

Submission date. 12/04/2026

Associate editor's decision after peer review (09/06/2026).

Dear Dr. Dopazo:

Manuscript ID NI-2026-0053 entitled "A new species of *Peckoltia* (Siluriformes, Loricariidae) from the rapids of rio Trombetas basin, Brazil" which you submitted to the Neotropical Ichthyology, has been reviewed. The comments of the reviewer(s) are included at the bottom of this letter.

The reviewer(s) have recommended publication, but also suggest some revisions to your manuscript. Therefore, I invite you to respond to the reviewer(s)' comments and revise your manuscript.

To revise your manuscript, log into <https://mc04.manuscriptcentral.com/ni-scielo> and enter your Author Center, where you will find your manuscript title listed under "Manuscripts with Decisions." Under "Actions," click on "Create a Revision." Your manuscript number has been appended to denote a revision.

You may also click the below link to start the revision process (or continue the process if you have already started your revision) for your manuscript. If you use the below link you will not be required to login to ScholarOne Manuscripts.

*** PLEASE NOTE: This is a two-step process. After clicking on the link, you will be directed to a webpage to confirm. ***

https://mc04.manuscriptcentral.com/ni-scielo?URL_MASK=b552ec421e964781bda9102beb7ad646

You will be unable to make your revisions on the originally submitted version of the manuscript. Instead, revise your manuscript using a word processing program and save it on your computer. Please also highlight the changes to your manuscript within the document by using the track changes mode in MS Word or by using bold or colored text. Once the revised manuscript is prepared, upload BOTH versions (the tracked and a clean) and submit them through your Author Center.

When submitting your revised manuscript, you will be able to respond to the comments in the space provided. You can use this space to document any changes you make to the original manuscript. In order to expedite the processing of the revised manuscript, please reply POINT TO POINT all the suggestions of the reviewers and be as specific as possible in your response to the comments.

IMPORTANT: Your original files are available to you when you upload your revised manuscript. Please delete any redundant files before completing the submission.

Because we are trying to facilitate timely publication of manuscripts submitted to the Neotropical Ichthyology, your revised manuscript should be submitted before 09-Aug-2026. If it is not possible for you to submit your revision by this date, we may have to consider your paper as a new submission.

Once again, thank you for submitting your manuscript to the Neotropical Ichthyology and I look forward to receiving your revision.

Sincerely,

Dr. Carlos DoNascimento

Associate Editor, Neotropical Ichthyology
tepuglanis@hotmail.com

Anonymous reviewer #1**Recommendation.** Major Revision

Comments. I think that this is likely a good species based on distribution and characters, but it looks a lot like *P. wernekei* although with a lot more plates on the abdomen and the juvenile looks pretty different. I would be much happier if *P. wernekei* was in the phylogenetic analysis. KP960136.1 on GenBank is a cytb sequence of *P. wernekei* (it is labeled as *Peckoltia* aff. *vittata*). I think that this has to be included in the analysis as the two species are so similar, and there is some similarity in species from the upper Orinoco and Trombetas.

Its clear that you are using other studies for comparative characters, and these need to be cited.

The description should be bolstered. It is pretty light right now. It would be nice to use something like the *P. wernekei* description as a template so that the species can be more directly compared. The description of a lack of an iris operculum is off as the live picture shows that the operculum is present (diverticulum is a bad word for this character).

The polyphyly that you see may be a result of not broad enough taxon or genetic sampling. Lujan et al. (2017) find *Peckoltia* monophyletic, although weakly supported. You may wish to mention this as it is the broadest sampling of the group yet.

The map is low resolution and the river layers and the digital elevation model don't work well together. Consider using the Hydrosheds database for rivers and elevation. They were done at the same time, so they mix well. There are certainly much better options out there. I am happy to share a QGIS map with you.

I am leery of the *Peckoltia multispinnis* sequence. Might want to check on it – although I could definitely be wrong about the identity of this species as I only ever saw pictures! The lower lip is unusual, though, so it should be fairly easy to identify.

I have made comments and corrections on the Word version of the document. I am happy to check on any characters of *P. wernekei* or any of the others if you want.

Jon Armbruster

I confirm I have not uploaded the author manuscript to any third party tool and have not used a generative AI tool to produce this reviewer report.: Confirm

Anonymous reviewer #2**Recommendation.** Minor Revision

Comments. The manuscript describes a new species of *Peckoltia* from rio Trombetas. The manuscript is well written, although some parts deserve some improvements in the English. I have made some comments throughout the text, but ideally, it should be checked by a native speaker. Chat GPT or AI may not be advisable.

