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Bat Acoustic Survey Results 2021

Report produced 2021-11-05

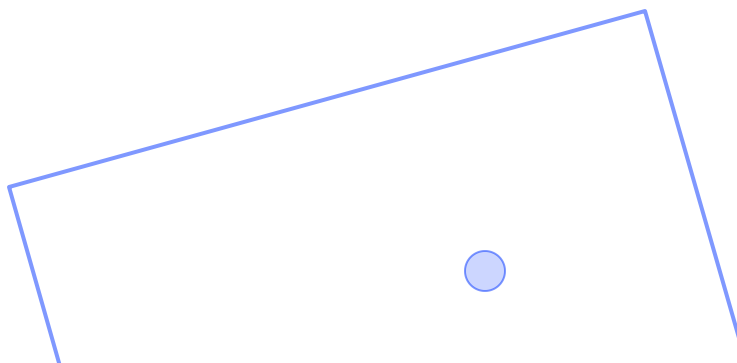
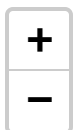


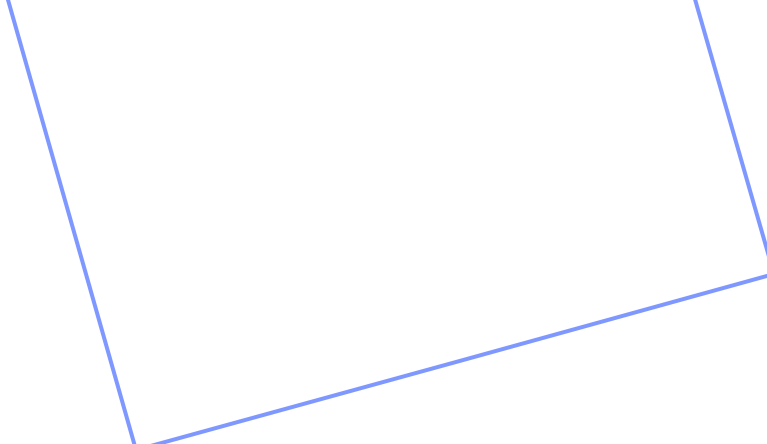
Thank you for your participation in the North American Bat Monitoring Program (NABat)!

11 bat species were detected in 2021 across all survey locations in this report. Read on to learn more about which species were found where.

Map of Survey Locations

This map shows the survey locations included in this report and the NABat cell(s) that they fall within. Hover your cursor over the map to see the NABat GRTS cell number(s) and survey location name(s).





Leaflet (<https://leafletjs.com>) | © OpenStreetMap (<http://openstreetmap.org>) contributors, CC-BY-SA (<http://creativecommons.org/licenses/by-sa/2.0/>)

Species Detected

Bat species confirmed in 2021 Bat species confirmed all years

An X indicates that the species was detected; blank if the species was not detected.

Species	NABat Cell 3562
	NE_Quail_Hollow
Townsend's big-eared bat	X
Big brown bat	X
Western red bat	X
Hoary bat	X
Silver-haired bat	X
California myotis	X
Long-eared myotis	X
Fringed myotis	X
Long-legged myotis	X
Yuma myotis	X
Mexican free-tailed bat	X

Photos of Species Detected

Click on the links below to learn more about the species have been detected at these sites to date.

Species	Photo	Learn More
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Species

Photo

Learn More

Townsend's big-eared bat
(*Corynorhinus townsendii*)



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<https://www.batcon.org/bat/corynorhinus-townsendii/>
(<https://www.batcon.org/bat/corynorhinus-townsendii/>)

Big brown bat (*Eptesicus fuscus*)



MICHAEL DURHAM/MINDEN PICTURES

<https://www.batcon.org/bat/eptesicus-fuscus/>
(<https://www.batcon.org/bat/eptesicus-fuscus/>)

Western red bat (*Lasiurus blossevillii*)



JOSE GABRIEL MARTINEZ FONSECA

<https://www.batcon.org/bat/lasiurus-blossevillii/>
(<https://www.batcon.org/bat/lasiurus-blossevillii/>)

