

Review of: "Listening to the Bats of Carajás: Applied Bioacoustics for Species Inventory and Environmental Use in a Mosaic of Forests, Savannas, and Industrial Mining in the Brazilian Amazonia"

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Potential competing interests: No potential competing interests to declare.

The acoustic section that is the basis of the paper needs substantial revision. Many species that were not identified can be, and there are many that are incorrectly identified.

Many proposed identifications include species that have yet to be verified acoustically. The methods section needs revision to correct what may be typographic errors, such as call duration and inter-pulse duration, which are measured in milliseconds but are stated as seconds.

The important display of pulses requires revision to show a standardized display with the Y axis as a logarithmic scale vs a linear scale that may distort the visual appearance of call pulses from lower to higher frequencies. The X-axis also needs to be standardized with tick marks at a standard scale of 10 ms. Also, for identification verification purposes, a compressed display is preferable that visually removes the "empty" space between pulses, thereby displaying a diagnostic call sequence that otherwise would not be clearly obvious. This is critically important to differentiate calls of groups such as the Lasiurines, which have a distinctive variation of the characteristic frequency of the dominant harmonic. Visualizing species that have paired call pulses, such as many species of Emballonuridae and some Molossidae, are also visually distinct when displayed as complete sequences but are not clearly identifiable when only individual pulses are displayed.

This is a very important paper documenting the diversity in an important area threatened by anthropogenic disturbance/development. This paper should be published once the supporting acoustic details are clarified and the species identifications are adjusted. An indication of each species' relative abundance would be very useful to support suggestions of the importance of the habitats surveyed. Are the areas important for foraging or roosting, or are some of the recorded bats simply moving/transiting through the area?

In many sections, the wording can be tightened up, and some minor English language usage adjustments will be useful so the text flows better for readers.

I look forward to the revised draft of this important work.

