

# Guide for Acoustic Identification of Florida bats

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## Family:

Vespertilionidae

## Database species code

Lassem or Lase

See glossary for explanation of codes

## Scientific name

*Lasiurus seminolus* (Rhoads, 1895)

Taxonomy follows Simmons and Cirranello (2021)

## Call shape

To view call graphics click on the camera icon on the right. You can then move through all images by using the left or right arrow keys. A left mouse click returns to the fact sheet.



Typical North American Vespertilionid pulses with FM reversed J broadband pulses of short duration. However, distinctive for the genus *Lasiurus* the Fmin shifts up and down. Note that commute calls are longer duration, have a lower frequency and are narrow band.

## Vocal signature parameters

Parameters	N	Min	Max	Mean	St.Dev	10%	25%	75%	90%
Dur	5845	0.09	12.90	0.72	1.30	0.18	0.20	0.62	1.44
TBC	5843	0.3	974.9	9.0	42.9	0.4	0.5	1.8	4.4
Fmin	5845	35.09	45.98	39.82	1.86	37.74	38.65	40.82	42.33
Fmax	5845	39.80	59.70	42.25	2.50	40.00	40.61	43.01	45.20
BW	5845	1.00	22.56	2.43	2.14	0.59	1.15	3.08	4.54
Fmean	5845	36.16	50.51	40.30	1.89	38.39	39.02	41.24	42.90
Fk	5845	35.87	49.69	41.64	2.09	39.80	40.20	42.78	44.44
FcH1	5845	17.55	22.99	20.06	0.93	19.05	19.42	20.52	21.39
Fc	5845	35.09	45.98	40.13	1.86	38.10	38.83	41.03	42.78
FcH3	5845	52.64	68.97	60.19	2.78	57.15	58.25	61.55	64.17
Sc	5845	-863.05	1788.64	215.55	231.46	0.00	52.64	325.52	518.63
Pmc	5845	-10.10	61.50	5.35	5.14	1.00	2.50	6.80	10.10

Reported by Szewczak (2018)

Lassem	Fc	Fmax	Fmin	FmaxE	dur	uppr slp	lwr slp	slp @ Fc	total slp
Mean	40.4	62.8	39.9	42.8	7.6	7.9	1.5	0.4	3.3
Max	44.0	76.0	44.0	48.0	9.7	13.0	2.4	0.9	5.3
Min	36.0	50.0	36.0	37.0	5.5	3.0	0.6	-0.2	1.3

## Source of acoustic data

Cynthia and George Marks

Bruce Miller

Reference calls recorded by Marks and Miller are being archived at BioAcoustica and will be freely available. See Baker et al., (2015).

## Known counties of distribution

- Alachua
- Baker
- Bay
- Bradford
- Brevard
- Broward
- Calhoun
- Charlotte
- Citrus
- Clay
- Collier
- Columbia
- Miami-Dade
- De Soto
- Dixie
- Duval
- Escambia
- Flagler
- Franklin
- Gadsden
- Gilchrist
- Glades
- Gulf
- Hamilton
- Hardee
- Hendry
- Hernando
- Highlands
- Hillsborough
- Holmes
- Indian River
- Jackson
- Jefferson
- Lafayette
- Lake
- Lee
- Leon
- Levy
- Liberty
- Madison
- Manatee
- Marion
- Martin
- Monroe
- Nassau
- Okaloosa
- Okeechobee
- Orange
- Osceola
- Palm Beach
- Pasco
- Pinellas
- Polk
- Putnam
- Santa Rosa
- Sarasota
- Seminole
- St. Johns
- St. Lucie
- Sumter
- Suwannee
- Taylor
- Union
- Volusia
- Wakulla
- Walton
- Washington

## Conservation status

Least concern; Ver.3.1 ; Population trend - unknown; evaluated 2008. (I.U.C.N. 2017.)

## Notes

Baird et al. (2015) appeared to make a strong case of separating the genus *Lasiurus* into 3 genera; proposing that the genus name *Lasiurus* be restricted to red bats, *Dasypterus* be used as the genus name for yellow bats, and hoary bats plus *L. egregius* (which appears more closely related to hoary bats than to red bats) be reassigned to the genus *Aeorestes*.

However, Ziegler et al. (2016) stated "That there was insufficient justification for changing the well-established zoological nomenclature for these bats, and any potential value of applying different generic names to the three clades is far outweighed by the confusion that these name changes will cause." Therefore, the classical nomenclature for the genus is maintained in these Fact Sheets and carried over to the Interactive ID keys to the vocal signatures of the Lasiurines.

See Baker et. al., (2015) for discussion of BioAcoustica and Baker and Vincent (2019) for a critique of the lack of freely available acoustic data.

## Citations

Baird, A. B., et al. 2015. Molecular systematic revision of tree bats (Lasiurini): doubling the native mammals of the Hawaiian Islands. *Journal of Mammalogy* 96:1255-1274

Baker, E., B. W. Price, S. D. Rycroft, J. Hill, and V. S. Smith. 2015. BioAcoustica: a free and open repository and analysis platform for bioacoustics. Database. 2015. bav054

Baker, E., and S. Vincent. 2019. A deafening silence: a lack of data and reproducibility in published bioacoustics research? Biodiversity Data Journal 7: e36783.

Marks, C. S., and G. E. Marks. 2006. Bats of Florida. Pp. 176. University of Florida Press, Gainesville.

Simmons, N. B., and A. L. Cirranello. 2020. Bat Species of the World: A taxonomic and geographic database. <http://batnames.org>

Szewczak, J. M. 2018. Echolocation Call Characteristics of Eastern U.S. Bats. Echolocation call characteristics of Eastern U.S. Bats. Unpublished report.

The IUCN 2017. Red List of Threatened Species. Version 2017-1. [www.iucnredlist.org](http://www.iucnredlist.org); Downloaded on August 6, 2017.

Ziegler, A. C., F. G. Howarth, and N. B. Simmons. 2016. A second endemic land mammal for the Hawaiian Islands: a new genus and species of fossil bat (Chiroptera: Vespertilionidae). American Museum Novitates. 3854: 1-52.

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