

# Anthropogenic noise decreases activity and calling behavior in wild mice

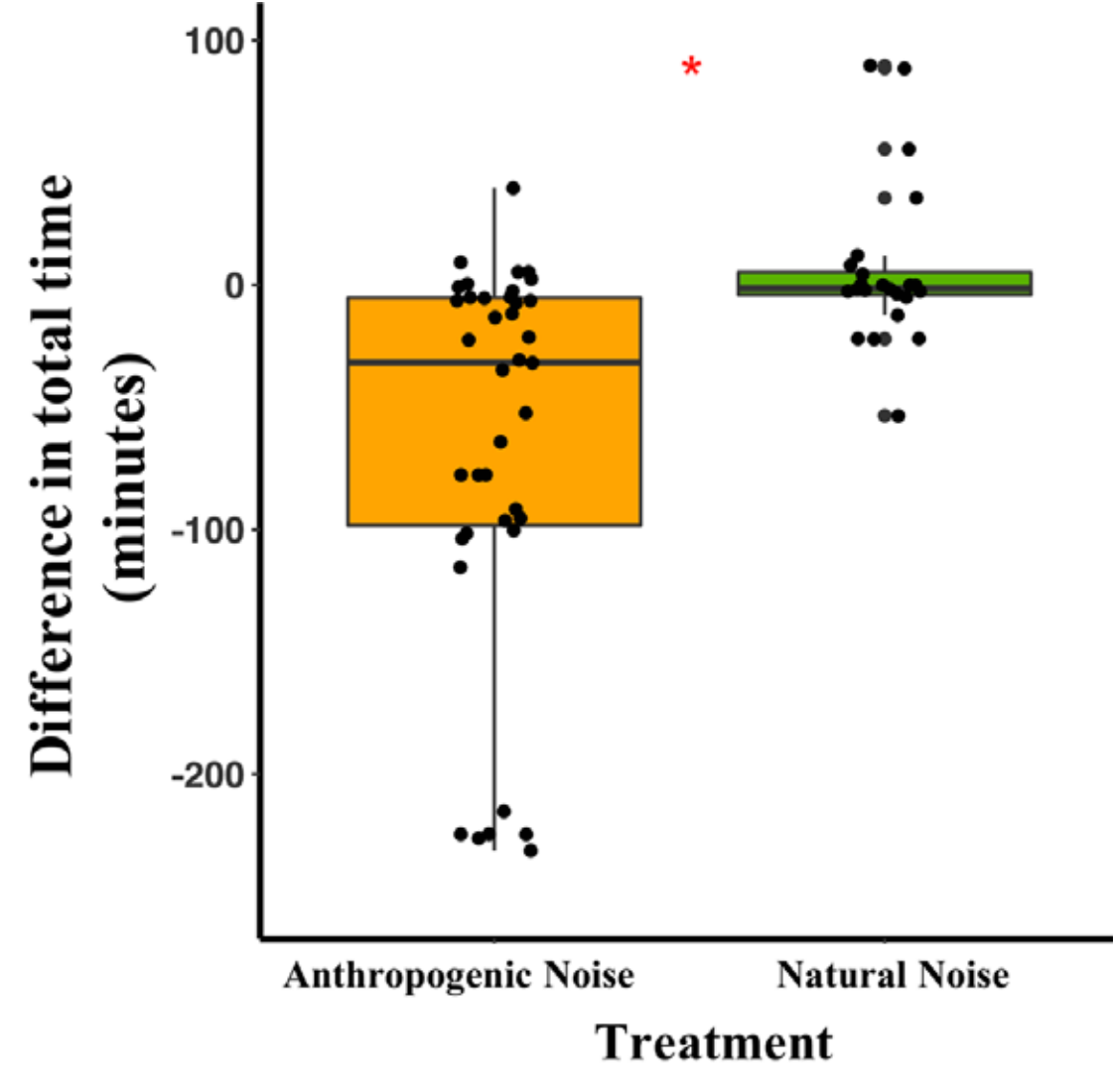
The effects of anthropogenic noise on nocturnal and free-living mammals, like rodents, are not understood even though noise is pervasive and rodents use sound to communicate.



