 (20.56)	32.93±3.46 (10.51)	3.33±6.52 (195.8)	55.83±11.48 (20.56)	-12.78±11.99 (93.82)	6.45±8.67 (134.42)
Eptfur	19.29±8.74 (45.31)	1.41±0.98 (69.5)	6.91±1.72 (24.89)	37.40±1.45 (3.88)	37.44±1.15 (3.07)	39.51±1.66 (4.2)	42.91±2.67 (6.22)	38.13±1.51 (3.96)	39.77±3.55 (8.93)	7.99±5.18 (64.83)	56.34±8.69 (15.42)	37.05±1.23 (3.32)	0.55±0.49 (89.09)	56.34±8.69 (15.42)	-10.93±7.02 (64.23)	3.10±1.64 (52.9)
Eptfus	30.01±7.67 (25.56)	3.96±3.61 (91.16)	6.00±2.18 (36.33)	29.31±4.61 (15.73)	31.15±5.23 (16.79)	37.03±6.11 (16.5)	40.45±6.25 (15.45)	34.63±6.07 (17.53)	34.77±5.78 (16.62)	9.74±4.01 (41.17)	59.32±10.61 (17.89)	29.30±4.60 (15.7)	2.11±1.75 (82.94)	59.32±10.61 (17.89)	-12.63±4.91 (38.88)	5.70±2.90 (50.88)
Eumund	2.95±1.39 (47.12)	0.17±0.27 (158.82)	19.27±3.74 (19.41)	15.07±0.96 (6.37)	15.49±0.79 (5.1)	15.74±0.83 (5.27)	16.40±1.32 (8.05)	15.97±1.35 (8.45)	16.03±1.17 (7.3)	0.38±0.47 (123.68)	17.70±1.90 (10.73)	14.75±0.75 (5.08)	0.01±0.02 (200)	17.64±1.95 (11.05)	-0.56±0.57 (101.79)	0.17±0.14 (82.35)
Idiphy	16.17±1.62 (10.02)	3.42±1.39 (40.64)	4.28±1.18 (27.57)	13.84±0.88 (6.36)	15.00±1.68 (11.2)	19.84±1.90 (9.58)	21.27±1.91 (8.98)	19.18±2.40 (12.51)	21.04±4.32 (20.53)	5.96±2.12 (35.57)	30.00±2.00 (6.67)	13.83±0.89 (6.44)	2.07±0.85 (41.06)	29.92±1.96 (6.55)	-7.82±4.96 (63.43)	4.12±1.22 (29.61)
Lasblo	50.54±9.18 (18.16)	17.75±10.09 (56.85)	3.29±1.28 (38.91)	39.49±5.93 (15.02)	42.22±5.90 (13.97)	61.73±10.81 (17.51)	63.83±16.54 (25.91)	54.28±9.78 (18.02)	53.75±10.72 (19.94)	20.06±9.03 (45.01)	90.03±10.66 (11.84)	39.49±5.93 (15.02)	10.10±6.82 (67.52)	89.58±10.56 (11.79)	-17.02±9.81 (57.64)	18.76±5.90 (31.45)
Lasbor	17.62±5.98 (33.94)	0.76±0.53 (69.74)	8.83±1.37 (15.52)	38.18±2.94 (7.70)	38.33±3.38 (8.82)	39.91±3.47 (8.69)	43.39±3.84 (8.85)	38.71±3.63 (9.38)	40.36±3.90 (9.66)	6.25±2.68 (42.88)	55.45±7.57 (13.65)	37.84±3.10 (8.19)	0.31±0.14 (45.16)	55.45±7.57 (13.65)	-9.05±5.07 (56.02)	1.96±0.69 (35.2)