Hoary bat (*Lasiurus cinereus*)



MICHAEL DURHAM/MINDEN PICTURES, BAT CONSERVATION INTERNATIONAL

<https://www.batcon.org/bat/lasiurus-cinereus/>
(<https://www.batcon.org/bat/lasiurus-cinereus/>)

Silver-haired bat (*Lasionycteris noctivagans*)



MICHAEL DURHAM/MINDEN PICTURES, BAT CONSERVATION INTERNATIONAL

<https://www.batcon.org/bat/lasionycteris-noctivagans/>
(<https://www.batcon.org/bat/lasionycteris-noctivagans/>)

California myotis (*Myotis californicus*)



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<https://www.batcon.org/bat/myotis-californicus/>
(<https://www.batcon.org/bat/myotis-californicus/>)

Species

Photo

Learn More

Long-eared myotis (*Myotis evotis*)



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<https://www.batcon.org/bat/myotis-evotis/>
(<https://www.batcon.org/bat/myotis-evotis/>)

Fringed myotis (*Myotis thysanodes*)



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<https://www.batcon.org/bat/myotis-thysanodes-2/>
(<https://www.batcon.org/bat/myotis-thysanodes-2/>)

Long-legged myotis (*Myotis volans*)



J. SCOTT ALTENBACH

<https://www.batcon.org/bat/myotis-volans/>
(<https://www.batcon.org/bat/myotis-volans/>)

Yuma myotis (*Myotis yumanensis*)



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<https://www.batcon.org/bat/myotis-yumanensis/>
(<https://www.batcon.org/bat/myotis-yumanensis/>)

Mexican free-tailed bat (*Tadarida brasiliensis*)



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<https://www.batcon.org/bat/tadarida-brasiliensis/>
(<https://www.batcon.org/bat/tadarida-brasiliensis/>)

Species Count

Number of bat species confirmed at each site in each year of surveying.

