

Comments on style

line 155 - Measurements of the left scapular blade of AODF 0603 are presented in Table S2, but there is no description (the description follows here).

ll 193-4 - Again here is a reference to measurements (given in table S3) as a description.

l. 827 - I would have written 'includes' rather than 'preserves', partly because I don't see that the specimen, as a whole, played a role in the preservation of this element. The authors can decide whether this is worth thinking about, since either way, the meaning is clear.

l. 998 - It's not clear to me whether the authors mean that the bulge might be an artefact in the specimen of *Australotitan*, or in both specimens.

ll 1239-40 - Isn't the appropriate term 'platycoelous'?

l 1318 - Given that the ulna of *Australotitan* mentioned here is incomplete, I would have written 'may have' rather than 'have'. However likely one regards the deduction, without a complete specimen it is still just a deduction. (And, yes, the authors have generally been careful to distinguish inferences from observations.)

Reassessment of the taxonomic assignment of material ...

Given that the authors disagree with several of the previous anatomical identifications of this material, it would have been useful to re-illustrate at least some of that material in the proper orientations. The authors might wish to consider this for future research.

ll 2219-20 - It would be appropriate to figure these, or include a reference to a figure if the chevrons have already been figured.

l. 2662 - 'diamantinasaurian' rather than 'diamintinosaurian'

Table 3 - For the first lines for *D. matildae*. I would have written 'anteriorly concave crescentic medial', rather than 'anteriorly crescentic concave medial', on the grounds that the crescent is anteriorly concave. But the authors may have had a different meaning in mind.

W. watsi ischium - check italicization, should not 'III' also be italicised?

Comments on content

line 181 - I'm not sure what 'locally autapomorphic' means: specifically why 'locally' rather than just 'apomorphic'? I have asked my colleagues here about this term, but none were aware of it (& this is not a small institution). I have also asked colleagues

overseas, who also have not heard of it, although one suggested convincingly that it is either incorrect or unnecessary (one of my colleagues here also said this). Also I was not able to find a definition by searching the net, although according to 'Google Scholar' the term has been in use for about 20 years. Given these conditions, the authors need to either define the term, or cite the publication where it was originally defined.

Il 228-69 - There seems to have been a lot of confusion regarding the identities of the discovered metacarpals. Given 1- the lack of comparative material available in Australia, 2- the apparent lack of funding for extensive overseas visits to examine comparative material & 3- the lack of attention given to metacarpals by palaeontologists in general, this is not surprising. Hopefully some of the Australian authors will be able to find funding to examine overseas collections.

I. 327 - I'm not aware that soft tissue attachment points can result in foramina, I thought the attachments were with Sharpey's fibres.

Il 492-506 - From Fig 5, the right manual phalanx (5AP-AU) is substantially smaller (less than 2/3 as wide distally) than the left (5M-R) but this not remarked on in the description, & the right is described as complete. So what accounts for the discrepancy in size? There are also differences in form (cf. 5N with 5AQ, & 5P with 5AS). Working only from the images I'm (rightly) hesitant to suggest that the authors got it wrong, but could the element of 5AP-AU actually be the right manual phalanx V-1? I also notice that the red lines very helpfully marking out specific features on the other figures, are missing from Fig 5.

I. 621 - I don't see much dorso-ventral compression in any as figured, but particularly in exemplar B, where the posterior central face seems very nearly circular.

I. 694 - Again I don't see much evidence of dorso-ventral compression here, particularly in exemplars G & H.

I. 863 - I'm unconvinced that a straight lateral margin implies a plate D-shaped when complete. Are there good reasons for not thinking that the medial margin was also straight, giving a trapezoidal shape overall?

I. 1490 - Why do the authors think the tooth is megaraptoran?

I. 1656 - I would personally find it helpful to designate the trochanteric shelf on the figure. I'm used to the term as applied to theropod femora,

Il 1986-7 - Referral of incomplete material to a named taxon is trickier than the authors (or Hocknull et al.) make out. Here it seems justifiable (or else the authors wouldn't have suggested it). But it is not a situation that has received the careful, logical consideration that it deserves. If there are but one or two diagnostic specimens, all of the same species, one may well be reluctant to refer undiagnostic material to that taxon. But if there are tens (or more) specimens, all of the same taxon, is it really parsimonious not

to refer the incomplete material to that taxon? This may not be important phylogenetically, but becomes significant for reconstructing ancient food webs and such analysis.

I. 2095 - In these circumstances a specimen-level analysis is by far the best approach, & the authors are to be commended for using it. This approach should be more often done.

I. 2387 - 'over-preparation' ?? was this material ever actually prepared? Is there any record that this material was prepared?

II 2487-9 - Why do the authors suggest that the ridge may be a taphonomic artefact? That the fibula was found in several pieces does not, in itself, imply that the ridge is an artefact.

II 2533-45 - The scheme of Tschopp et al. is somewhat arbitrary. Nevertheless it is a step in the right direction - away from intuitive decisions regarding what constitutes generic membership (even accepting that 'intuitive' doesn't necessarily mean 'wrong'). So it is appropriate to use this protocol.

Table 2 - I'm not sure that 'mediolateral width' is a meaningful term when applied to a vertebra. Nor is it what I think the authors mean. I would suggest just using 'width', presumably at the middle (dorsoventrally) of the centrum. However, I find the use of incomplete elements a bit problematic. Clearly the centrum has to be complete enough to get reliable measurements for this index. So some comment would be helpful, unless this is detailed in Mannion et al. 2013.

General comments

- Acronyms tend to make the text incomprehensible to anyone other than the authors, and hence disrupt the reader's train of thought. I would like to suggest in any section writing out the acronym at its first appearance & then resorting to the abbreviate form. However, the terminology for the vertebral laminae is cumbersome & long ('though informative) & writing it out may also disrupt the reader's train of thought. The authors (& editors) should consider this issue.

- Reading through the similarities & differences of the material here described, particularly to *Savannasaurus* & *Wintonotitan*, leads me to wonder: are the differences of these specimens all possibly due to developmental plasticity, i.e., individual variation? Is the kind & range of individual skeletal variation even known for sauropods? Obviously not a topic for this ms.

- The occurrence of some of this material, e.g. AODF 0665 & 0125, suggests to me that further excavation at some of these sites might well yield substantially more complete specimens. The trick, of course, is working out just where to excavate.

- Are the figured photographs of the specimens or the digital scans? Given the problems with the use of scans & such imaging techniques (Harvard Medical School has reportedly recently retracted 10+ published papers because of inaccuracies in 'computer-assisted' images) it would be reassuring to figure some photos along with the scans to forestall possible doubts about the accuracy of the images.

- This is the best-written ms (or paper) that I've read in a long time. The writing is graceful & tactful, & above all, lucid. And the included material, especially Tables 1, 3 & 4, is very useful, as is figuring all the specimens in several views. The authors have done a commendably good job here.