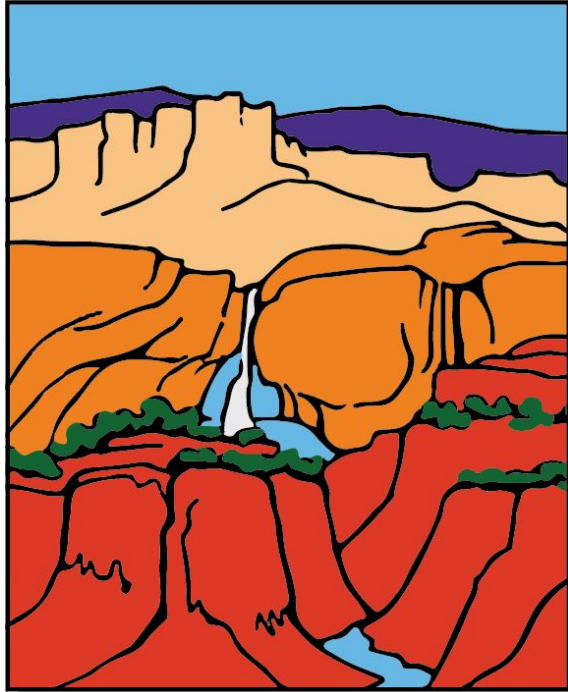




GRAND STAIRCASE
ESCALANTE

PARTNERS

Bats of the Grand Staircase-Escalante National Monument

Jacqueline (Jackie) Grant, Ph.D.

Executive Director

jackie@gsenm.org

8 October 2025

Presentation Outline

1. Introductions
2. GSEP info
3. GSENM info
4. Bat evolution & biology
5. Bat species in GSENM
6. Interspersed trivia
7. Questions/bat detector demo

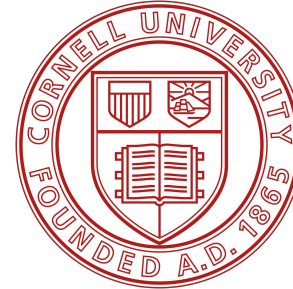


Who is Jackie Grant?

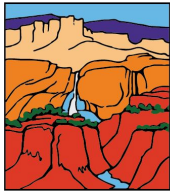
- Educator & scientist
- Pollinator biologist
- Botanist
- Earthwatch project leader
- Museum curator & director
- Federal & Tribal partner
- Lecturer, Adjunct, Assistant, Associate & Full professor
- Executive Director



Michigan Tech



SUU SOUTHERN
UTAH
UNIVERSITY



GRAND STAIRCASE
ESCALANTE
PARTNERS

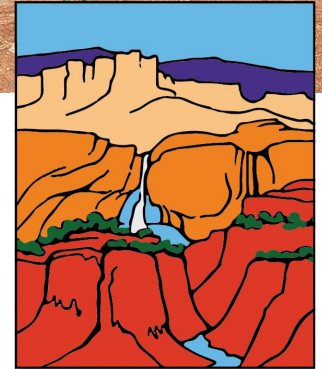


Who Are Grand Staircase Escalante Partners?

501(c)(3) Nonprofit

Mission:

Honoring the past and safeguarding the future of **Grand Staircase-Escalante National Monument** and its connected landscapes and watersheds through science, conservation, and education.



GRAND STAIRCASE
ESCALANTE
PARTNERS

What are the BLM National Conservation Lands?

- **Designated by Congress or Presidents**
- **Conserve special features**
- **24 year old system**
- **+/- 905 units**
 - **Monuments**
 - **Conservation Areas**
 - **Wild and Scenic Rivers**
 - **Scenic and Historic Trails**
 - **Wilderness and Wilderness Study Areas**
- **+/- 37 million acres!**



Hoodoo in GSENM. Photo by JB Grant, 2024.

What is a BLM-National Conservation Lands Friends Group?

“A private, independent, 501(c)(3) **nonprofit organization**

formed and managed primarily by local citizen volunteers

to **assist and support** the purposes and objectives

of a **Bureau of Land Management site**, facility, or program.