NABat Cell	Location Name	2020	2021
3562	NE_Quail_Hollow	10	11

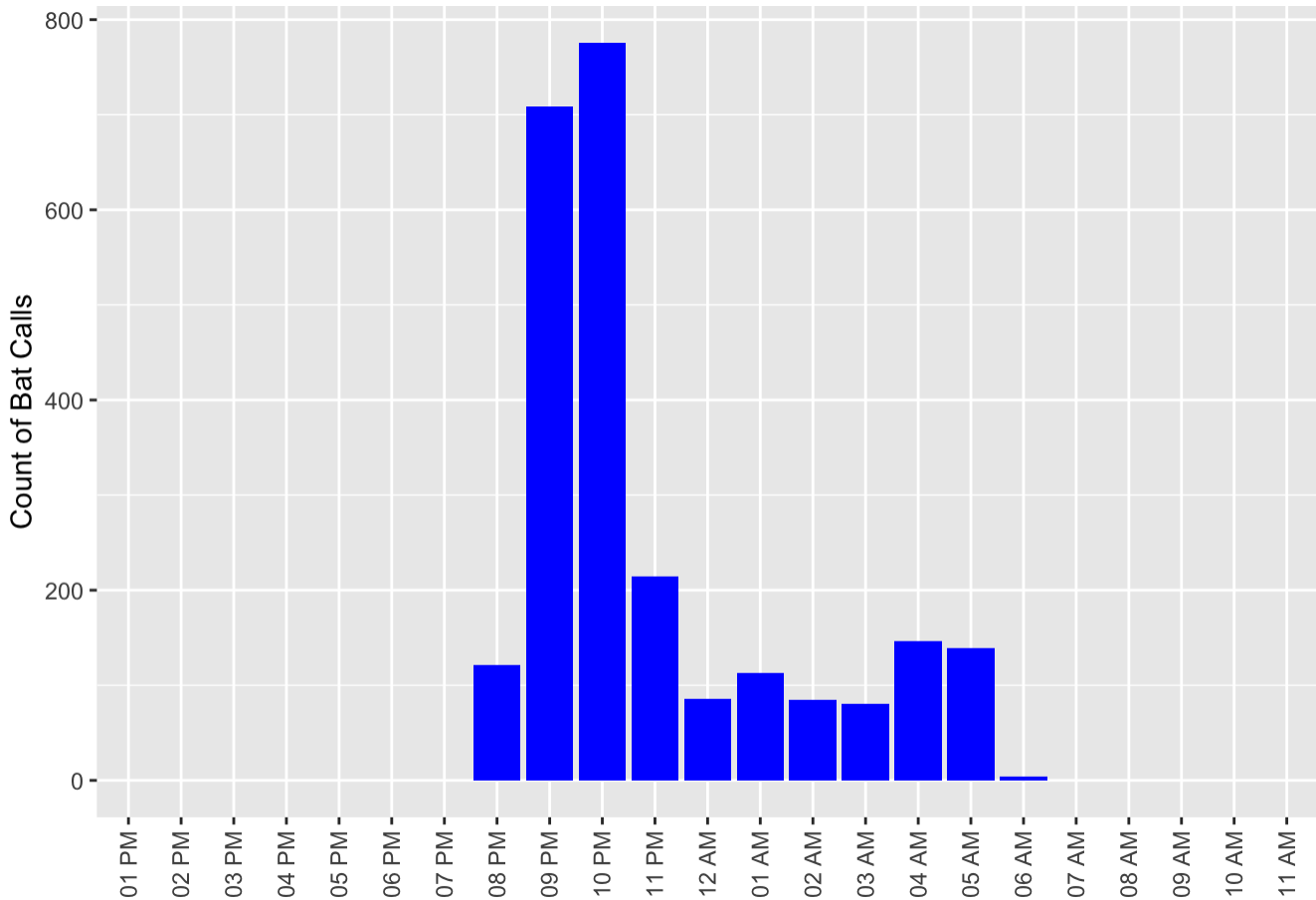
Survey Dates

NABat Cell	Location Name	Survey Start Date	Survey End Date
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NABat Cell	Location Name	Survey Start Date	Survey End Date
3562	NE_Quail_Hollow	2021-06-30	2021-07-08

Bat Activity

The following bar chart gives a sense of when bats were active at these sites this past summer, as it shows the number of bat recordings captured during each hour of the day. Note that this is a total count that includes all survey nights at all survey sites in this report.



Background

Our region’s bats face unprecedented threats, including widespread habitat alteration and destruction, climate change and drought, and the arrival and spread of a deadly fungal disease called White-nose Syndrome. Yet little is known about the current abundance and distribution of most US bat species. NABat brings together a diverse and extensive network of partners in collecting data to assess the status and trends of bat populations throughout North America to inform the conservation and management of bats. Participation by private landowners is critical to the success of effective bat population monitoring in our region as many of our highest priority survey locations occur on private land.

There are over 1,400 bat species in the world, with California and Nevada being home to 25. Our region’s bats play important ecological roles that are vital to the health of our natural ecosystems and our human economies. Scientists estimate that insect-eating bats may save U.S. farmers roughly \$23 billion each year by reducing crop damage and limiting the need for pesticides, as they eat up to half of their body weight in insects each night.

