

Peer Review

Review of: "Feeding Ecology and Activity Rhythms of the Critically Endangered Hawksbill Turtle"

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The manuscript "Feeding Ecology and Activity Rhythms of the Critically Endangered Hawksbill Turtle" presents a well-executed experimental study investigating the feeding habits of the hawksbill turtle (*Eretmochelys imbricata*) in the waters surrounding Martinique island. The experimental work was carefully designed and carried out, despite some inherent methodological limitations. Notably, the relatively short duration that the camera was attached to the turtles' carapaces and occasional issues with underwater visibility. However, these limitations are acknowledged by the authors. Even so, these limitations did not compromise the overall quality and relevance of the data collected.

The results obtained are consistent and provide valuable insights into the feeding ecology of *E. imbricata*, particularly regarding the role of sponges and other benthic organisms in its diet. These findings contribute meaningfully to the broader understanding of the species' foraging behaviour in this region.

It is important, however, to interpret the results within a critical framework, considering that *E. imbricata* is an omnivorous species with known dietary plasticity depending on geographic location and environmental availability. The authors demonstrate full awareness of these ecological nuances and are careful to emphasise throughout the manuscript that their conclusions apply specifically to the *E. imbricata* population in Martinique.

A particularly commendable aspect of the paper is its extensive and thoughtful discussion section, which extends beyond immediate dietary observations to consider several parallel topics of potential importance for future research. These include the composition of microbiota associated with sponge species consumed by the turtles, possible thermoregulatory behaviours related to foraging, the presence of bioactive compounds such as antibiotic and anti-inflammatory substances in sponge tissues, and the potential implications of these for turtle health and physiology. Furthermore, the study underscores the

importance of such ecological knowledge for the effective conservation management of *E. imbricata*, a species of considerable conservation concern.

In summary, this is a well-conceived and carefully executed study that makes a valuable contribution to the field of marine ecology and conservation. The authors are appropriately cautious in framing their conclusions and provide a broad, insightful discussion that enhances the relevance of their findings beyond the immediate scope of the study.

Declarations

Potential competing interests: No potential competing interests to declare.