

Dear Editor,

Thank you for having considered this paper.

We did our best to edit it following the reviewers' comments. Detailed answers to all of the issues raised by each are indicated below (in red).

We also performed a major revision of the English language of the text. All of the performed modifications are indicated in the attached text file including revision marks.

We hope that these modifications will constitute a significant improvement of the manuscript and we thank you and the two referees for the time they spend helping us to make this work better.

Sincerely,

Corentin Bochaton

Reviewer 1 comments (Iratxe Boneta)

Regarding specific aspects of the manuscript, the Introduction briefly summarizes the state of art. About the convenience of the selected information and references I have nothing to contribute, but been unfamiliar with the area and culture, its reading has facilitated me the understanding of the manuscript.

Material and methods section is correct, these are my comments:

- In the subsection "Main characteristics of *Indotestudo elongata*, the Yellow-Headed tortoise", the provided species information is adequate, although it would facilitate understanding to a foreign reader unfamiliar with the area to indicate the months in which it takes place the dry and rainy season (Lines 164 and 166-167).

This is now indicated in the text: Dry season between March and May and rainy season between July and October.

- Regarding the subsection "Presentation of the studied sites and assemblages", I found it more clarifying to present the sites under study in the Introduction section.

This paragraph is here to provide contextual information, just as the previous one about *Indotestudo elongata*. Both could have been placed in the introduction section but as the introduction is a single independent piece of text we preferred to move these two paragraphs in the Material and Methods section. We agree this is not ideal but in the absence of intermediate section between the MM and the introduction we prefer to keep it that way.

- In Line 159, replace first "has" by "as".

We guess you talked about the line 259, it has been corrected.

- In "Quantification of the zooarchaeological data" section, provide references for the quantification units followed methodology.

We have added references to Lyman 2008 for the basic quantification units that were not referenced in the previous version.

- In Line 352, cervical scute instead of nuchal scute?

Indeed, this mistake has been corrected at lines 350 and 353.

- In "Specific identification of the *I. elongata* archaeological bone sample" section, I would appreciate a more general description of the applied taxonomic identification criteria, specifically a brief paragraph regarding distinction between Testudinidae (i.e., *Indotestudo elongata*), Geoemydidae and Trionychidae, as later clarified in lines 434 to 436.

The mentioned criteria are already exclusive of the other families and diagnostic criteria we used for the preliminary identifications of the Geoemydidae and Trionychidae turtles are those published by Pritchard et al. 2009. We have added a sentence at the end of the paragraph to make this clearer but we do not believe it is useful to directly report those criteria here.

- References regarding the methodology applied for the identification and description of taphonomic alterations (i.e., water dissolution, gnawing, burning and cutmarks) should be included in the section.

You are right; this has been included in the section dealing with the zooarchaeological methods.

Results are presented in a clear and organized manner. Figures and tables are suitable for the manuscript comprehension. I have found some mistakes:

- On Figure 2 caption: Line 397, replace GB for GW; Lines 398-399, remove measures GddvW and GdlvW as they do not appear in figure; Line 402, remove measure GplvW; and include measurements names for GdlmW and GplmW.

Thank you for having caught these mistakes! The figure and its caption have been edited to perfectly match the information of table 1.

- On Figure 3, Nuchal plate (C) is upside down.

This has been corrected.

- On Tables 2 to 11, replace NMI for MNI.

This has been corrected; this mistake was also present in the anatomical distribution figures.

- On Figure 6, site name is incorrectly spelled in Chart titles.

This has been corrected.

On References section:

- There are two Bochaton et al. 2019 references. It should be clarified each time in text with one is referred.

This was an issue of zotero style that has been corrected.

- Gracià et al. 2022 is not cited in text.

This reference has been removed.

- Schlegel & Müller, 1845 is not listed in references.

- Boulenger, 1907 is not listed in references.

- Blyth, 1854 is not listed in references.

These last three references correspond to the taxon names. They can be cited in the literature section or not depending of the recommendation of the journals. Here we chose not to do so.

Reviewer 2: Noel Amano

L32-34: Rephrase to better argue the point: the complete picture of hunter gatherer subsistence economies/strategies remain to be fully described/elucidated because of the lack of comprehensive zooarchaeological studies taking into account all faunal taxa (i.e. not just terrestrial mammals, etc.)

The beginning of the abstract have been edited to better convey this idea: "While non-marine turtles are almost ubiquitous in the archaeological record of Southeast Asia, their zooarchaeological examination has been inadequately pursued within this tropical region. This gap in research hinders a complete comprehension of past human subsistence strategies and economies, as only a limited number of comprehensive studies encompassing all the taxa found in archaeological sites have been conducted thus far. This constraint becomes particularly significant in relation to prehistoric hunter-gatherer populations, who might have extensively utilized inland chelonian taxa."