Concerning the species itself, the diagnosis is poor. The species is very similar to *Peckoltia vittata* that is very poorly taxonomically delimited. As *P. vittata* was described based on syntypes from different locations, there is a lot of ambiguity in assigning diagnostic features for other species already described and very close to *P. vittata*. One of the diagnostic characters used in the current paper is the amount of abdominal covering by plates. The authors state that the new species has the abdomen partly covered, and that in *P. vittata*, it is completely covered. As I examined the syntypes of *vittata*, I could observe that the abdominal coverture is quite variable. Some syntypes have more extensive coverage than the others. Thus, this is not a good diagnostic character.

On the other hand, three facts called my attention and the authors apparently did not give much importance: the number of mandibular teeth, the orientation of the dentaries and the type locality. All syntypes of *P. vittata* measured by me had at most 20 teeth, whereas the new species shows a much larger number (28–51 on the premaxillary and 30–42 on the dentaries). Even in Figure 4, it is possible to observe that there are many teeth on the mandibles and the wide orientation of the dentaries. The mandibles are more open than in *P. vittata*. Concerning the location, the specimens were apparently collected above Cachoeira Porteira. Cachoeira Porteira is a very strong barrier for some fish (based on Ferreira, 1993, and personal observation). The syntypes of *P. vittata* are all from lower rio Xingu, or rio Amazonas, close to the rio Xingu mouth, or rio Madeira.

Also, color description should be improved. Color pattern is very similar among different species of *Peckoltia*. You should state more clearly the coloration of the head, the saddles (are ok) and more details on the fins.

Figure 3, a CT-scanned image, is quite uninformative. If nothing is going to be commented about the suspensorium, or even a comparison with other *Peckoltia* species, the figure should be removed.

The phylogeny proposed seems to be a work under construction as it does not congregate all the known species of the genus. Thus, deeper conclusions about relationships among *Peckoltia* species might be premature. It would be interesting and helpful to have the genetic distances between all the *Peckoltia* spp. used in the analysis. The species *P. kahxi* seems to be valid, and certainly the genetic distance between *kahxi* and the other species would reinforce this conclusion.

I confirm I have not uploaded the author manuscript to any third party tool and have not used a generative AI tool to produce this reviewer report.: Confirm

Anonymous reviewer #3

Recommendation. Major Revision

Comments.

General Comments:

The authors provide a brief though generally sufficient description of a new *Peckoltia* species from the Trombetas; however, I think that their diagnosis is insufficient with respect to the primary potential misidentification: *Peckoltia vittata*, which has not been redescribed since its original description in 1881. The authors highlight the ambiguity and shifting species limits of *P. vittata*, but nowhere do they say what *P. vittata* is. Nor do they appear to have morphologically examined any more than three specimens of *P. vittata* (listed in comparative material examined), despite an abundance of material from the lower Xingu type locality available at several institutions. Further to this point, they only include a single *P. vittata* terminal in the molecular phylogeny, despite the availability of two *P. vittata* cytb sequences in Genbank from the Lujan et al. 2015 multilocus analysis (one from the lower Xingu and one from the Madeira). All of this provides little confidence that the authors have adequately characterized the primary species with which this new species might be confused.

Another significant concern is that, despite stating that "the data supporting the findings of this study are available within the article," I do not see any links to the sequence data or the CT-data of the new species. These data must be uploaded to a

suitable data repository, with links provided before the ms can be accepted.

Specific Edits:

P3L24: Should be: 'sensu stricto'

P3L53: *Peckoltia wernekei* is part of this group too.

P3L57: Replace 'denticles' with 'tooth row'

P4L5: Armbruster's Orinoco species of vittata became *P. wernekei*

P4L8: Replace 'species listing studies' with 'studies listing species'

P6L22: I strongly recommend that paratypes be distributed to not just the institution where the holotype is deposited. This helps ensure the long-term preservation and availability of types in the event a collection is damaged or destroyed.

P10L41: Should be: 'sensu stricto'

P11L14–27: This presentation of hydrologic history is so brief as to be unnecessary. I recommend removing this paragraph. Also, *Baryancistrus sensu stricto* does not occur in the Orinoco, as both *B. beggini* and *B. demantoides* belong to an undescribed new genus following the molecular results of Lujan et al. (2015).

Author's Rebuttal Letter (13/07/2026).

Dear Editor,

We appreciate the thorough reviews and constructive feedback provided by the reviewers. We have carefully addressed all of the reviewers' comments and incorporated the suggested changes into the revised manuscript. We have also highlighted the changes within the document using track changes.

Reviewer: 1

Comments:

I think that this is likely a good species based on distribution and characters, but it looks a lot like *P. wernekei* although with a lot more plates on the abdomen and the juvenile looks pretty different. I would be much happier if *P. wernekei* was in the phylogenetic analysis. KP960136.1 on GenBank is a cytb sequence of *P. wernekei* (it is labeled as *Peckoltia* aff. vittata). I think that this has to be included in the analysis as the two species are so similar, and there is some similarity in species from the upper Orinoco and Trombetas.