Friends groups vary in **size**, **structure**, and **purpose**.”



Photo credit Jackie Grant, 2024.

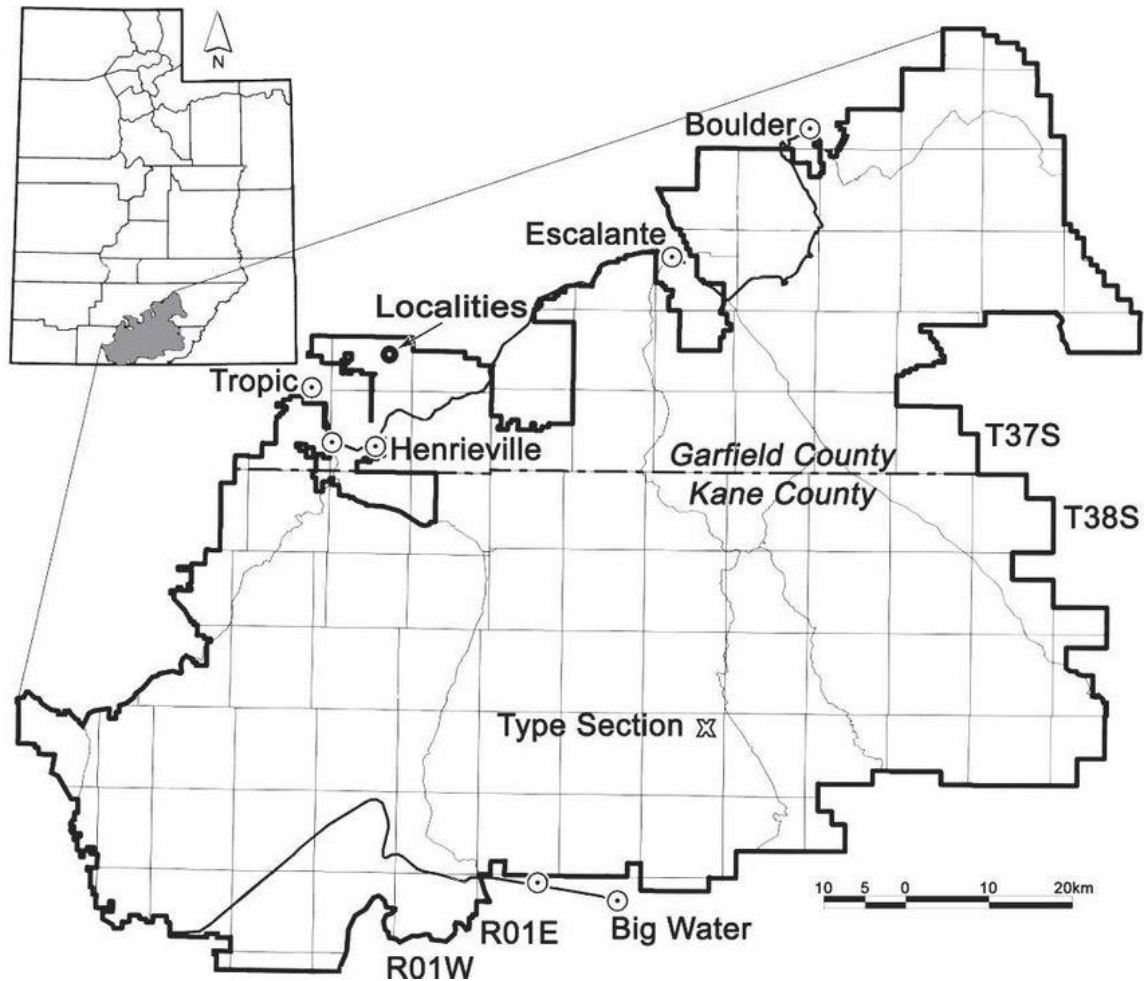
Why do bats have such wrinkly ears and even noses?

