

***Interactive comment on “Megafauna community assessment of polymetallic nodule fields with cameras: Platform and methodology comparison” by Timm Schoening et al.***

**Adrian Glover**

a.glover@nhm.ac.uk

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This is an excellent paper adding to the growing body of work on deep-sea faunal surveys conducted using imaging alone.

However, I would urge the authors to consider incorporating a section discussing the obvious need for taxonomic descriptions of the fauna living in these remote and poorly-studied regions.

Almost all of the fauna being observed in the images are either undescribed or lack local taxonomic records linked to vouchered specimens. This means it is not possible

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to identify the animals observed to species level. For this reason, image survey cannot replace actual sampling until such time that we have a reasonably good checklist of known species (verified from samples) from the region where the image survey is taking place.

Once that is achieved, image survey will be a valuable tool for conducting biodiversity assessment. At the moment, the use is limited to the abundance of higher taxa. This is not the species-level assessment that the regulator, stakeholders and society should demand.

The authors refer to this in this sentence only:

"To label fauna to species level from imagery requires a certain amount of skill, and an awareness of fauna likely to occur in a particular survey region."

I believe they could easily add to this section the obvious need to undertake taxonomic descriptions to enable identification, and also make the caveat that species-level identification is not possible until this has been done.

Good luck with this excellent work.

Adrian Glover <http://www.nhm.ac.uk/deep-sea>

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