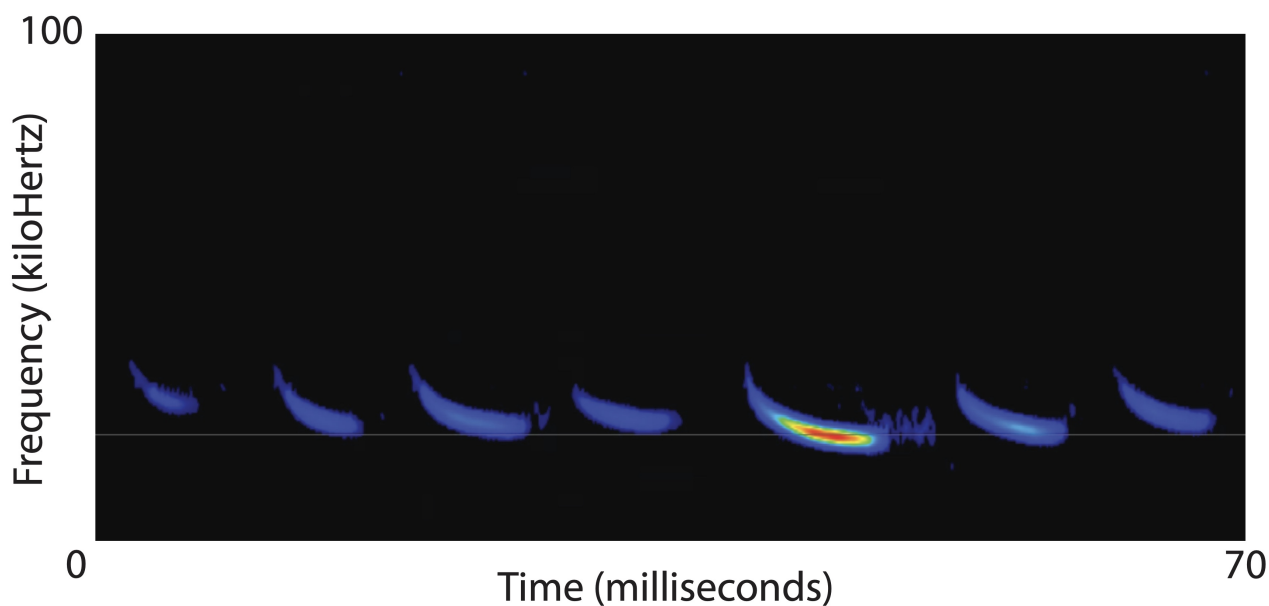
Bats are difficult to observe and identify because they are most active at night and roost in small spaces. However, using “bat acoustic detectors”, we can record the echolocation calls of bats as they travel and forage for food during the night. The recordings can then be used to identify the species of the bats present in an area.

Methods

NABat divides North America into a grid of 10 x 10 km squares and randomly assigns a priority ranking to every square, which is used to determine which areas to target for surveying. Exact survey locations within the 10 x 10 km squares are then selected by biologists to target areas with high expected bat activity. Bat acoustic detectors are placed near landscape features that may attract bats, such as water, dead trees, barns, open space, and forest edges.

The detectors are deployed to record for four consecutive nights. Once collected, the recorded echolocation calls are identified to the species level using auto-identification software and suspected species are then confirmed through expert review by Bat Conservation International staff. Data are then contributed to the NABat database and used to estimate habitat occupancy and population trends to guide wildlife management efforts.

Below is an example sonogram that shows a string of bat pulses. A sonogram is a graph of the frequency of sound emitted over time. Bats typically emit calls at very high frequencies. So high, that in many cases, their calls can't be heard by the human ear. Looking at the sonograms of bat echolocation sequences allows us to “hear” with our eyes. Below is the echolocation sequence of a hoary bat (*Lasiurus cinereus*). You can see each echolocation pulse made by the bat as a colored streak on the sonogram.



Learn More

The PacWest Bat Hub coordinates NABat efforts throughout California & Nevada. The PacWest Bat Hub is managed by Bat Conservation International in collaboration with the NABat Coordinating Office, US Fish and Wildlife Service, California Department of Fish & Wildlife, and the Nevada Department of Wildlife.

To learn more about the North American Bat Monitoring Program visit [nabatmonitoring.org](https://www.nabatmonitoring.org) (<https://www.nabatmonitoring.org/>).

To learn more about the PacWest Bat Hub visit [pacwestbats.org](https://www.pacwestbats.org) (<https://www.pacwestbats.org/>).

To learn more about bats and to support their conservation visit [batcon.org](https://www.batcon.org/) (<https://www.batcon.org/>).

You can report bat colonies and bat roosting sites to the California Department of Fish and Wildlife here (<https://wildlife.ca.gov/Conservation/Mammals/Bats/Report-Colony>). Knowing where bats roost helps CDFW to prioritize surveillance efforts, monitor population trends, and protect California's bats.



PACWEST BAT HUB



**BAT CONSERVATION
INTERNATIONAL**