Submission date. 09/08/2025

Associate editor's decision after peer review (10/02/2026).

Dear Miss Fráguas:

Manuscript ID NI-2025-0144 entitled "Sewage-derived energy pathways in the fish food web of the lower Doce River, Brazil" which you submitted to the Neotropical Ichthyology, has been reviewed.

Your manuscript was evaluated by one reviewer and by myself, as several potential reviewers declined the invitation, which significantly delayed the review process. The reviewer recommended "Reject and Resubmit," but I consider that the manuscript can be accepted after major revisions.

Here, and an attached file to this systemes /I present some comments:

The expression "energy pathways" in the title is broad and may suggest a comprehensive ecosystem-level approach, whereas the study is based on specific proxies. Thus, the title could be more precise regarding the nature of the investigated pathways and the methodological approach.

The abstract should better align with the conceptual scope implied by the title, explicitly state the hypotheses, and avoid overgeneralization of the results. Greater clarity on how sewage-derived resources are traced and their ecological implications would significantly strengthen the manuscript.

The Introduction is publishable, but it could be more concise, precise, and persuasive with minor adjustments in style, repetition, and focus.

Overall, the Methods section is strong, detailed, and scientifically sound, but it can be improved in clarity, conciseness, consistency, and academic style. Although the methodology is conceptually correct, several sentences are overly long, repetitive, or slightly non-native in style.

The Results section is clear and scientifically solid, but it can be improved in precision, coherence, style, and tone (i.e., more objective and less interpretative). In some parts, it reads as a mixture of Results and Discussion.

The Discussion is strong and well-argued, but it could be more objective, concise, and logically structured, with reduced repetition.

Throughout the manuscript, several paragraphs are overly long and lack objectivity; they should be split and rewritten to improve clarity and conciseness. The last paragraph of the Discussion is one example.

Please see the attachedd file for more detaisl

The comments of the reviewer(s) are included at the bottom of this letter

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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 12-Apr-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.
Therefore, please carefully address all comments from the reviewer as well as my comments inserted directly in the manuscript, and revise the paper accordingly and also provide a detailed response letter explaining each change made or justifying those not implemented.
Once again, thank you for submitting your manuscript to the Neotropical Ichthyology and I look forward to receiving your revision.
Sincerely,
Dr. Francisco Araújo
Associate Editor, Neotropical Ichthyology
gersonufrrj@gmail.com, gerson@ufrrj.br

Anonymous reviewer #1
Recommendation. Reject & Resubmit
Comments. The manuscript addresses an important question and already documents depleted sewage $\delta^{15}N$ and notable contributions of sewage-derived carbon especially in the dry season and for omnivores like O. niloticus (this is a good, policy-relevant signal). However, the methodology needs strengthening so that robust claims can be made. Here are some comments that may help to improve the quality of the manuscript:
1. Only sewage before treatment (SEWB) was included in the analysis. After-treatment sewage (SEWA) was sampled and omitted from models despite being part of the river mixture and no chemical context was provided. Mixtures/consumers reflect both untreated and partially treated effluent. Therefore, unmeasured covariates make isotopic end-members non-diagnostic. I suggest that both SEWA and SEWB should both be modelled. Nutrients and water quality should be measured as independent tracers of wastewater. Use these to validate mixing estimates and to partition diffuse vs point sources.
2. simmr models used fixed TEFs ($\Delta^{15}N$=2.9±0.32‰; $\Delta^{13}C$=1.3±0.3‰) and multiple, overlapping sources (FPOM, SM, PE, TI, AI, SEWB) without reporting diagnostics, prior choices, or sensitivity to TEF/source means. The authors should report MCMC diagnostics and posterior correlations. They should report whether the chains converged or not.
3. Baseline choice and trophic position estimation need strengthening. Trophic position used a two-baseline model (periphyton + aquatic invertebrates) with McCutchan TEFs. In sewage-impacted rivers, periphyton and AI can both integrate wastewater N. Their $\delta^{15}N$ can drift seasonally, biasing TP estimates ("baseline shift" problem). To fix this, the authors can add primary consumers with restricted diets (e.g., scraper snails, filter-feeding bivalves) as baselines.
4. For piscivores, the model uses "values for the other fish feeding guilds … as resources," i.e., consumer means as sources. This conflates consumer and source uncertainty, ignores within-guild variance, and can produce circularity. The authors should use the actual prey fish tissues as sources, stratified by size class.
5. Muscle was analysed for larger fish and whole small fish (gut removed) for others.