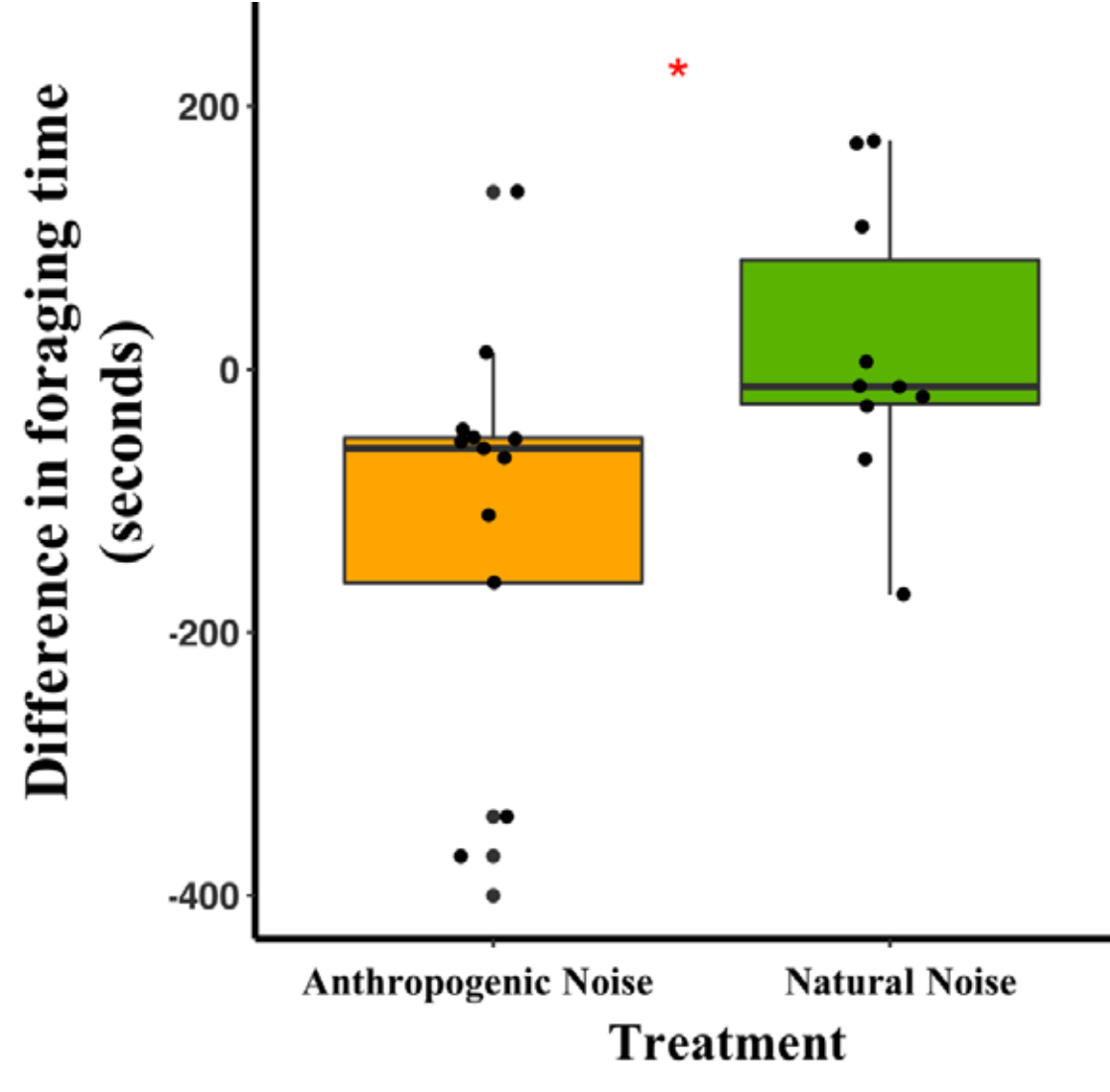
We assessed how two different species of wild, native rodents, the deer mouse and the woodland jumping mouse, responded to both **natural noise** and **anthropogenic noise**. We also present the first calls recorded from woodland jumping mice.

## We found that both species of mice produce fewer ultrasonic calls in the presence of noise when compared to their baseline level of calling.