Lascin	30.45±5.12 (16.81)	5.80±6.79 (117.07)	4.25±1.39 (32.71)	26.81±4.39 (16.37)	28.25±4.70 (16.64)	34.76±6.38 (18.35)	36.52±7.39 (20.24)	32.37±6.06 (18.72)	35.47±7.11 (20.05)	14.81±10.75 (72.59)	57.24±7.92 (13.84)	26.79±4.39 (16.39)	4.00±6.03 (150.75)	57.23±7.92 (13.84)	-16.66±14.22 (85.35)	9.47±7.57 (79.94)
Lasega	23.68±4.89 (20.65)	6.26±1.83 (29.23)	2.93±0.51 (17.41)	37.45±0.98 (2.62)	40.66±2.07 (5.09)	47.14±1.81 (3.84)	50.35±4.32 (8.58)	50.14±5.40 (10.77)	55.20±5.41 (9.8)	11.81±5.34 (45.22)	61.13±4.50 (7.36)	37.45±0.98 (2.62)	5.53±1.67 (30.2)	61.13±4.50 (7.36)	-17.02±9.81 (43.13)	7.58±2.09 (27.57)
Lasnoc	23.25±6.80 (29.25)	0.89±0.66 (74.16)	9.53±1.54 (16.16)	26.16±1.21 (4.63)	27.56±1.13 (4.1)	30.00±1.49 (4.97)	32.91±2.80 (8.51)	29.66±1.11 (3.74)	30.04±2.01 (6.69)	5.67±2.18 (38.45)	49.39±6.70 (13.57)	26.14±1.20 (4.59)	0.40±0.20 (50)	49.39±6.70 (13.57)	-9.62±3.48 (36.17)	2.28±0.69 (30.26)

Lasxan	29.65±4.97 (16.76)	2.51±2.46 (98.01)	5.52±2.14 (38.77)	33.20±2.14 (6.45)	33.83±1.85 (5.47)	38.88±1.79 (4.6)	43.18±2.66 (6.16)	36.70±2.99 (8.15)	38.47±3.33 (8.66)	12.68±3.88 (30.6)	62.78±4.73 (7.53)	33.13±2.07 (6.25)	1.70±1.79 (105.29)	62.78±4.73 (7.53)	-17.98±5.70 (31.7)	5.46±2.55 (46.7)
Lepyer	45.16±7.79 (17.25)	4.80±2.23 (46.46)	6.22±1.29 (20.74)	34.12±4.28 (12.54)	40.13±5.63 (14.03)	50.40±6.29 (12.48)	55.56±6.27 (11.29)	52.80±6.21 (11.76)	49.72±6.89 (13.86)	12.98±4.29 (33.05)	79.28±9.36 (11.81)	34.12±4.28 (12.54)	3.50±1.55 (44.29)	79.18±9.25 (11.68)	-12.94±7.20 (55.64)	7.53±3.02 (40.11)
Maccal	32.99±4.64 (14.06)	7.64±4.37 (57.2)	3.31±1.02 (30.82)	47.45±2.32 (4.89)	51.77±2.63 (5.08)	59.26±2.53 (4.27)	64.22±2.73 (4.25)	63.12±4.05 (6.42)	60.39±4.60 (7.62)	17.31±5.12 (29.58)	80.44±5.33 (6.63)	47.45±2.32 (4.89)	6.03±2.13 (35.32)	80.44±5.33 (6.63)	-24.72±7.50 (30.34)	10.00±3.38 (33.8)
Molmol	4.22±1.55 (36.73)	0.46±0.47 (102.17)	8.72±2.49 (28.56)	34.95±4.03 (11.53)	36.04±4.52 (12.54)	37.74±4.62 (12.24)	37.93±4.51 (11.89)	37.00±4.78 (12.92)	38.38±4.59 (11.96)	0.32±0.28 (87.5)	38.93±4.57 (11.74)	34.71±4.09 (11.78)	0.11±0.13 (118.18)	37.45±4.55 (12.15)	-0.19±0.19 (100)	0.51±0.28 (54.9)