Muscle half life takes weeks to months whereas the whole body of small fish can integrate faster and differs in C:N ratios and lipid content, inflating among-species/season comparisons. The authors can standardize the sampled tissue e.g. dorsal muscle or model tissue-specific TEFs. They may apply lipid normalization or chemical extraction.
6. TEF was set to zero for FPOM/SM mixing because "no changes in trophic levels," but microbial processing can fractionate C and N. Biofilm/microbial reworking can shift δ values by ~0.4–1.0‰, biasing allocation to "sewage." This can be fixed by including small, uncertainty-aware TEFs for detrital transformations or testing robustness with ±0.5–1.0‰ scenarios.
7. The work is focused on Colatina yet management recommendations are basin-wide. Frame conclusions as site-specific and propose a designed gradient study (multiple cities/outfalls) to generalize.
8. Add concentration dependence (C:N or %C) in simmr for all basal sources and report how this tightens posteriors.
9. Always report credible intervals in text, tables and figures
10. Table 1 has no caption
11. Figure 1. In addition to the different colors, it would be helpful if different symbols were also used. Figures C and D are not necessary. Some sources can be combined in A and B to increase resolution
12. Figure 2. This figure can go to the supplementary material. Here, the authors can present biplots for each trophic guild.
13. Figure 3. Instead of numbers, species names on the x-axis would be helpful. The credible intervals are very wide probably because of the baseline shift problem. Why are some piscivores having relatively low TPs?
14. Figure 4. Biplots are a better option here.
15. Figure 5. Red lines are not shown in the legend.

Author's Rebuttal Letter (01/04/2026).
Dear Dr. Francisco Araújo,
Associate Editor of Neotropical Ichthyology,
This is the submission of the revised manuscript (NI-2025-0144) now entitled "Tracing sewage-derived organic matter in fish trophic pathways in the lower Doce River basin, Brazil".
Thank you for your email enclosing the comments. We have carefully reviewed the comments and have revised the manuscript accordingly. Our responses are given in a point-by-point manner below. Changes in the manuscript are shown with tracked changes and we indicate the page and line number on each suggestion on the response letter.
We hope the revised version is now suitable for publication and look forward to hearing from you in your earliest convenience.
Best regards,
Patrícia Fráguas
10-Feb-2026
Dear Miss Fráguas:
Manuscript ID NI-2025-0144 entitled "Sewage-derived energy pathways in the fish food web of the lower Doce River, Brazil" which you submitted to the Neotropical Ichthyology, has been reviewed.
Your manuscript was evaluated by one reviewer and by myself, as several potential reviewers declined the invitation, which significantly delayed the review process. The reviewer recommended "Reject and Resubmit," but I consider that the manuscript can be accepted after major revisions.
Here, and an attached file to this systems /I present some comments:
Response: We thank you for your suggestions and comments. We have addressed