Its clear that you are using other studies for comparative characters, and these need to be cited.

A: Thank you for the suggestions. We have included them in the manuscripts.

The description should be bolstered. It is pretty light right now. It would be nice to use something like the *P. wernekei* description as a template so that the species can be more directly compared. The description of a lack of an iris operculum is off as the live picture shows that the operculum is present (diverticulum is a bad word for this character).

A: We have done improvements on the description, including word changes and the characters that were highlighted to be included by the referee.

The polyphyly that you see may be a result of not broad enough taxon or genetic sampling. Lujan et al. (2017) find *Peckoltia* monophyletic, although weakly supported. You may wish to mention this as it is the broadest sampling of the group yet.

A: Thank you for the suggestions. We have included them in the manuscripts.

The map is low resolution and the river layers and the digital elevation model don't work well together. Consider using the Hydrosheds database for rivers and elevation.

They were done at the same time, so they mix well. There are certainly much better options out there. I am happy to share a QGIS map with you.

A: We believe that the current display of the map is adequate for a species description as it follows the layout commonly used in this kind of study. Therefore, we state that elevation models mentioned by the referee are not necessarily mandatory.

I am leery of the *Peckoltia multispinnis* sequence. Might want to check on it – although I could definitely be wrong about the identity of this species as I only ever saw pictures! The lower lip is unusual, though, so it should be fairly easy to identify.

A: Done. The sequence of this species has been integrated into our phylogenetic topology (Genbank: KT988049). In addition, the morphological comparison of this species in the diagnosis of the proposed new species was included in the text, based on literature records (Armbruster 2008; Armbruster & Lujan 2016).

I have made comments and corrections on the Word version of the document. I am happy to check on any characters of *P. wernekei* or any of the others if you want.

A: We thank you for the help on the corrections.

Reviewer: 2

Comments:

The manuscript describes a new species of *Peckoltia* from rio Trombetas.

The manuscript is well written, although some parts deserve some improvements in the English. I have made some comments throughout the text, but ideally, it should be checked by a native speaker. Chat GPT or AI may not be advisable.

A: Done.

Concerning the species itself, the diagnosis is poor. The species is very similar to *Peckoltia vittata* that is very poorly taxonomically delimited. As *P. vittata* was described based on syntypes from different locations, there is a lot of ambiguity in assigning diagnostic features for other species already described and very close to *P. vittata*. One of the diagnostic characters used in the current paper is the amount of abdominal covering by plates. The authors state that the new species has the abdomen partly covered, and that in *P. vittata*, it is completely covered. As I examined the syntypes of *vittata*, I could observe that the abdominal coverture is quite variable. Some syntypes have more extensive coverage than the others. Thus, this is not a good diagnostic character.

A: We thank Reviewer 2 for their comments. We recognize that the previous diagnostic text was neither adequate nor appropriate for proposing a new species. Therefore, we have made concise improvements to the diagnosis and description to correctly present the new species, including characters not previously reported in the manuscript.

On the other hand, three facts called my attention and the authors apparently did not give much importance: the number of mandibular teeth, the orientation of the dentaries and the type locality. All syntypes of *P. vittata* measured by me had at most 20 teeth, whereas the new species shows a much larger number (28–51 on the premaxillary and 30–42 on the dentaries). Even in Figure 4, it is possible to observe that there are many teeth on the mandibles and the wide orientation of the dentaries. The mandibles are more open than in *P. vittata*. Concerning the location, the specimens were apparently collected above Cachoeira Porteira. Cachoeira Porteira is a very strong barrier for some fish (based on Ferreira, 1993, and personal observation). The syntypes of *P. vittata* are all from lower rio Xingu, or rio Amazonas, close to the rio Xingu mouth, or rio Madeira.

A: We have included the characters mentioned by the referee in our diagnosis.

Also, color description should be improved. Color pattern is very similar among different species of *Peckoltia*. You should state more clearly the coloration of the head, the saddles (are ok) and more details on the fins.

A: Done.

Figure 3, a CT-scanned image, is quite uninformative. If nothing is going to be commented about the suspensorium, or even a comparison with other *Peckoltia* species, the figure should be removed.

A: We disagree. The image is used to illustrate the characters used in the diagnosis, as indicated in the text. Further comparisons were included on text based on the works of Araújo et al. (2024, 2025).

The phylogeny proposed seems to be a work under construction as it does not congregate all the known species of the genus. Thus, deeper conclusions about relationships among *Peckoltia* species might be premature. It would be interesting and helpful to have the genetic distances between all the *Peckoltia* spp. used in the analysis. The species *P. kahxi* seems to be valid, and certainly the genetic distance between *kahxi* and the other species would reinforce this conclusion.