Molruf	3.49±2.32 (66.48)	0.17±0.23 (135.29)	9.73±4.24 (43.58)	29.05±2.94 (10.12)	30.73±3.24 (10.54)	31.47±3.80 (12.07)	31.49±3.78 (12)	31.11±3.69 (11.86)	31.89±3.91 (12.26)	0.18±0.17 (94.44)	32.28±3.82 (11.83)	28.79±2.88 (10)	0.03±0.09 (300)	31.48±3.95 (12.55)	-0.22±0.46 (209.09)	0.28±0.27 (96.43)
Molsin	2.80±2.00 (71.43)	0.22±0.12 (54.55)	9.54±2.11 (22.12)	33.61±3.87 (11.51)	35.13±3.09 (8.8)	35.48±3.05 (8.6)	35.53±2.99 (8.42)	35.21±3.11 (8.83)	35.99±3.12 (8.67)	0.25±0.29 (116)	36.29±2.98 (8.21)	33.48±3.82 (11.41)	0±0.02 (0)	35.41±2.87 (8.11)	-0.27±0.40 (148.15)	0.22±0.07 (31.82)
Mormeg	13.56±3.31 (24.41)	1.44±1.18 (81.94)	4.78±1.62 (33.89)	42.10±2.35 (5.58)	50.25±1.51 (3)	52.19±1.22 (2.34)	53.11±2.25 (4.24)	53.36±2.04 (3.82)	52.00±2.19 (4.21)	3.08±3.20 (103.9)	55.66±2.62 (4.71)	42.10±2.35 (5.58)	1.00±1.10 (110)	55.59±2.68 (4.82)	-3.56±3.81 (107.02)	1.69±1.37 (81.07)
Myoaur	44.83±10.74 (23.96)	8.34±8.38 (100.48)	4.62±1.18 (25.54)	31.50±3.95 (12.54)	38.12±3.79 (9.94)	47.03±7.93 (16.86)	51.60±7.05 (13.66)	44.44±7.43 (16.72)	43.74±8.30 (18.98)	16.61±5.78 (34.8)	76.33±13.12 (17.19)	31.50±3.95 (12.54)	4.77±4.62 (96.86)	76.33±13.12 (17.19)	-19.21±5.83 (30.35)	10.32±6.17 (59.79)
Myocal	46.98±13.38 (28.48)	14.37±16.57 (115.31)	3.74±1.43 (38.24)	41.88±3.41 (8.14)	46.09±3.97 (8.61)	57.97±8.36 (14.42)	62.11±10.55 (16.99)	55.46±12.8 (23.08)	55.18±14.63 (26.51)	24.13±16.49 (68.34)	88.85±14.67 (16.51)	41.87±3.41 (8.14)	8.78±11.26 (128.25)	88.85±14.67 (16.51)	-28.57±18.13 (63.46)	16.26±13.46 (82.78)
Myokea	29.76±9.49 (31.89)	8.02±11.28 (140.65)	3.30±0.87 (26.36)	59.12±2.39 (4.04)	59.52±1.91 (3.21)	61.90±3.21 (5.19)	65.90±5.10 (7.74)	59.99±1.72 (2.87)	60.87±2.34 (3.84)	23.98±7.36 (30.69)	88.47±9.72 (10.99)	58.71±2.06 (3.51)	1.68±3.87 (230.36)	88.47±9.72 (10.99)	-26.7±7.23 (27.08)	11.58±5.43 (46.89)