them point by point below and have also included responses to the comments provided directly in the manuscript.
The expression "energy pathways" in the title is broad and may suggest a comprehensive ecosystem-level approach, whereas the study is based on specific proxies. Thus, the title could be more precise regarding the nature of the investigated pathways and the methodological approach.
Response: We adopted the title suggested by the editor. We agree this version is more precise and better reflects the methodological approach of the study. (Page 1, lines 1-2).
The abstract should better align with the conceptual scope implied by the title, explicitly state the hypotheses, and avoid overgeneralization of the results. Greater clarity on how sewage-derived resources are traced and their ecological implications would significantly strengthen the manuscript.
Response: The abstract has been revised to clearly state tracing of sewage-derived resources and ecological implications (Page 1, lines 15-32; Page 2, lines 1-3).
The Introduction is publishable, but it could be more concise, precise, and persuasive with minor adjustments in style, repetition, and focus.
Overall, the Methods section is strong, detailed, and scientifically sound, but it can be improved in clarity, conciseness, consistency, and academic style. Although the methodology is conceptually correct, several sentences are overly long, repetitive, or slightly non-native in style.
Response: Thank you for the suggestion. We have revised Introduction and Methods section to improve clarity, conciseness, and overall academic style (Pages 3 - 9).
The Results section is clear and scientifically solid, but it can be improved in precision, coherence, style, and tone (i.e., more objective and less interpretative). In some parts, it reads as a mixture of Results and Discussion.
The Discussion is strong and well-argued, but it could be more objective, concise, and logically structured, with reduced repetition.
Throughout the manuscript, several paragraphs are overly long and lack objectivity; they should be split and rewritten to improve clarity and conciseness. The last paragraph of the Discussion is one example.
Response: The results and discussion sections have been revised to increase clarity and conciseness (Pages 9-15).
Please see the attached file for more details
Response to comments added directly to the text
Suggestion: Tracing sewage-derived organic matter in fish trophic pathways in the lower Doce
Response: The suggestion has been incorporated to the text (Page 1, lines 1-2).
(The excess of nutrients entering the aquatic systems, a process known as eutrophication, triggers a cascade of effects on aquatic organisms.)
Unnecessary sentence. Immediately afterward, you repeat the same idea using different words.
Response: The sentence has been removed.
Here, there is a repetition of "sewage".
Better: Studies show that, depending on the type of sewage treatment, impacted systems may exhibit depleted $\delta^{15}N$ signatures.
Response: This sentence has been changed (Page 4, lines 5-6).
Better: This study aimed to assess the incorporation of urban sewage into the aquatic food web of the lower Doce River basin
Response: The suggestion has been incorporated (Page 5, lines 1-3).
Better: The main industrial sectors include metal-mechanical
Response: The sentence has been removed during the revision process as the section was restructured.
Better: Oreochromis niloticus showed high sewage assimilation in both seasons,

accounting for approximately half of its diet in the dry season.
Response: This section has been revised, and the original sentence has been replaced by a new formulation (Page 9, lines 9-13).
Like Discussion. Better: The highest trophic positions were recorded for piscivorous species in both seasons
Response: We have incorporated the suggestion, and we also highlight some exceptions observed in our data (Page 10, lines 20-21).
Sentence to long and repetitive. Better: In the Doce River basin, these low $\delta^{15}N$ values likely reflect the strong influence of sewage inputs, given that more than 80% of local sewage is discharged without treatment.
Response: The idea has been incorporated in the revised version, although this sentence has been reworded (Page 12, lines 6-12).
Better: It is important to note that resource consumption does not necessarily reflect resource availability, which was not quantified in this study.
Response: The sentence has been adapted (Page 13, lines 27-29).
The paragraph seems too long, losing objectivity. It might be better to split it into two and make them more concise, objective, and conclusive.
Response: The paragraphs have been restructured to improve clarity, conciseness and objectivity (Page 14, lines 15-28).
You repeat "propagate through the food web" and "human health" twice. Please improve this part of the text.
Response: This section has been restructured and repetition was removed (Page 14, lines 31-33).
Check the format of the References and ensure that all works cited in the text are included in the list, and that there are no references listed that are not cited in the text.
Response: All references were checked. All studies cited in the text are listed in references and there are no uncited references (Pages 17-22).
Entire Scoresheet:
Reviewer: 1
Recommendation: Reject & Resubmit
Comments:
The manuscript addresses an important question and already documents depleted sewage $\delta^{15}N$ and notable contributions of sewage-derived carbon especially in the dry season and for omnivores like O. niloticus (this is a good, policy-relevant signal). However, the methodology needs strengthening so that robust claims can be made. Here are some comments that may help to improve the quality of the manuscript:
Response: Thank you for the valuable suggestions. We have answered them in a point by point manner below.
1. Only sewage before treatment (SEWB) was included in the analysis. After-treatment sewage (SEWA) was sampled and omitted from models despite being part of the river mixture and no chemical context was provided. Mixtures/consumers reflect both untreated and partially treated effluent. Therefore, unmeasured covariates make isotopic end-members non-diagnostic. I suggest that both SEWA and SEWB should both be modelled. Nutrients and water quality should be measured as independent tracers of wastewater. Use these to validate mixing estimates and to partition diffuse vs point sources.
Response: We revised the baseline structure to include both sewage after treatment (SEWA) and sewage before treatment (SEWB) in the mixing models. The updated baselines are:
Detritivores (PE, SM, SEWB, SEWA);
Herbivores (PE, GRC4, MA, CPOM);
Omnivores (AI, TI, SEWB, SEWA);
Invertivores (AI, TI);