- A. To repel predators
- B. To gather water
- C. To attract mates
- D. To manipulate sound



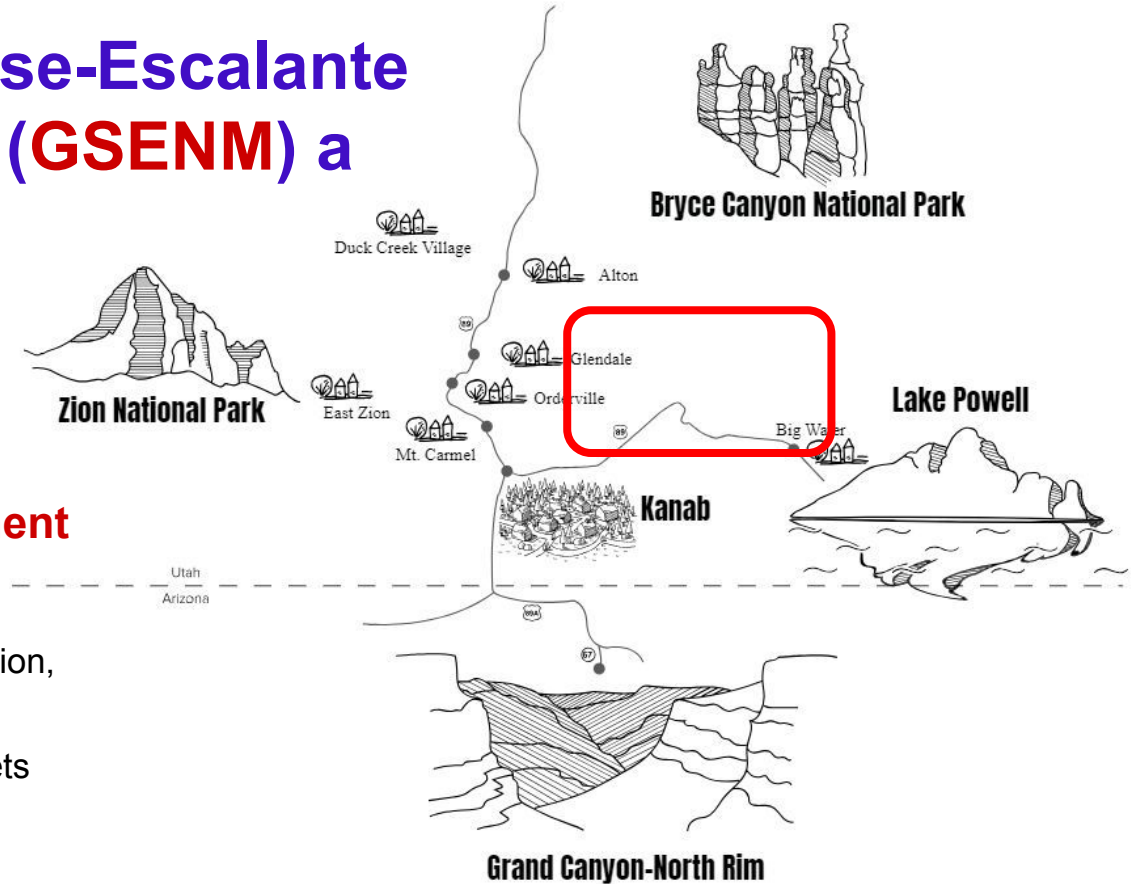
Where is the Grand Staircase-Escalante National Monument (GSENM)?

- Southern Utah
- 1.87 million acres
- Gateway communities:
 - **Kanab**, Glendale, Tropic, Escalante, Boulder, Big Water



Is the Grand Staircase-Escalante National Monument (**GSENM**) a national park?

- National Park Service?
- USDA Forest Service?
- **Bureau of Land Management**
 - Multiple use mandate
 - Grazing, timber, coal, recreation, conservation?
 - Rules not as restrictive for pets



Where's the Staircase?