Myomel	59.23±10.44 (17.63)	19.26±9.99 (51.87)	2.77±0.70 (25.27)	39.83±5.63 (14.14)	45.29±5.82 (12.85)	62.46±10.08 (16.14)	67.52±14.09 (20.87)	65.27±18.26 (27.98)	56.55±8.13 (14.38)	29.71±6.31 (21.24)	99.06±10.66 (10.76)	39.83±5.63 (14.14)	14.79±8.76 (59.23)	99.06±10.66 (10.76)	-37.93±9.80 (25.84)	22.88±8.18 (35.75)
Myothy	51.63±10.07 (19.5)	10.50±6.68 (63.62)	3.71±0.88 (23.72)	17.29±1.96 (11.34)	21.32±2.39 (11.21)	33.61±5.68 (16.9)	35.02±7.67 (21.9)	28.00±3.1 (11.07)	29.02±5.84 (20.12)	21.61±8.35 (38.64)	68.92±10.49 (15.22)	17.29±1.96 (11.34)	6.66±2.73 (40.99)	68.92±10.49 (15.22)	-26.57±8.23 (30.97)	15.31±5.15 (33.64)
Myovel	42.58±9.06 (21.28)	7.86±7.94 (101.02)	4.67±1.54 (32.98)	38.12±2.25 (5.90)	41.59±2.59 (6.23)	49.87±5.26 (10.55)	53.02±5.75 (10.84)	45.94±5.26 (11.45)	46.23±5.69 (12.31)	16.74±5.91 (35.3)	80.70±9.89 (12.26)	38.12±2.25 (5.9)	3.77±3.27 (86.74)	80.70±9.89 (12.26)	-20.05±70 (34.91)	10.39±5.06 (48.7)
Myovol	47.29±9.66 (20.43)	9.44±7.17 (75.95)	5.12±1.52 (29.69)	37.11±3.62 (9.76)	41.70±5.31 (12.73)	54.45±7.64 (14.03)	56.49±8.93 (15.81)	52.33±9.79 (18.71)	47.64±6.42 (13.48)	13.78±5.77 (41.87)	84.39±11.45 (13.57)	37.11±3.62 (9.75)	5.89±5.32 (90.32)	84.39±11.45 (13.57)	-15.72±5.94 (37.79)	10.65±5.95 (55.87)
Myoyum	44.80±11.19 (24.98)	11.96±11.31 (94.57)	3.69±1.19 (32.25)	42.76±5.03 (11.76)	47.36±5.06 (10.68)	57.38±7.87 (13.72)	60.74±6.97 (11.48)	55.95±8.05 (14.39)	52.64±7.34 (13.94)	21.21±10.27 (48.42)	87.56±13.75 (15.7)	42.76±5.03 (11.76)	7.13±7.08 (99.3)	87.56±13.75 (15.7)	-24.62±11.39 (46.26)	14.07±8.85 (62.9)
Natstr	61.15±9.71 (15.88)	31.69±15.01 (47.37)	2.11±0.71 (33.65)	95.00±7.26 (7.64)	105.54±9.01 (8.54)	125.58±7.86 (6.26)	130.18±16.34 (12.55)	126.71±16.17 (12.76)	119.42±10.74 (8.99)	35.14±14.29 (40.67)	156.14±7.85 (5.03)	94.99±7.27 (7.65)	24.14±11.79 (48.84)	156.14±7.85 (5.03)	-35.97±16.73 (46.51)	31.10±11.03 (35.47)