Piscivores (AI, TI, Fish - explained in comment n°4) (Page 8, lines 14-18).
We appreciate the reviewer's suggestion to include nutrients and water quality measurements as independent tracers of wastewater. We agree that integrating physicochemical parameters with isotopic data can be valuable for partitioning diffuse and point sources. However, the primary objective of this study was to evaluate trophic pathways and resource assimilation using stable isotope analysis. Accordingly, the sampling design and analytical framework were structured specifically for isotopic mixing models rather than for wastewater source characterization. We therefore consider the inclusion of nutrient and water quality tracers to be beyond the scope of the present study, although we recognize their relevance for complementary investigations focused on wastewater characterization.
2. simmr models used fixed TEFs ($\Delta^{15}N$=2.9±0.32‰; $\Delta^{13}C$=1.3±0.3‰) and multiple, overlapping sources (FPOM, SM, PE, TI, AI, SEWB) without reporting diagnostics, prior choices, or sensitivity to TEF/source means. The authors should report MCMC diagnostics and posterior correlations. They should report whether the chains converged or not.
Response: In the revised manuscript we have expanded the description regarding mixing models.
We added the configuration used for mixing models in the methodology section. Models were run with three Markov chains of 100,000 iterations each, a burn-in of 50,000 iterations, and a thinning interval of 50, resulting in 3,000 posterior samples per model. Convergence was assessed using the Gelman–Rubin diagnostic (R) (Page 8, lines 3-6).
Prior structure is also explained in methodology section. For models with ≥4 individuals we used the default uninformative Dirichlet prior implemented in simmr. For models with ≤3 individuals, informative priors were specified using the simmr_elicit function to improve parameter identifiability under small sample sizes (Page 8, lines 7-11).
We added the requested model diagnostics to the Results section. All parameters across all models showed R values < 1.004, indicating adequate convergence and mixing of the MCMC chains. Posterior correlations among source contributions were also examined; among models including three or more sources, strong negative correlations r ≤ -0.85) were detected in 5 cases. As expected, two-source models were excluded from this assessment because perfect negative correlation is mathematically constrained in such cases (Page 9, lines 23-28).
We evaluated the sensitivity of mixing polygon feasibility to uncertainty in trophic enrichment factors (TEF) following the approach proposed by Smith et al. (2013). TEF shifts of ±0.5‰ and ±1‰ were applied to both $\delta^{13}C$ and $\delta^{15}N$. For each model, we assessed whether consumers remained within the mixing polygon after TEF modification. Among the 35 models evaluated, 12 (34.3%) changed polygon inclusion status under at least one TEF shift, while 9 models (25.7%) were affected by the ±0.5‰ shift alone. Most models therefore remained stable under plausible TEF variation.

TEF shift	Models changed	Percentage
±0.5‰	9	25.7%
±1‰	12	34.3%

3. Baseline choice and trophic position estimation need strengthening. Trophic position used a two-baseline model (periphyton + aquatic invertebrates) with McCutchan TEFs. In sewage-impacted rivers, periphyton and AI can both integrate wastewater N. Their $\delta^{15}N$ can drift seasonally, biasing TP estimates ("baseline shift" problem). To fix this, the authors can add primary consumers with restricted diets (e.g., scraper snails, filter-feeding bivalves) as baselines.
Response: We appreciate this important comment regarding baseline choice and potential $\delta^{15}N$ drift in impacted systems.
Upon further evaluation, we recognized that the aquatic invertebrate (AI) group

included taxa with mixed feeding strategies, which may not reliably represent a single trophic level baseline. Because additional sampling of more restricted primary consumers is not possible, we re-ran all trophic position models using a one-baseline approach with periphyton as the sole baseline.

