

# Guide for Acoustic Identification of Florida bats

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## Family:

Vespertilionidae

## Database species code

Persub or Pesu

See glossary for explanation of codes

## Scientific name

*Perimyotis subflavus* (F. Cuvier, 1832).

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, call shapes vary depending on what the bat is doing when recorded. Pulses range from steep FM broad-band pulses of short duration to longer duration pulses with a pronounced rounding of the lower part of the pulse. Several examples are provided.

## Vocal signature parameters

Parameters	N	Min	Max	Mean	St.Dev	10%	25%	75%	90%
Dur	2704	3.00	9.98	6.13	1.44	4.03	5.10	7.15	7.87
TBC	2634	48.9	4573.7	187.3	258.1	88.2	99.8	195.2	301.5
Fmin	2704	33.76	45.71	41.36	1.48	39.60	40.61	42.33	43.24
Fmax	2704	43.01	76.92	56.67	8.46	47.34	50.00	62.62	69.57
BW	2704	0.76	39.66	15.31	8.81	5.54	8.50	21.55	28.97
Fmean	2704	41.52	49.46	44.69	1.78	42.53	43.35	45.78	47.31
Fk	2704	40.20	47.90	43.69	1.43	42.11	42.55	44.69	45.71
FcH1	2704	20.52	23.26	21.31	0.53	20.62	20.94	21.62	22.10
Fc	2704	41.03	46.51	42.63	1.06	41.24	41.88	43.24	44.20
FcH3	2704	61.55	69.77	63.94	1.59	61.86	62.82	64.86	66.30
Sc	2704	-234.09	326.64	15.22	24.68	0.00	5.12	21.36	41.81
Pmc	2704	0.60	87.50	32.93	19.42	11.30	17.90	46.50	64.00

Reported by Szewczak (2018)

Persub	Fc	Fmax	Fmin	FmaxE	dur	uppr slp	lwr slp	slp @ Fc	total slp
Mean	42.6	57.6	41.3	43.9	7.1	7.7	1.1	0.2	2.5
Max	44.0	67.0	43.0	46.0	8.4	14.0	1.7	0.7	4.0
Min	41.0	48.0	40.0	42.0	5.8	1.7	0.4	-0.4	0.9

## Source of acoustic data

Cynthia and George Marks

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

As *Pipistrellus subflavus*; Least concern; Ver.3.1 ; Population trend - stable; evaluated . (I.U.C.N. 2017.)

## Notes

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

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.

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