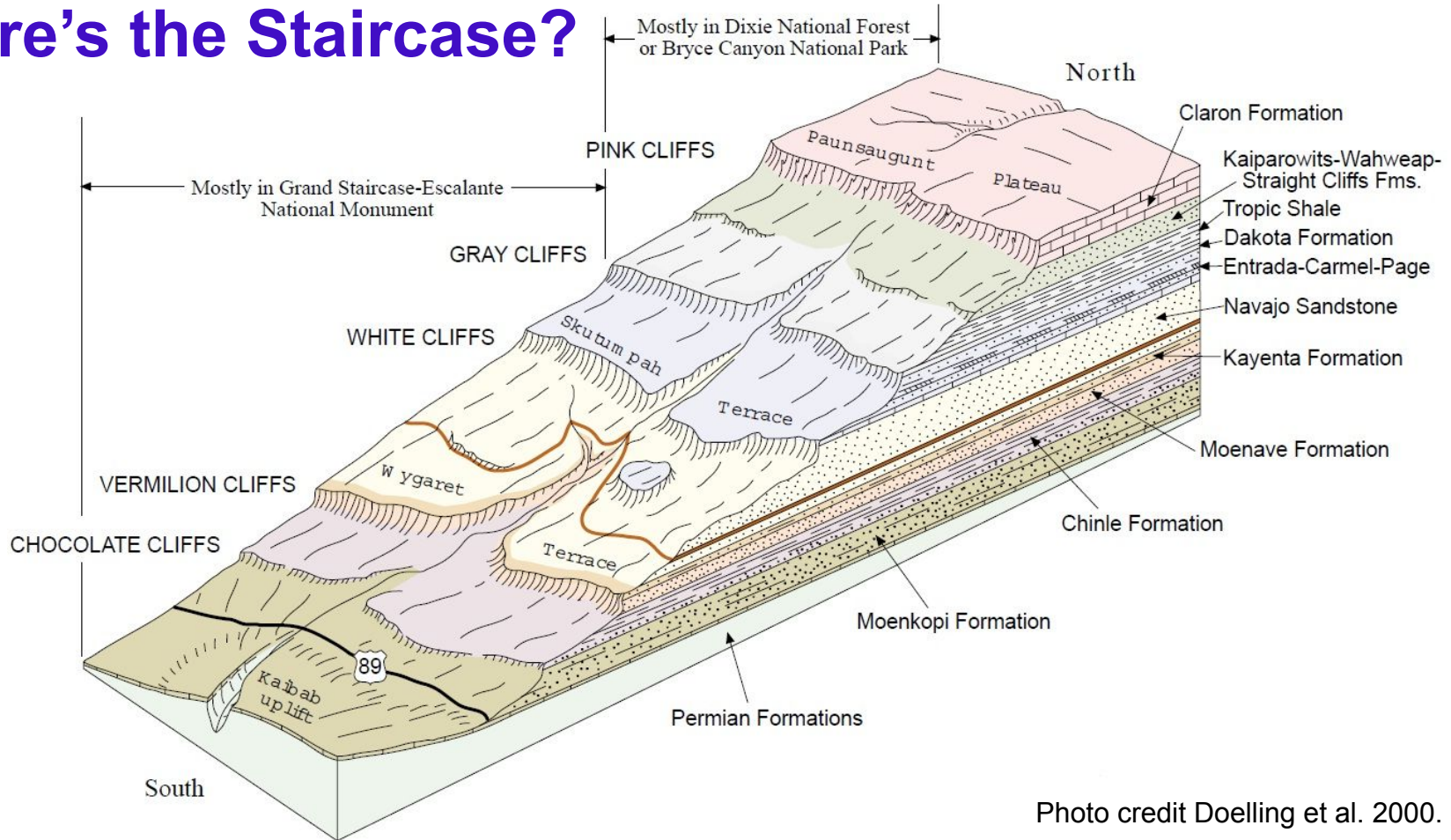