Trophic position models were already conducted separately for each season, and are still conducted separately in this reviewed version to account for seasonal baseline shifts. The overall trophic structure and relative ranking of species remained broadly consistent between the two-baseline and one-baseline models. Reordering occurred only among species occupying very similar trophic positions (e.g., TP ranges of 3.54–3.66, 3.97–4.03, and 4.39–4.83).

The manuscript has been revised to clarify baseline selection (Page 7, lines 26-30).

4. For piscivores, the model uses "values for the other fish feeding guilds … as resources," i.e., consumer means as sources. This conflates consumer and source uncertainty, ignores within-guild variance, and can produce circularity. The authors should use the actual prey fish tissues as sources, stratified by size class.

Response: We revised the resource structure to reduce source uncertainty. The updated model now includes aquatic and terrestrial invertebrates to account for potential ontogenetic diet shifts. Additionally, the Fish category was redefined. We now include only small-bodied species and species documented in the literature as potential prey of the piscivorous species included in our study. The Fish category now comprises the following species: Astyanax lacustris, Astyanax sp., Geophagus brasiliensis, Oreochromis niloticus, Hoplias malabaricus, Oligosarcus argenteus, Knodus moenkhausii, Poecilia vivipara, and Deuterodon taeniatus (Page 8, lines 18-23).

5. Muscle was analysed for larger fish and whole small fish (gut removed) for others. Muscle half life takes weeks to months whereas the whole body of small fish can integrate faster and differs in C:N ratios and lipid content, inflating among-species/season comparisons. The authors can standardize the sampled tissue e.g. dorsal muscle or model tissue-specific TEFs. They may apply lipid normalization or chemical extraction.

Response: We acknowledge that tissue-specific TEFs could be an option. However, applying different TEFs for muscle versus whole body samples, would require running separate simmr analyses for each tissue type, preventing comparisons across the whole community. To account for tissue-related differences, we applied the C:N ratio mathematical correction based by Post et al. (2007) using the following formula: $\Delta\delta^{13}C = -3.32 + 0.99 \times C:N$ (Page 7, lines 14-16).

6. TEF was set to zero for FPOM/SM mixing because "no changes in trophic levels," but microbial processing can fractionate C and N. Biofilm/microbial reworking can shift δ values by ~0.4–1.0‰, biasing allocation to "sewage." This can be fixed by including small, uncertainty-aware TEFs for detrital transformations or testing robustness with ±0.5–1.0‰ scenarios.

Response: Thank you for the suggestion. The mixing models for FPOM and SM mixing now include a trophic enrichment factor (TEF) with a mean 0.5‰ and standard deviation of 0.4‰ to account for potential isotopic shifts associated with microbial processing (Page 8, lines 27-29). All models were rerun incorporating this adjustment and Figure 4 has been updated accordingly (Page 11, line 12).

7. The work is focused on Colatina yet management recommendations are basin-wide. Frame conclusions as site-specific and propose a designed gradient study (multiple cities/outfalls) to generalize.

Response: Thank you for the suggestion. We have revised the manuscript, now it is clear that our conclusions are specific to Colatina, and we also removed basin-wide generalizations. We also proposed that other major urban centers (e.g. Ipatinga, Governador Valadares and Linhares) are assessed to evaluate how sewage inputs affect different sections of the basin (Page 14, lines 6-15).

8. Add concentration dependence (C:N or %C) in simmr for all basal sources and report

how this tightens posteriors.
Response: Thank you for your suggestion. Overall, the inclusion of concentration dependence caused only slight changes in the credible intervals widths for most components. These differences are summarized in the table below, which reports median CI widths per food resource with and without concentration dependence, as well as the mean difference between models. Necessary changes have been made in the methods section (Page 8, lines 1-2).