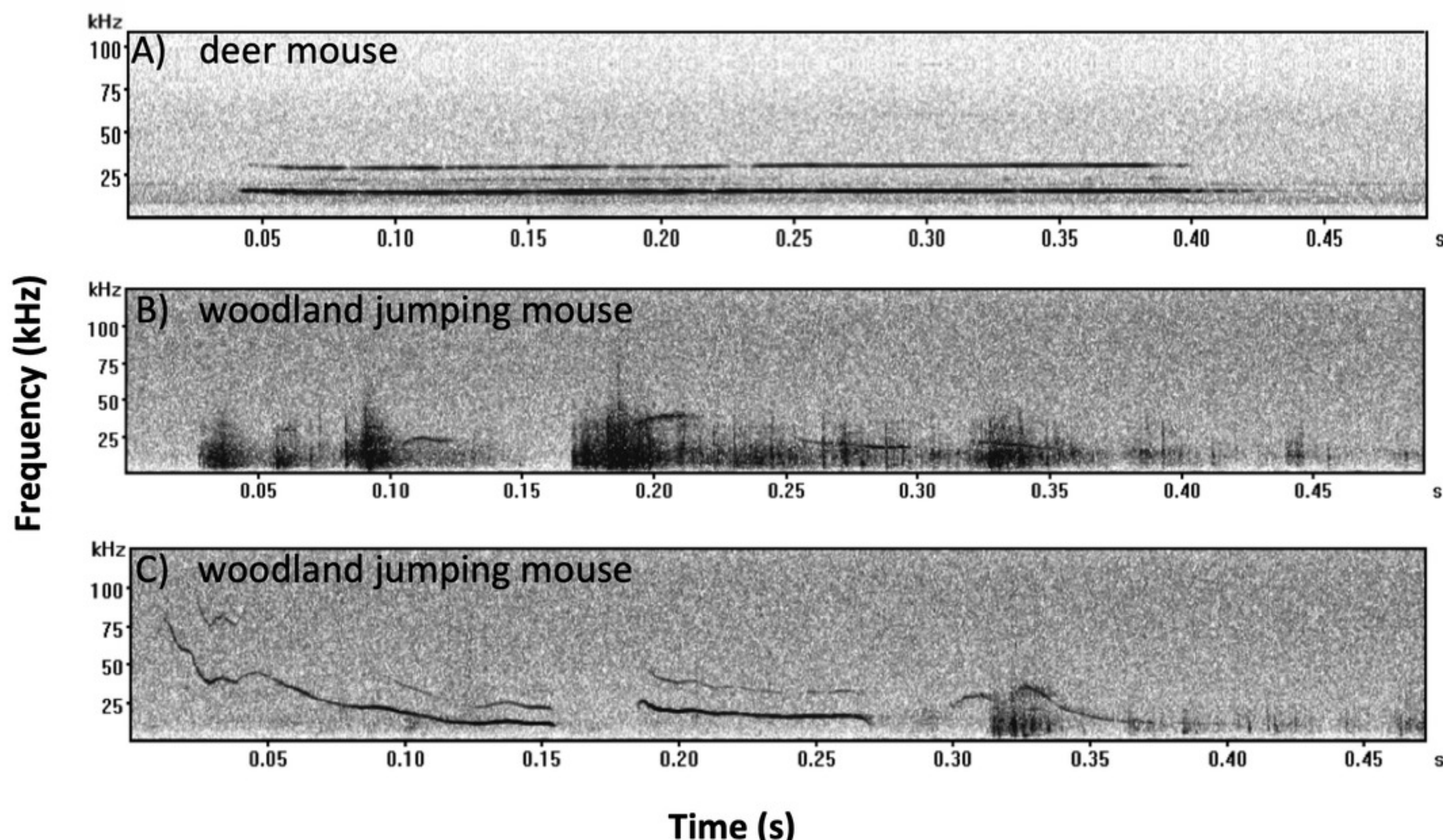
Deer mice responded differently to anthropogenic noise than to natural noise in terms of activity time in the focal area and time spent foraging. Deer mice appeared more sensitive to anthropogenic noise than woodland jumping mice.



Deer mice spend less time in focal area in presence of anthropogenic noise compared with natural noise.



Deer mice spend less time foraging in presence of anthropogenic noise compared with natural noise.



Examples of spectrograms of ultrasonic vocalizations recorded from the A) deer mouse (*Peromyscus maniculatus*) and B) and C) woodland jumping mouse (*Napaeozapus insignis*).

## Key Takeaways

- Woodland jumping mice produce ultrasonic calls
- Noise affects the calling behavior of both species of mice
- The type of noise matters. Deer mice decrease activity in the presence of anthropogenic but not natural noise
- The species are not the same in how they respond to noise because one species appears more sensitive.

We have to consider species differences when we think about how we mitigate for noise pollution.