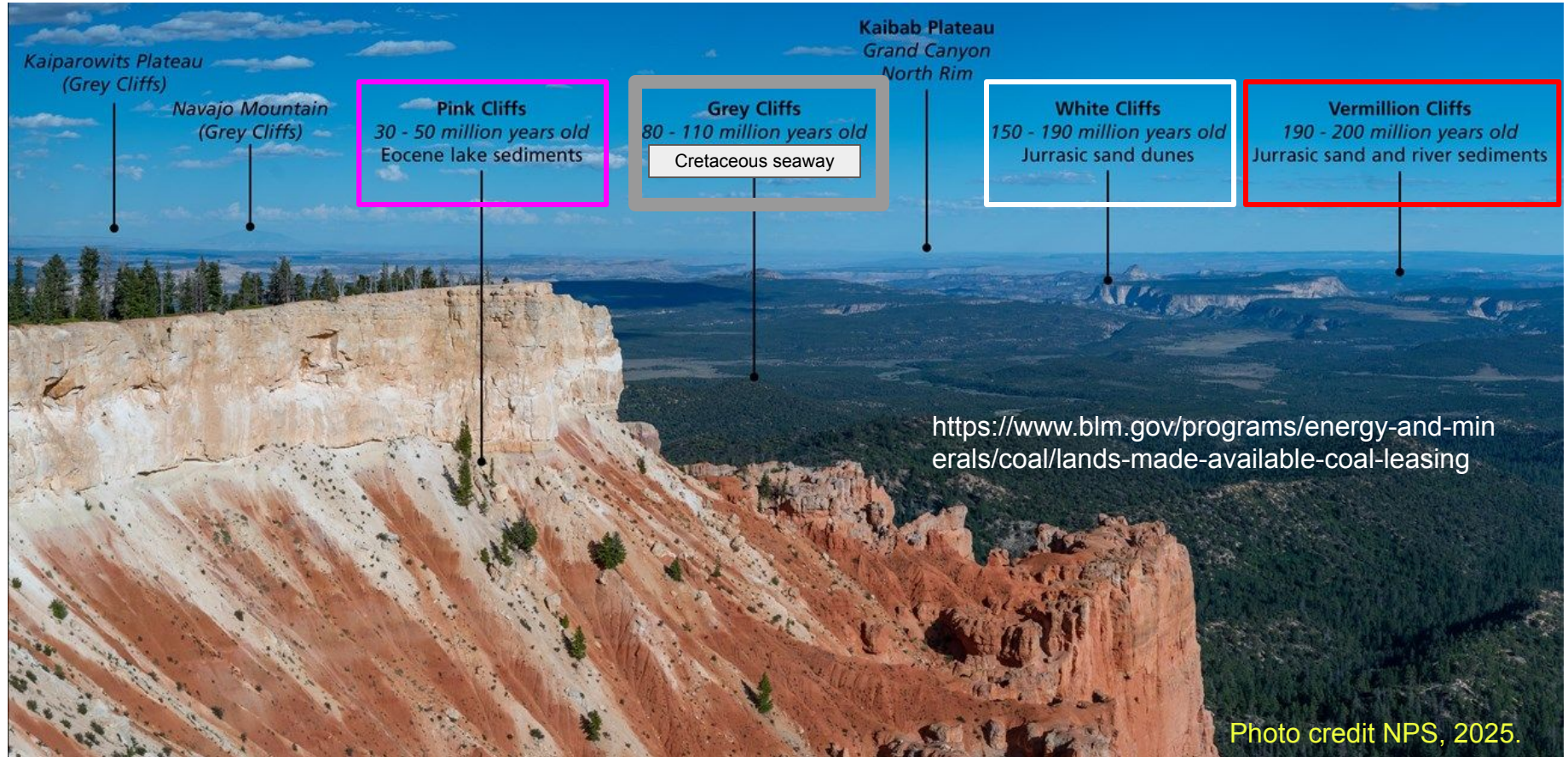


