

Interactive comment on “Freshwater fish fauna of rivers in the southern Western Ghats, India” by Anbu Aravazhi Arunkumar and Arunachalam Manimekalan

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Dear Colleagues,

I find this manuscript (MS) convinces in the fact that it provides a species overview and does it all as Open Access. It's short and concise.

I value those efforts highly, and based on our own experience in that wider region.

To me, this MS is to be accepted after considering some comments below.

I find, this style of research - open access- breaks new ground and is a great contribution in many regards. The analysis done looks robust to me, as presented (please

mention more software details, if you can).

The authors state already a lack of data and few surveys for the area, and so this work matters even more then. The Ghats are a global biodiversity hotspot and deserve more modern online research for sure!

This work also helps addressing the Satpura hypothesis, which is part of modern biogeography and for India overall.

While water (and sand in rivers) is the 'new oil', the authors can easily make that link to environmental impact studies more; they should.

This work further links with BarCoding and DNA work (but not with Genbank). Ideally, the voucher specimen should link with a URL where to find them online and how to connect them further. This would allow for a more global access, too.

Due to the mesh-size issues of the compiled data, this data set should be treated probably as a first minimum estimate (similar to 'presence only' data, I would say). I would simply interpret it that way. Documenting the research design is very relevant for a better interpretation of those data.

So far, I see the data not much presented as a data base (just tables). So I would encourage the authors to serve a digital database copy of all data (ideally with metadata).

The geo-referencing in the table is very important and great, but seems to lack the 'seconds'. Thus, it's still great but not very precise (=>the minutes need decimals or seconds details). This should be stated and what it means, on the ground for an accuracy for a user of this data. To be professional, each location needs an error estimate (see GBIF.org data for an example, or biogeomancer tool and PLOS1 paper <https://www.gbif.org/document/80536/biogeomancer-guide-to-best-practices-in-georeferencing>).

In addition, data collections should ideally be time/date-referenced as well; if possible. I would elaborate on that either way (I assume it's not mentioned because data are

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compiled; say so then).

As a great addition, I like the physical data collection and water descriptions.

I find table 5 to be clearly a highlight of this study and data set!

The fish taxonomy issues are well mentioned. What is a little bit missing though is a good and clear taxonomy citation that is followed here. Ideally, it probably should be ITIS.gov (which can take species list uploads and which provides taxonomic serial numbers TSNs) but for now, any other will do fine if stated clearly. It's a nice start for Open Access work.

I assume the first english species descriptions do not match so well with recent species IDs, nor are they available online. This can be mentioned; same applies to the evolutionary questions in fish taxonomy (which appear to be quite fundamental ?).

Smaller additional comments for improvements:

The abstract should present details mentioned in the last phrases.

Line 74: Should read Kolkata

Line 192: Should have a lower case name

Line 209-210: This should need more details.

Fig 7 Should state source/author of the drawings.

Tables should have the columns correctly formatted.

This concludes my first assessment.

Once more, I really like this MS and the work and find it can easily make for a nice contribution indeed, now as a modern Open Access online manuscript for a global audience with suitable impact. Thanks.

Kind regards Falk Huettmann PhD, Associate Professor University of Alaska Fairbanks

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