Noclep	27.43±4.75 (17.32)	2.84±2.32 (81.69)	8.41±3.44 (40.9)	23.55±3.44 (14.61)	29.30±4.12 (14.06)	41.16±8.01 (19.46)	44.29±8.94 (20.19)	38.29±4.29 (11.2)	31.03±3.45 (11.12)	2.86±2.32 (81.12)	50.96±5.22 (10.24)	23.52±3.42 (14.54)	1.43±1.64 (114.69)	50.79±5.09 (10.02)	-2.52±2.38 (94.44)	3.58±1.64 (45.81)
Nycfem	19.46±4.21 (21.63)	2.86±1.62 (56.64)	5.55±1.37 (24.68)	17.09±1.47 (8.60)	19.48±1.64 (8.42)	24.16±2.10 (8.69)	25.62±3.03 (11.83)	24.59±2.82 (11.47)	24.38±2.65 (10.87)	5.72±2.37 (41.43)	36.55±4.02 (11)	17.08±1.47 (8.61)	1.73±0.96 (55.49)	36.55±4.02 (11)	-5.56±3.63 (65.29)	3.78±1.27 (33.6)
Nychum	28.90±8.18 (28.3)	2.04±1.76 (86.27)	6.16±1.10 (17.86)	38.67±2.27 (5.87)	39.13±2.07 (5.29)	42.78±1.01 (2.36)	46.86±2.59 (5.53)	40.31±1.70 (4.22)	42.44±2.67 (6.29)	11.30±4.90 (43.36)	67.40±6.93 (10.28)	38.50±2.15 (5.58)	0.93±0.91 (97.85)	67.40±6.93 (10.28)	-15.9±6.80 (42.77)	4.75±2.16 (45.47)
Nyclat	23.07±3.91 (16.95)	4.22±1.23 (29.15)	4.85±1.40 (28.87)	17.97±3.95 (21.98)	20.09±3.38 (16.82)	27.67±3.18 (11.49)	28.41±4.17 (14.68)	29.33±3.51 (11.97)	25.68±3.35 (13.05)	6.73±1.99 (29.57)	41.03±4.19 (10.21)	17.96±3.95 (21.99)	3.13±0.99 (31.63)	41.03±4.19 (10.21)	-6.47±3.10 (47.91)	4.94±1.06 (21.46)
Nycmac	14.86±3.38 (22.75)	1.68±0.64 (38.1)	7.92±1.40 (17.68)	13.79±4.26 (30.90)	16.49±4.26 (25.83)	20.8±3.20 (15.38)	21.07±6.03 (28.62)	21.85±3.85 (17.62)	22.34±2.76 (12.35)	2.62±1.19 (45.42)	28.66±4.48 (15.63)	13.79±4.26 (30.89)	0.78±0.42 (53.85)	28.59±4.52 (15.81)	-1.31±1.08 (82.44)	1.85±0.51 (27.57)
Permac	4.33±2.26 (52.19)	0.20±0.19 (95)	7.30±1.30 (17.81)	37.56±2.32 (6.18)	40.99±2.54 (6.2)	41.38±2.38 (5.75)	41.42±2.49 (6.01)	41.40±2.41 (5.82)	41.61±2.38 (5.72)	0.19±0.23 (121.05)	41.87±2.48 (5.92)	37.54±2.30 (6.13)	0±0.01 (0)	41.71±2.49 (5.97)	-0.32±0.26 (81.25)	0.18±0.17 (94.44)
Piphes	23.26±6.27 (26.96)	1.72±1.47 (85.47)	4.78±1.01 (21.13)	43.29±2.45 (5.66)	44.55±2.17 (4.87)	46.58±2.05 (4.4)	50.1±2.65 (5.29)	45.85±2.03 (4.43)	46.49±1.99 (4.28)	13.73±6.24 (45.45)	66.51±6.41 (9.64)	43.25±2.43 (5.62)	0.89±1.26 (141.57)	66.51±6.41 (9.64)	-22.83±8.47 (37.1)	4.91±3.14 (63.95)