Photo credit Doelling et al. 2000.

What does this look like in practice?



How many bat species can be found in Utah?

- A. 6-8
- B. 10-12
- C. 18-21
- D. >30



GSENM: Grand Staircase Section



Henderson Canyon, GSENM. Photo by JB Grant, 2025.



Photo credit Utah Geological Survey.

GSENM: Kaiparowits Plateau Section



The Blues WSA, GSENM. Photo by JB Grant, 2025.

Smoky Mountain Road. Photo credit Outdeezzy
<https://outdeezzy.com/photo-gallery-utahs-smoky-mountain-road/>.

GSENM: Escalante Canyons Section



Photo credit Grand Staircase Escalante
Partners: gsenm.org



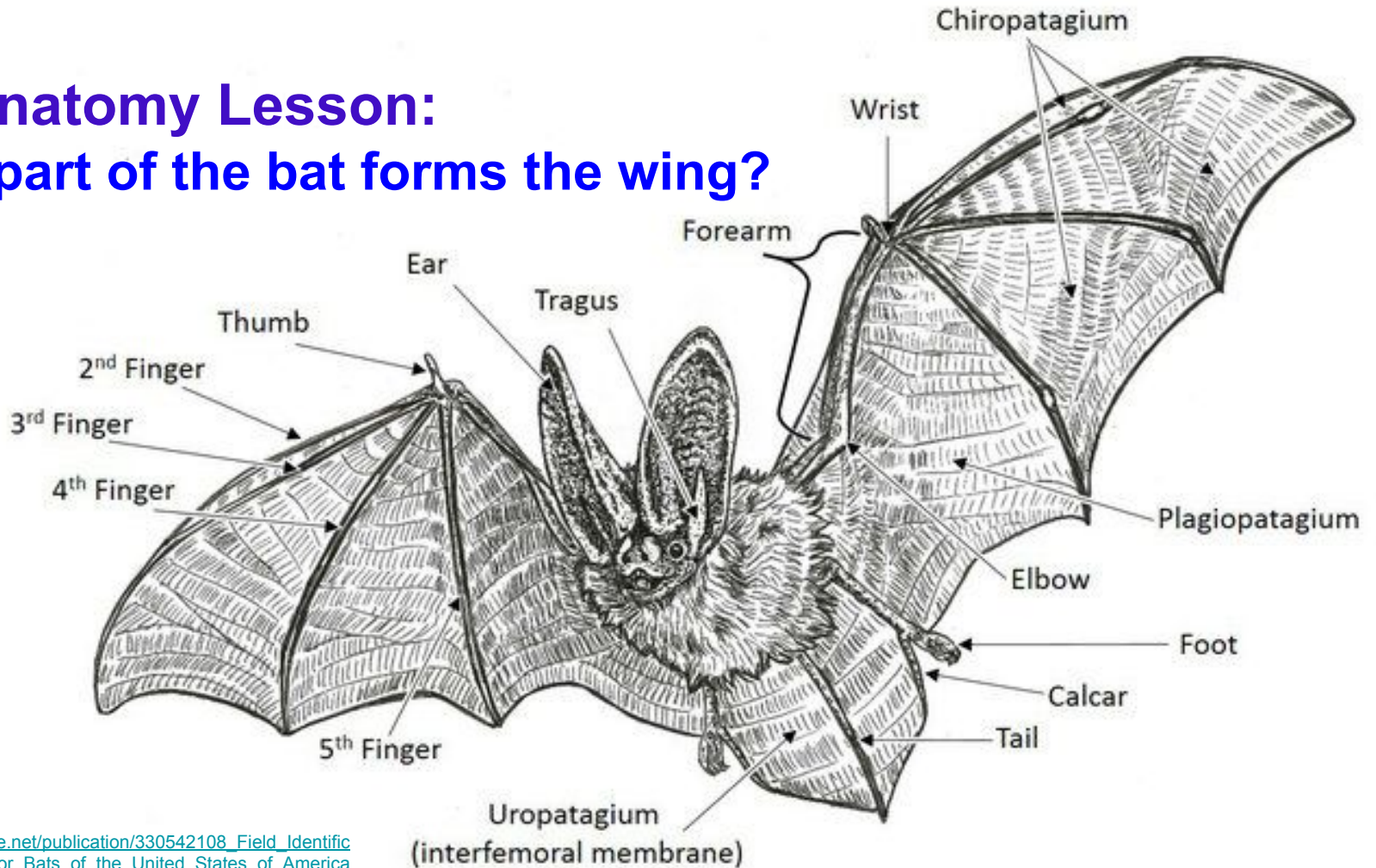
Bats use echolocation to visualize their environment. What other animals use echolocation?