Food resource Median CI (with concentration dependence) Median CI (without concentration dependence) Mean difference
AI 0.427 0.462 -0.033
CPOM 0.434 0.387 0.047
GRC4 0.384 0.326 0.057
MA 0.357 0.328 0.029
PE 0.295 0.319 -0.007
PX 0.378 0.402 -0.045
SEWA 0.618 0.430 0.111
SEWB 0.637 0.494 0.065
SM 0.236 0.272 -0.014
TI 0.411 0.437 -0.033
9. Always report credible intervals in text, tables and figures
Response: Credible intervals are now reported in supplementary tables S2, S3, S4, and text (Page 10, lines 17-20).
10. Table 1 has no caption
Response: Captions for table 1 are indicated after the Acknowledgements section (Page 15, lines 26-27).
11. Figure 1. In addition to the different colors, it would be helpful if different symbols were also used. Figures C and D are not necessary. Some sources can be combined in A and B to increase resolution
Response: Different symbols were added to the figure, and plots C and D were removed. (Page 15, lines 28-33, page 16, lines 1-2).
12. Figure 2. This figure can go to the supplementary material. Here, the authors can present biplots for each trophic guild.
Response: Thank you for the suggestion. Biplots represent the distribution of consumers and food resources in isotopic space, whereas Figure 2 summarizes the estimated source contributions derived from the mixing models. Therefore, biplots would not provide the same type of information as the current figure. We chose to retain the stacked barplot in the main text because it provides a synthetic visualization of estimated mean resource contribution for all species, facilitating comparison among trophic guilds and seasons. We also addressed the request regarding uncertainty by adding a table in the main text reporting the credible intervals for these estimates (Page 9, lines28-30).
13. Figure 3. Instead of numbers, species names on the x-axis would be helpful. The credible intervals are very wide probably because of the baseline shift problem. Why are some piscivores having relatively low TPs?
Response: Species names have been added to x-axis of Figure 3.
We conducted a new analysis using the "oneBaseline" method using only periphyton as baseline. Also models were run independently for each season. Patterns remained constant. (Page 7, lines 26-30).
Relatively wide credible intervals are likely related to small sample sizes, which can increase uncertainty in Bayesian trophic position estimates.
The piscivorous species with lower trophic positions were Oligosarcus argenteus and Hoplias intermedius. All sampled individuals of these species measured between 1.7 and 3.2 cm indicating that they were juveniles. At early life stages, these species are known

to consume aquatic invertebrates before shifting predominantly to piscivorous diets (Araujo et al., 2005). The observed lower trophic positions likely reflect ontogenetic dietary shifts.

Araújo, F. G., Andrade, C. C., Santos, R. N., Santos, A. N., & Santos, L. N. (2005). Spatial and seasonal changes in the diet of Oligosarcus hepsetus (Characiformes, Characidae) in a Brazilian reservoir. Brazilian Journal of Biology, 65(1), 1-8.

14. Figure 4. Biplots are a better option here.

Response: Thank you for the suggestion. We replaced the previous figure with boxplots displaying the posterior distributions of source contributions, which allow credible intervals to be reported directly in the figure. Because simmr outputs represent posterior probability distributions rather than multivariate ordination results, boxplots provide a clearer representation of the uncertainty around source estimates. The figure has been updated accordingly (Page 11, line 12).

15. Figure 5. Red lines are not shown in the legend.

Response: Red lines are now in the labels of the plot (Page 11, line 13).

Associate editor's decision after peer review (27/04/2026).

Dear Miss Fráguas:

It is a pleasure to accept your manuscript entitled "Tracing sewage-derived organic matter in fish trophic pathways in the lower Doce River 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. Francisco Gerson Araújo
Associate Editor, Neotropical Ichthyology
gersonufrrj@gmail.com, gerson@ufrrj.br

Neotropical Ichthyology

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HOW TO CITE THIS ARTICLE

- **Fráguas PS, Carvalho DR, Ferreira FF, Sperber CF, Pompeu PS.** Tracing sewage-derived organic matter in fish trophic pathways in the lower Doce River basin, Brazil. Neotrop Ichthyol. 2026; 24(3):e250144. https://doi.org/10.1590/1982-0224-2025-0144