Pipsub	22.19±10.16 (45.79)	0.98±0.90 (91.84)	7.58±1.58 (20.84)	41.85±2.58 (6.17)	42.68±2.39 (5.6)	43.93±2.88 (6.56)	47.65±4.19 (8.79)	43.12±2.41 (5.59)	44.02±2.63 (5.97)	9.73±6.32 (64.95)	63.88±11.23 (17.58)	41.69±2.53 (6.07)	0.37±0.46 (124.32)	63.87±11.26 (17.63)	-16.27±10.24 (62.94)	3.24±2.11 (65.12)
Procen	4.94±1.40 (28.34)	0.10±0.09 (90)	47.66±24.30 (50.99)	26.94±1.45 (5.38)	27.05±1.10 (4.07)	24.43±1.66 (6.79)	25.74±1.76 (6.84)	26.23±1.50 (5.72)	26.03±1.33 (5.11)	0.16±0.10 (62.5)	27.76±1.06 (3.82)	22.82±1.32 (5.78)	0.02±0.02 (100)	22.89±1.38 (6.03)	0.10±0.11 (110)	0.17±0.05 (29.41)

Ptedav	12.92±1.60 (12.38)	1.05±1.95 (185.71)	5.84±1.11 (19.01)	58.36±2.05 (3.51)	59.82±1.95 (3.26)	69.05±3.04 (4.4)	66.76±5.36 (8.03)	61.07±3.36 (5.5)	66.78±5.52 (8.27)	2.46±2.86 (116.26)	71.24±2.52 (3.54)	58.32±2.02 (3.46)	0.20±0.27 (135)	69.75±3.05 (4.37)	-0.31±0.86 (277.42)	4.16±0.98 (23.56)
Ptegym	9.70±1.140 (11.75)	0.33±1.35 (409.09)	5.33±0.82 (15.38)	45.81±2.85 (6.22)	46.86±2.74 (5.85)	55.15±2.67 (4.84)	54.83±1.29 (2.35)	49.46±2.93 (5.92)	51.34±4.87 (9.49)	0.31±0.98 (316.13)	55.51±3.19 (5.75)	45.81±2.84 (6.2)	0.04±0.15 (375)	54.99±3.14 (5.71)	-0.18±0.32 (177.78)	2.55±0.83 (32.55)
Ptepar	12.1±2.13 (17.6)	0.02±0.03 (150)	21.21±4.97 (23.43)	52.87±2.20 (4.16)	64.51±2.15 (3.33)	64.84±1.23 (1.9)	64.84±1.23 (1.9)	63.89±2.96 (4.63)	63.61±3.19 (5.01)	0.03±0.13 (433.33)	64.97±1.27 (1.95)	52.86±2.20 (4.16)	0±0 (0)	61.93±2.04 (3.29)	-0.08±0.29 (362.5)	0.04±0.15 (375)
Pteper	18.76±3.11 (16.58)	2.15±2.26 (105.12)	5.71±1.18 (20.67)	64.12±2.84 (4.43)	65.94±3.10 (4.7)	71.87±3.08 (4.29)	72.97±6.56 (8.99)	69.36±4.89 (7.05)	70.53±5.25 (7.44)	3.97±1.91 (48.11)	82.88±2.66 (3.21)	64.12±2.84 (4.43)	0.96±1.24 (129.17)	82.83±2.68 (3.24)	-3.17±3.53 (111.36)	4.37±1.21 (27.69)
Rhoaen	31.49±11.25 (35.73)	5.17±5.00 (96.71)	3.79±0.97 (25.59)	45.19±2.05 (4.54)	47.22±2.13 (4.51)	52.34±3.18 (6.08)	55.91±3.29 (5.88)	49.57±2.94 (5.93)	49.73±2.81 (5.65)	17.00±5.92 (34.82)	76.66±11.61 (15.14)	45.17±2.03 (4.49)	2.09±1.27 (60.77)	76.66±11.61 (15.14)	-18.16±4.87 (26.82)	8.89±4.02 (45.22)