- A. Oilbirds and swiftlets**
- B. Some frogs**
- C. Toothed whales**
- D. All of the above**

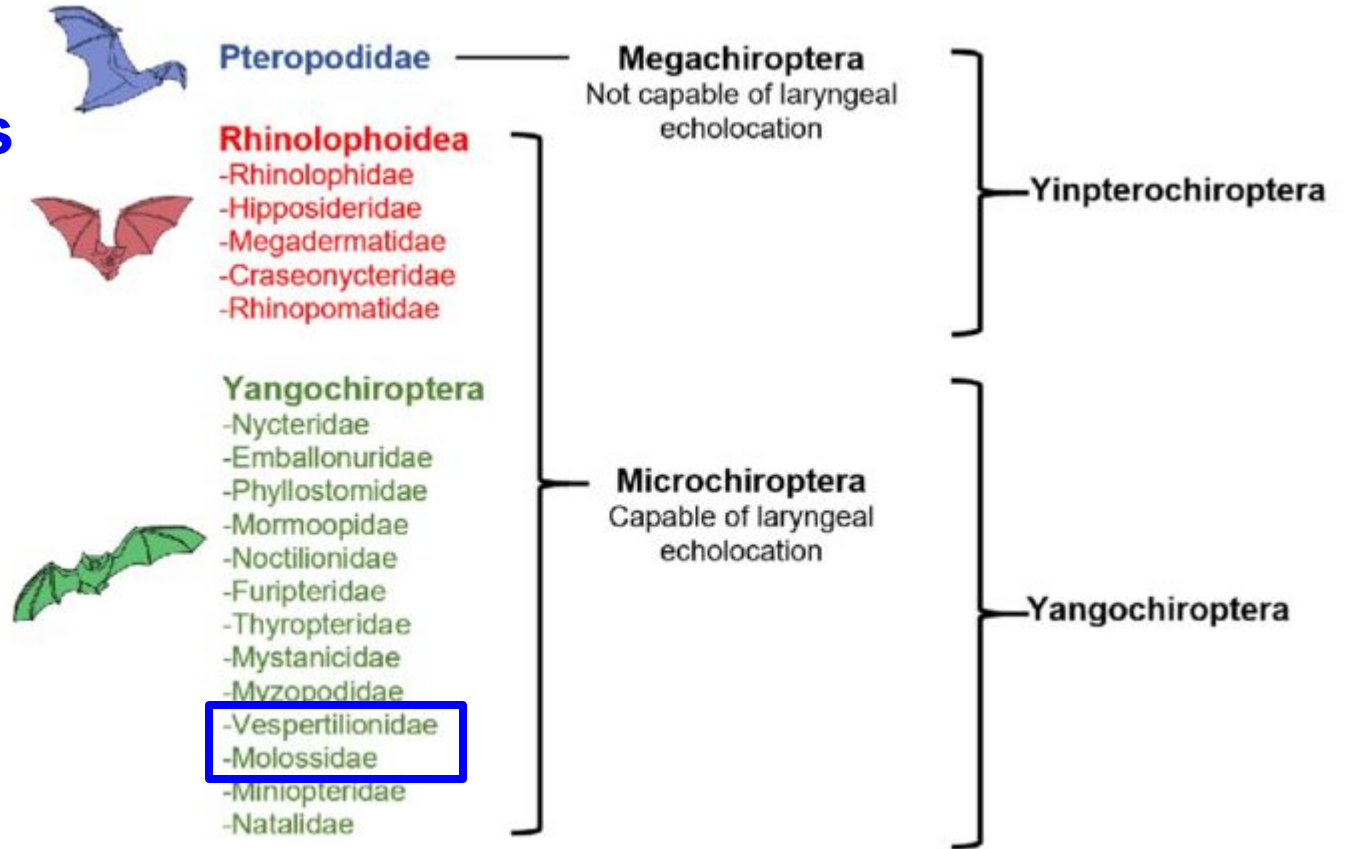


Bat Anatomy Lesson:

What part of the bat forms the wing?