L38-41: "as they account for the majority of remains in turtle archaeological assemblages" "as it is the most represented taxon in archaeological assemblages in the region of study."

This has been edited as you suggested it.

L47: It perhaps is just a matter of perspective but I hold that taphonomic homogeneity would not suggest cultural similarity: it's the 'how many ways to dress a pig' argument. One group butchering turtles the way another group would not necessarily mean cultural connection. The way wild boars are being butchered and processed by hunter-gatherers in Borneo (disarticulation, skinning etc., see Niah caves results) is similar to that how Hoabinhian hunter gatherers and Austronesian farmers butchered wild and domestic pigs in Vietnam respectively (see: Man Bac and An Son, Con Congua, Rach Nui, etc.)- and yet this doesn't mean cultural connection.

And also what about equifinality? Different actions resulting to same taphonomic signatures- that's one of the limitations of any taphonomic and zooarchaeological research.

I understand that the authors might disagree and argue that it's a matter of theoretical interpretation. I acknowledge that this might be the case, but if the authors would argue for cultural similarities, I suggest that they make the question of taphonomic equifinality fully resolved- i.e. convincingly demonstrate that the taphonomic signatures on palimpsestic assemblages really results of discernible carcass processing actions.

You are perfectly right and we do completely agree with that point. The problem here is that the way the abstract is written makes the reader believe that our interpretation of similarities between the assemblages lies on taphonomic data, which is not really the case. Across the sites, the same herpetofaunal taxa are exploited in similar magnitudes despite differences in environmental setting and there are clearly similarities in subsistence strategies and thus “cultural” similarities which do not necessarily mean connections between groups. I have tried to tone this down a bit as this question is not discussed in the paper at all (we preferred to keep it for when the full assemblages will have been properly studied). We edited the abstract to clarify this point.

We have also added few sentences regarding the taphonomic interpretation of the assemblages in the discussion to make clear that we do not consider the similar taphonomic observations as a marker of cultural similarities.

L71-75: Please check grammar and sentence structures for lines 56-74 (and for that matter other parts of the paper). The introduction is very strong but lapses in grammar sometimes obscure the paper’s arguments and points.

For instance see sentence below, it can be broken down to shorter ones, to be clear re: syntax (see underlined). Also the last section of the statement I believe requires a citation.

Despite this, the Hoabinhian people remain, however, quite poorly understood from cultural and material point of views. In fact, the homogeneity and lack of diversity of their lithic material culture, probably related to their putative heavy use of objects made of perishable vegetal material (Forestier)

does not allow to characterize the precise uses of the sites by past populations (this means?), and it is difficult to expect a cultural stasis over 30,000 years among different hunter-gatherer groups in such an extensive region presenting diverse environmental, ecological and geographic settings (citation).

This paragraph has been reworded:” Nonetheless, despite these findings, the Hoabinhian people remain poorly understood from both cultural and material perspectives. The perceived homogeneity and limited diversity in their lithic material culture, potentially influenced by their extensive reliance on perishable vegetal resources (Forestier, 2003), pose a challenge in characterizing the activities undertaken at the sites, and in determining their overall functions (e.g., long-term occupation, butchering site, hunting camp). Additionally, the archaeological evidence paints an improbable image of cultural stagnation spanning over 30,000 years among diverse hunter-gatherer groups across an expansive region with varying environmental, ecological, and geographic conditions (Zeitoun et al., 2019).”

L85-89: Although I agree in the authors re: the need to fully characterized the subsistence economies of Hoabinhian hunter gatherers, I suggest that they also acknowledge that this ‘culture’ existed in a vast area with vast kinds of local environment (perhaps this adaptation to different environments is the defining trait of the Hoabinhian?) and that therefore subsistence economies will vary greatly across their range.

This sentence has been reworded as follow to convey that idea:

“As a result, we currently have only a vague idea of the potentially strong spatial and chronological variability of the subsistence strategies of the Hoabinhian people that have occupied and exploited a wide diversity of tropical environments across an extensive period of time.”

L 102: Just be consistent with 'Southeast Asia' (sometimes it is South East Asia, or South-East Asia), same for 'osteometric' (sometimes osteo-metric).

This has been corrected.

L 175: Instead of 'sepultures' use 'burials' and 'inhumations' ?

This has been corrected to "burials".

L210: rephrase- you mean complete bone assemblages?

Yes, the "complete bone assemblage of the excavation" as it is indicated now.

L 238: These layers have been dated on the basis of the typology of the archaeological artifacts they have provided. ?

We have added that this refers to "lithic tools, ceramic shards, and metal objects".

