

Guide for Acoustic Identification of Florida bats

Family:

Molossidae

Database species code

Tadbra or Tabr

See glossary for explanation of codes

Scientific name

Tadarida brasiliensis (L. Geoffroy, 1824)

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.



QCF single pulses of decreasing frequency may include short FM pulses. Commuting calls may be considerably lower Fc and are "flat looking" narrow band pulses of longer duration. Calls of this species may be quite variable depending on conditions when recorded (Gillam and McCracken, 2007).

Feeding buzz and approach phase calls are variable and shift to broad band pulses that are considerably higher in frequency and shorter duration. Out of the context of complete call sequences these pulses may be mistaken for Vespertilionid calls.

NOTE: *AutoID algorithms will likely misclassify such pulses.*

Vocal signature parameters

Parameters	N	Min	Max	Mean	St.Dev	10%	25%	75%	90%
Dur	10,624	2.00	31.53	9.88	4.13	3.38	6.53	13.01	14.51
TBC	10,322	2.2	3469.1	236.8	159.4	71.4	156.0	302.8	369.6
Fmin	10,624	10.94	56.34	23.39	2.43	20.62	21.86	24.84	26.40
Fmax	10,624	18.41	66.67	29.79	7.06	22.99	24.84	33.20	40.20
BW	10,624	0.11	40.42	6.40	6.33	1.10	2.03	8.66	15.62
Fmean	10,624	15.51	59.90	25.78	3.26	22.07	23.49	27.67	30.17
Fk	10,624	18.08	62.50	26.66	3.75	22.73	24.28	28.47	30.59
FCH1	10,624	8.37	28.17	12.35	1.63	10.76	11.35	13.10	13.94
Fc	10,624	16.74	56.34	24.71	3.26	21.51	22.70	26.19	27.87
FcH3	10,624	25.11	84.51	37.06	4.89	32.27	34.05	39.29	41.81
Sc	10,624	-212.27	499.75	33.76	58.14	3.88	8.13	28.68	80.07
Pmc	10,624	0.00	152.40	19.95	20.11	3.20	6.50	26.50	46.70

Reported by Szewczak (2018)

Tadbra	Fc	Fmax	Fmin	FmaxE	dur	uppr slp	lwr slp	slp @ Fc	total slp
Mean	25.5	23.3	24.1	28.0	11.5	1.6	0.5	0.4	0.7
Max	28.0	39.0	26.0	31.0	14.0	3.2	0.8	1.0	1.4
Min	23.0	25.0	22.0	25.0	9.5	0.0	0.1	-0.3	0.0

Source of acoustic data

Cynthia and George Marks

Chris Corben

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

Known counties of distribution

Tadarida brasiliensis is one of the most widely distributed mammalian species in the Western Hemisphere (Wilkins, 1989) and has been documented throughout the state.

- Alachua
- Baker
- Bay
- Bradford
- Brevard
- Broward
- Calhoun
- Charlotte
- Citrus
- Clay
- Collier
- Columbia
- 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
- Miami-Dade
- 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 - stable; evaluated 2015. (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.

Gillam, E. H., and G. F. McCracken. 2007. Variability in the echolocation of *Tadarida brasiliensis*: effects of geography and local acoustic environment. *Animal Behavior*. 74:277-286.

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; Downloaded on August 6, 2017.

Wilkins, K. T. 1989. *Tadarida brasiliensis*. Mammalian Species. 331:1-10.

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