Rhopar	40.55±7.89 (19.46)	11.84±9.09 (76.77)	3.27±0.82 (25.08)	42.83±3.02 (7.05)	44.93±2.38 (5.3)	52.85±2.55 (4.82)	57.7±3.33 (5.77)	50.28±3.34 (6.64)	51.06±3.63 (7.11)	23.54±7.47 (31.73)	83.35±8.66 (10.39)	42.80±3.01 (7.03)	5.21±2.18 (41.84)	83.35±8.66 (10.39)	-29.96±10.33 (34.48)	12.98±3.85 (29.66)
Rhynas	16.86±4.81 (28.53)	0.34±0.32 (94.12)	4.38±0.69 (15.75)	81.84±4.88 (5.96)	94.49±4.91 (5.2)	98.62±1.04 (1.05)	97.98±1.35 (1.38)	92.89±5.49 (5.91)	95.79±4.45 (4.65)	0.55±0.57 (103.64)	98.71±1.03 (1.04)	81.84±4.88 (5.96)	0.07±0.10 (142.86)	98.25±1.16 (1.18)	-0.29±0.57 (196.55)	1.75±2.00 (114.29)
Sacbil	4.45±2.55 (57.3)	0.19±0.15 (78.95)	7.40±1.58 (21.35)	45.78±4.60 (10.05)	47.46±4.47 (9.42)	47.68±5.45 (11.43)	47.88±6.11 (12.76)	47.40±4.52 (9.54)	47.29±5.68 (12.01)	0.42±1.16 (276.19)	48.55±7.33 (15.1)	44.10±5.11 (11.59)	0±0 (0)	45.38±8.10 (17.85)	0.08±0.26 (325)	0.44±1.1 (250)
Saclep	4.61±1.83 (39.7)	0.23±0.18 (78.26)	6.78±2.28 (33.63)	47.69±3.77 (7.91)	50.82±2.83 (5.57)	51.12±2.48 (4.85)	51.08±2.54 (4.97)	50.98±2.76 (5.41)	50.58±2.48 (4.9)	0.24±0.22 (91.67)	51.27±2.50 (4.88)	46.66±3.84 (8.23)	0.01±0.02 (200)	48.35±2.98 (6.16)	0.16±0.51 (318.75)	0.25±0.29 (116)
Stulil	38.24±6.61 (17.29)	12.88±11.57 (89.83)	3.13±1.49 (47.6)	52.62±3.95 (7.51)	55.75±3.50 (6.28)	66.22±3.66 (5.53)	70.78±4.79 (6.77)	67.52±5.21 (7.72)	72.44±5.08 (7.01)	22.94±10.54 (45.95)	90.86±5.27 (5.8)	52.62±3.95 (7.51)	9.19±7.13 (77.58)	90.86±5.27 (5.8)	-27.52±10.73 (38.99)	15.18±8.91 (58.7)
Stulud	33.37±5.26 (15.76)	7.11±3.28 (46.13)	3.99±1.54 (38.6)	49.06±3.41 (6.95)	53.12±3.64 (6.85)	61.94±2.69 (4.34)	68.07±3.13 (4.6)	68.19±3.60 (5.28)	68.65±4.44 (6.47)	16.28±8.14 (50)	82.43±4.91 (5.96)	49.06±3.41 (6.95)	5.81±2.99 (51.46)	82.43±4.91 (5.96)	-21.97±9.81 (44.65)	9.03±4.33 (47.95)