A: Done.

Reviewer: 3

Comments:

General Comments:

The authors provide a brief though generally sufficient description of a new *Peckoltia* species from the Trombetas; however, I think that their diagnosis is insufficient with respect to the primary potential misidentification: *Peckoltia vittata*, which has not been redescribed since its original description in 1881. The authors highlight the ambiguity and shifting species limits of *P. vittata*, but nowhere do they say what *P. vittata* is. Nor do they appear to have morphologically examined any more than three specimens of *P. vittata* (listed in comparative material examined), despite an abundance of material from the lower Xingu type locality available at several institutions. Further to this point, they only include a single *P. vittata* terminal in the molecular phylogeny, despite the availability of two *P. vittata* cytb sequences in Genbank from the Lujan et al. 2015 multilocus analysis (one from the lower Xingu and one from the Madeira). All of this provides little confidence that the authors have adequately characterized the primary species with which this new species might be confused.

A: Done.

Another significant concern is that, despite stating that "the data supporting the findings of this study are available within the article," I do not see any links to the sequence data or the CT-data of the new species. These data must be uploaded to a suitable data repository, with links provided before the ms can be accepted.

A: The DNA sequences generated and analyzed in this study have been deposited in the public repository GenBank, and all corresponding accession numbers are provided in the Supplementary Material. Regarding the micro-CT data, the raw scans were processed to generate the three-dimensional reconstructions presented in Figure 3, which constitute the tomographic dataset supporting the anatomical interpretations in this study. We have clarified the Data Availability Statement to explicitly indicate the location of the GenBank accession numbers and to better explain the availability of the tomographic data.

Specific Edits:

P3L24: Should be: 'sensu stricto' done

P3L53: *Peckoltia wernekei* is part of this group too. done

P3L57: Replace 'denticles' with 'tooth row' done

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P6L22: I strongly recommend that paratypes be distributed to not just the institution where the holotype is deposited. This helps ensure the long-term preservation and availability of types in the event a collection is damaged or destroyed. done

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We believe that these revisions have significantly improved the quality and clarity of our manuscript. We hope that you will find the revised manuscript suitable for publication. Thank you for your time and consideration.

Sincerely,

Manuela Dopazo

Associate editor's decision after peer review (18/07/2026).

Dear Dr. Dopazo:

It is a pleasure to accept your manuscript entitled "A new species of *Peckoltia* (Siluriformes, Loricariidae) from the rapids of rio Trombetas basin, Brazil" in its current form for publication in the Neotropical Ichthyology.

Congratulations for the acceptance of your article, and be aware on the following topics:

1. Publication Fee

NI will charge a publication fee if none of the co-authors is an active SBI member. This measure is essential to strengthen SBI and thus ensure the continuity of our journal, scientific society, and biannual meetings. SBI is not limited to Brazilians but is open to anyone interested in freshwater and marine Neotropical fishes. More details on SBI are available at <https://www.sbi.bio.br/>. Please email tesouraria.sbi@gmail.com to confirm whether any of your co-authors is a current SBI member and to activate your SBI membership if needed. Otherwise, if you will cover the publication fee of R\$1.000, please inform us at the same email. For authors outside Brazil, the fee will be converted to US dollars based on the official exchange rate on the date of payment. The only exceptions to this fee are invited articles.

2. Science Communication and Social Media

NI actively promotes published articles to both academic colleagues and the general public, including science journalists. To support this, we create social media posts and require images and/or videos of fish related to your work. If your article does not include such images, please send a photo of a representative fish species, preferably alive in its natural habitat. If you do not have your own photo, you may provide a link to an online image, along with the source, author, and, if applicable, authorization for its use. We also publish video summaries of articles in Portuguese on our Instagram (@neoichth). We ask you to designate one author to record a short video using a mobile

phone, following the attached instructions. The video should include visual materials (photos, graphics) and a script for subtitles to enhance accessibility. Please email the completed material to our Social Media Editor, Igor Souto-Santos, at icass.ufrj@gmail.com within 30 days.

Additionally, if your article is taxonomic in nature and has been submitted to Zoobank, it is your responsibility to update the manuscript's status on Zoobank once it has been published.

All of the above information and materials are mandatory for the publication of your article, including the scientific dissemination component, which is crucial in the current climate of science denial and misinformation. If you have any questions, please feel free to contact us at neoichth@nupelia.uem.br.

Please send an e-mail to neoichth@nupelia.uem.br within five working days to let us know you are aware of all the important points mentioned above.

Thank you for your fine contribution. On behalf of the Editors of the Neotropical Ichthyology, we look forward to your continued contributions to the Journal.

Sincerely,

Dr. Carlos DoNascimento

Associate Editor, Neotropical Ichthyology

repuglanis@hotmail.com

Neotropical Ichthyology



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