Bat Relationships



What features of this bat tell us that it is not a local?

- A. Its eyes
- B. Its ears
- C. Its wings
- D. Its nose



Molossidae - free-tailed bats

- 100 species worldwide
- Two species in Utah & GSENM
 - *Nyctinomops macrotis*
 - *Tadarida brasiliensis*
- Highest flyers at up to 10,000 feet
- 100 miles per flight
- Colonial roosters (thousands)



Vespertilionidae - evening bats

- >400 species worldwide
- 16 species in Utah & GSENM
- Simple-nosed bats
- Solitary to colonial roosters
- Reach altitudes of 10-100's of feet
- Threatened by white-nose syndrome



Managing for Bats

- Open forests
 - Prescribed fire, midstory thinning
- Roosting locations
 - Caves, dead trees, old growth
- Water & insects
- Light pollution
- Mines
- Dry washes, pinyon & juniper



Photo credits Jackie Grant, 2025 & 2024.

Surveying for Bats

- Harp Traps
- Mist-netting
- Acoustic detection

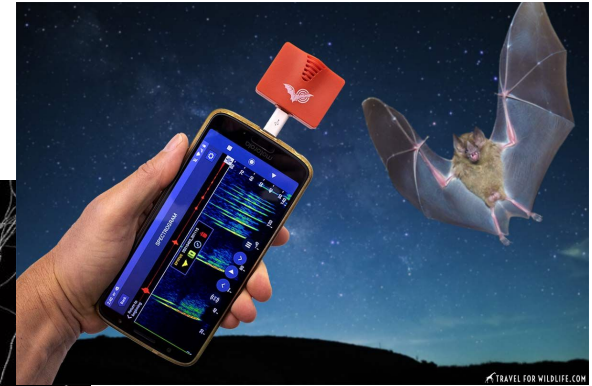


Photo credits Titley Scientific, NPS, Wildlife Acoustics.

How much do Utah's smallest bats weigh relative to a penny?

- A. About 1-2 pennies
- B. About 10 pennies
- C. About 12 pennies
- D. About 50 pennies



What's the best way to get a single bat out of your house?

- A. Open doors and windows**
- B. Chase it with a broom**
- C. Catch it in a waste bin**
- D. Grab it with your hands and release it outside**

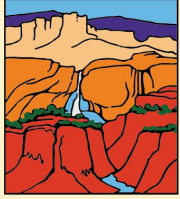


What do we call a recording of a bat's vocalization?

- A. ultrasound
- B. stethoscope
- C. spectrogram
- D. radar



QUESTIONS?



GRAND STAIRCASE
ESCALANTE

PARTNERS

**Become a
member or
volunteer!**

gsenm.org



jackie@gsenm.org - web: gsenm.org

BECOME A PAWTNER TODAY!

Becoming a PAWtner means your four-legged friend joins a community of animal lovers who care about Grand Staircase-Escalante National Monument.

Our program informs visitors about hazards specific to our region, explains pet etiquette expectations, and helps our supporters recognize the pet that has made their trips to the Monument so special.

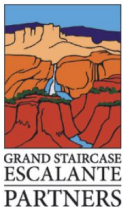
BENEFITS

- Digital GSENM Pet Toolkit
- Pet's photo in our online gallery
- PAWtners sticker



JOIN FOR \$25!

Your donation helps to ensure these lands and the adventures they inspire last for generations to come.



gsenm.org/pawtners



admin@gsenm.org



Cleo - too hot in GSENM. Photo by JB Grant, 2025.