Tadbra	20.74±5.04 (24.3)	1.96±1.58 (80.61)	7.20±1.93 (26.81)	26.09±2.47 (9.47)	28.72±2.50 (8.7)	32.56±2.61 (8.02)	34.59±4.09 (11.82)	31.70±2.69 (8.49)	32.61±3.73 (11.44)	5.16±1.79 (34.69)	46.83±5.41 (11.55)	26.09±2.47 (9.47)	1.05±0.94 (89.52)	46.81±5.42 (11.58)	-4.05±2.63 (64.94)	3.27±1.43 (43.73)
Thytri	22.88±2.32 (10.14)	3.84±1.77 (46.09)	2.76±0.37 (13.41)	43.50±1.87 (4.30)	45.95±1.11 (2.42)	49.76±1.09 (2.19)	51.99±1.91 (3.67)	49.73±1.97 (3.96)	53.09±2.46 (4.63)	14.25±3.90 (27.37)	66.38±2.02 (3.04)	43.50±1.87 (4.3)	3.13±0.96 (30.67)	66.38±2.02 (3.04)	-28.36±6.81 (24.01)	7.16±1.41 (19.69)
Tracir	26.62±3.52 (13.22)	23.26±10.31 (44.33)	1.19±0.21 (17.65)	57.76±2.51 (4.35)	59.75±2.89 (4.84)	67.80±4.39 (6.47)	69.69±6.30 (9.04)	68.48±6.97 (10.18)	66.78±5.13 (7.68)	31.05±6.04 (19.45)	84.38±3.01 (3.57)	57.76±2.49 (4.31)	15.75±5.70 (36.19)	84.38±3.01 (3.57)	-33.41±6.53 (19.55)	22.76±3.26 (14.32)

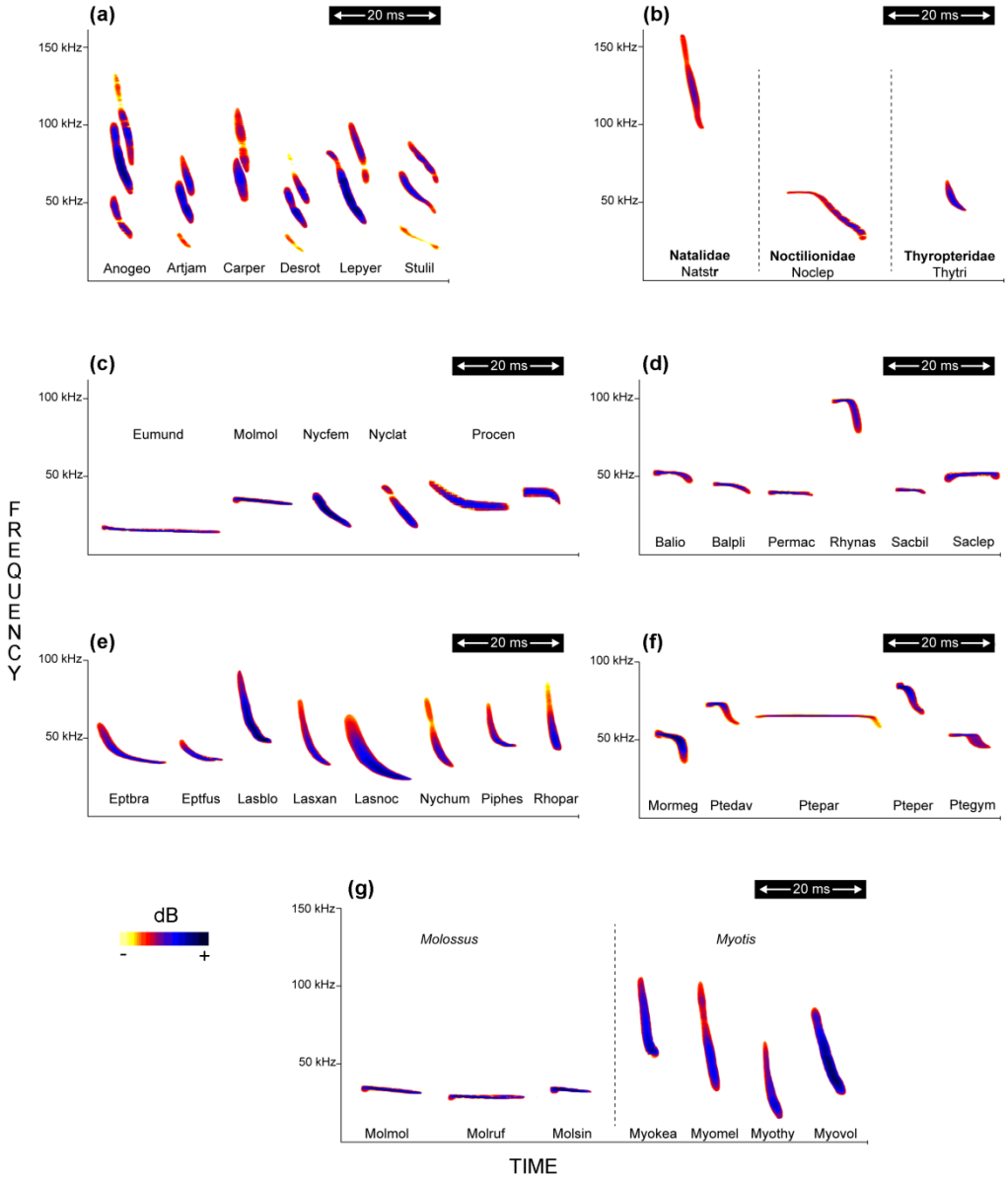
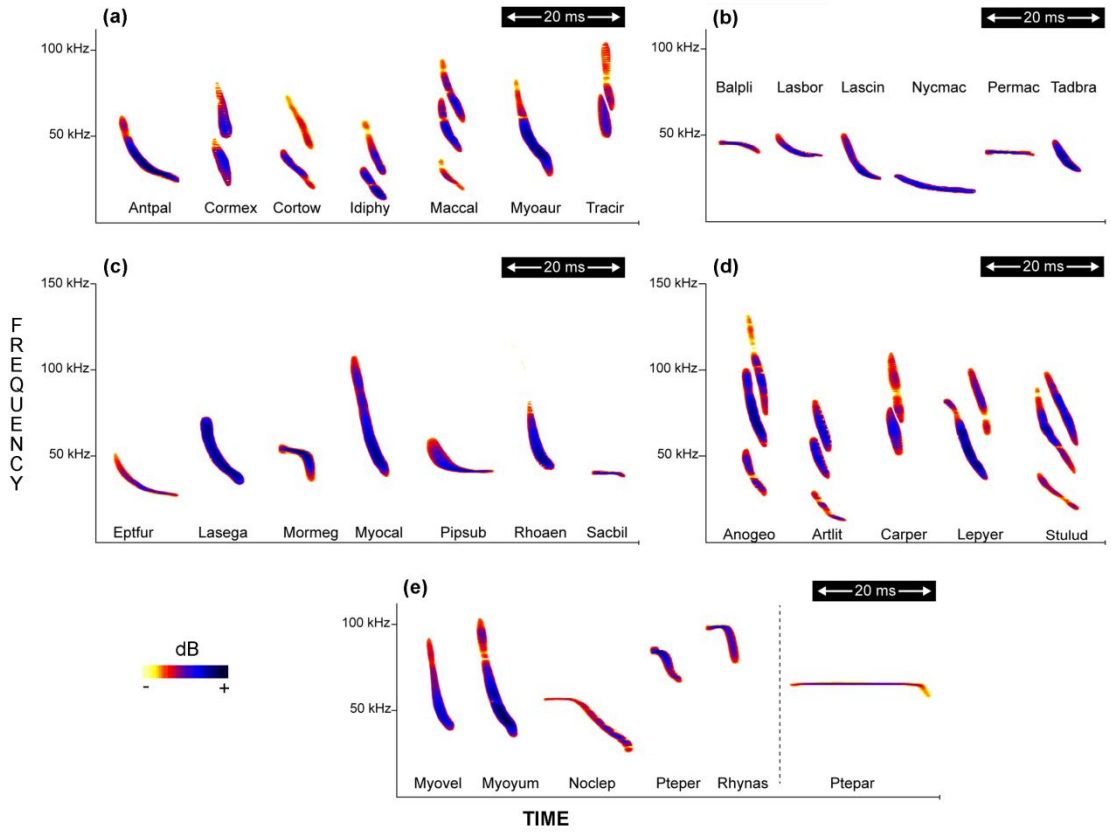


Figure S1. Spectrograms showing the inter-specific variability of representative search-phase echolocation calls within taxonomic groups used for the classifiers, where (a) Phyllostomidae; b) Natalidae; Noctilionidae; Thyropteridae; c) Molossidae; d) Emballonuridae; e) Vespertilionidae; f) Mormoopidae; and g) within the genera *Molossus* and *Myotis*. See Table S4 for definitions of species abbreviations.



16

17 **Figure S2.** Spectrograms showing inter-specific variability of representative search-phase
18 echolocation calls within ecological guilds used for the classifiers, where a) Guild 5 - Narrow
19 space passive gleaning foragers, b) Guild 1- Open space aerial foragers, c) Guild 2 - Edge
20 space aerial foragers, d) Guild 6 - Narrow space passive/active gleaning foragers, and e) Guild
21 3 - Edge space trawling foragers and Guild 4 - Narrow space flutter detecting foragers. See
22 Table S4 for definition of species abbreviations.

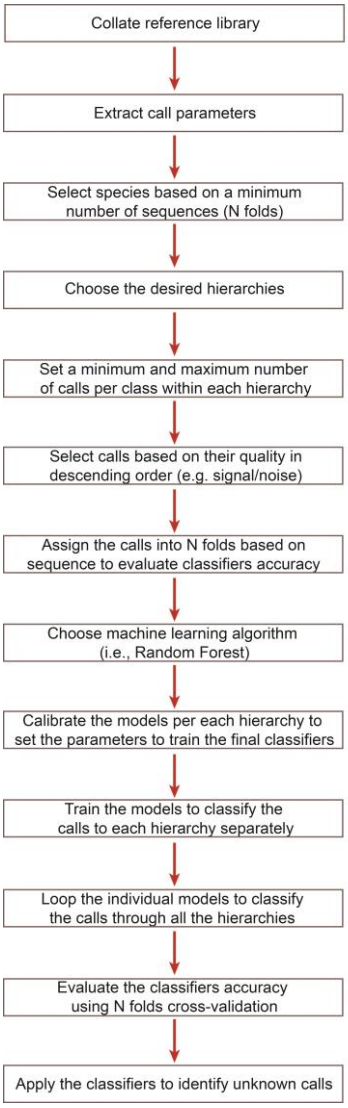


Figure S3. Schematic representation of the protocol used to build the classifiers.