L272: NISP usually mean '**Number of Identified Specimens**' in standard zooarchaeological analyses, so please check and if you mean otherwise, please use a different acronym (number of identified skeletal parts could also mean MNE? which is the minimum number of element).

This is the standard NISP, we just used a wrong way to name it. This has been edited.

L275: 'anatomical side' in standard zooarch analysis as 'laterality of the bones' might mean something else.

Corrected.

L 277: Minimum not Minimal

This has been corrected everywhere in the manuscript.

L277 : computed

Corrected.

L278 : to look at difference in skeletal element representation in different archaeological contexts.

This has been edited as follow: "A Minimum Number of Elements (MNE) has been calculated for each anatomical part to assess differences in skeletal element representation across various archaeological contexts."

L279: not sure what 'superior unit' means here but will be important to elucidate as it's an essential part of the methods.

This has been clarified as: The results were rounded up to the nearest higher whole number to obtain the MNEs.

L280: Minimum Number of Individuals

This has been edited everywhere in the text.

L 286-287 : Perhaps provide a simple count of the number of *Indotestudo* compared to other taxa- as this will be more convincing that the unidentified fragments are actually from the taxon and not from others (i.e. if its >80% vs <75%, etc).

This sentence has been reworded as follow to provide a more realistic representation of what we meant: "As tortoises are the best-represented taxa in the different assemblages with consistently more than 60% of the NISP attributed to that group, most of these unidentified turtle bones likely represent *Indotestudo*."

L303-310: are the specimens in the museum sexed? might be useful to identify sexual dimorphism in case it exists.

Some of them are as it is indicated in the supplementary material but there is not enough material to test possible sexual dimorphism. That is why it is not discussed here.

L311-312: ? (distributed might be the wrong word here)

"Distributed" has been replaced by "taken" to clarify this point.

L354: less than 1%.

This has been corrected.

L455 : calcination

I have checked the difference between carbonization and calcination. Calcination implies inorganic material and carbonization is the right term to be applied to bones.

L540 : mean completion rate of peripheral plates of the bridge in respect to the others: not clear what this means, perhaps rephrase.

This has been reworded as follow: This could be attributed to an identification bias stemming from the comparatively lower mean completion rate of peripheral plates of the bridge, potentially making their identification more challenging compared to other peripherals.

L649-651: Perhaps statistical analysis (simple multivariate) would show if the differences observed are significant.

This is difficult because a lot of the variability between the assemblages is carried by random different in the different peripheral plates for instance. We thus choose for the anatomical distributions to stick with a qualitative description as switching to a real qualitative analysis would have needed much more methodological development that appeared not really needed in that paper.

L652: veil of calcite: layer of calcium carbonate

"veil of calcite" is correct and it more accurately indicated that the layer is very thin.

L916-923: I agree with the authors- but I suggest rephrasing/rewriting this section for clarity and to make the arguments clearer.

'damage the natural populations' meaning?

This paragraph has been reworded as follow for clarity: Tortoise populations are vulnerable to intensive exploitation, often targeting larger mature individuals. Consequently, their exploitation has been viewed as an indicator of small-scale hunting and, thus, of relatively small human groups (Stiner et al., 2000). In the sites under study, the pronounced focus on a single turtle species (*I. elongata*) and the emphasis placed on larger individuals could potentially lead to detrimental consequences for natural populations. This could involve a sustained reduction in the number of individuals and a decrease in average specimen size over the long term (Close and Seigel, 1997). Such exploitation could remain sustainable only if it were not intense, implying that a relatively limited number of individuals were harvested to sustain a potentially small-sized human group. Evaluating this aspect proves challenging, as comprehending the overall significance of tortoises in the diet of Southeast Asian hunter-gatherer groups studied, and thus estimating the intensity of their exploitation, requires a comprehensive and quantified examination of the mammal fauna at the sites, as well as robust data pertaining to occupation duration and site usage. Nonetheless, it is evident that the prehistoric populations under investigation did engage in the exploitation of tortoises, which constituted a notable component of their meat-based diet.

L926-927 : subsisted? please rephrase again.

This sentence has been reworded as follow: This behavior has persisted until nowadays in continental Southeast Asia hunter-gatherer modern groups (Hansel, 2004), although not all populations choose to exploit reptile species (Tungittiplakornl and Dearden, 2002).

L929-932: rephrase

This has been reworded as follow: This work has been developed as a foundation, aiming to furnish fundamental data and research instruments essential for investigating tortoise assemblages in continental Southeast Asia. Consequently, the full extent of this effort's value will be realized by employing its analytical methodology in forthcoming studies and juxtaposing it against supplementary assemblages for comparison.