COMMENTS ON STYLE:

INTRODUCTION
pdf page 8, ll. 97-8 - Here (or somewhere else) I would recommend mentioneing *Austroaurus mickillopi*, to forestall readers confusing *Australotitan* with *Austrosaurus*. Some comment to the effect that *Austrosaurus* 1- derives from older sediments & 2- doesn't include appendicular material would do.

GEOLOGICAL SETTING
pdf page 11, l. 172 - Although the abbreviations NSW & SA will be readily recognized by Australians, they might not be so easily recognized by readers overseas.

p. 12, l. 207 - Why use 'trialed' rather than 'tried'?

ll. 219-222 - I'm not sure that this is actually a sentence. But it is readily understandable, so I will leave changing it to the authors' discretion.

p. 13, l. 233 - I think the authors mean 'faunas' or 'faunae' at both positions.

p. 14, l. 279 - I would suggest "... interpretation by Hall (2015)" rather than "... interpretation by (Hall 2015)", in short, change the position of the opening parenthesis '('.

p. 15, ll. 295 & 299 - The text states that the authors agree with estimates from the literature here and elsewhere. But it's unclear whether this agreement is the result of independent assessment based on new observations (which are not mentioned) or simply that the authors found no reason not to accept the estimates from the literature. If the latter, why did the authors feel the necessity to make such statements, rather than just recounting the results and proceeding to use them? It seems the authors had specific reasons for explicitly stating their support which are not apparent from the text.

Since this is a rather long and involved treatment of the stratigraphy, it is good of the authors to provide a succinct summary at the end.

p. 20, l. 452 & following instances - I think it is 'in situ', not 'insitu'

l. 465 - The taxon name needs to be italicised

p. 21, l. 472 - I think 'slightly' rather than 'slight'

p. 22, l. 508 - Might the authors mean 'resistant' rather than 'resistive'?
l. 530 - from Australia?

p. 25, l. 617 ff. - How do the authors know that the cracking occurred after burial? From the text, I think they are correct, but they need to state explicitly why they think the cracking was not pre-burial.

p. 27, l. 655 - Presumably water flow pre-burial(?) Yes, the authors do indicate this later, but it would be nice to state this here at the beginning of the discussion. p. 25, l. 605 - I would

have written '... partial left and complete right humerus ...' (as is done on p. 40 ll. 1054-5) rather than 'humeri'.

p. 29, l. 717 - Isn't it 'pteridophyte' rather than 'pterydophyte?

l. 727 - I think using 'those' rather than 'these' would make the sentence clearer.

MATERIALS & METHODS
p. 31, l. 799 - I think it's 'commonplace' rather than 'common place'

p. 34, l. 882 - Good that you're not using jpg format.

p. 36, l. 927 - I think the authors mean 'single' here, not 'singular'

DESCRIPTION, HOLOTYPE
p. 41, l. 1089 - I think the authors mean 'is' rather than 'are', since the subject of the sentence is 'anterior portion [singular] of the scapular blade'.

p. 42, l. 1125 - I would suggest writing 'nearly' rather than 'near'.

p. 44, l. 1202 - 'scapulae shape' reads awkwardly, since 'scapulae' is plural & 'shape' is singular

p. 45, l. 1232 - I think the authors needn't write 'plant woody', just 'woody' should do.

p. 51, l. 1416 - The 'sentence' in this line is not a sentence, there is no verb and no object.

p. 60, l.1687 - Do the authors not mean 'differentiating' rather than 'differentiation of'?

REFERRED SPECIMENS
p. 61, l. 1728 - I think 'represents' rather than 'represent', since the subject is singular.

p. 69, ll. 1964-5 - This sentence is unclear. Are two specimens of *Argentinosaurus* mentioned here, *A. huinculensis* (presumably meaning the holotype) & a referred specimen? Presumably the authors do not mean an absolutely smaller femur but rather a relatively smaller femur. And in the second case presumably relatively to some other element of the skeleton, but which? P. 68, l. 1927 is also a bit unclear in this regard.

DISCUSSION
p. 73, l. 2096 - One wold usually write this as "... of Otero (2010) ..."

p. 78, ll. 2248 ff - This is a long sentence with something missing. The phrasing "The presence ... with ..." implies that there is something in these centra along with the features listed after the word 'with', but just what is also present is not stated.

CONCLUSION
p. 87, l. 2509 - It's not clear what the authors mean by "granular phylogenetic placements'.

l. 2515 - I think, technically, the authors are referring to a lineage, rather than a clade. There is current opinion to use ‘clade’ for a group of related contemporaneous taxa, as for example, living whales, but ‘lineage’ for genealogically related taxa of different ages, as for example, Neogene whales. This seems an appropriate usage to me.

Explicitly stating the orientation of the element described is a particularly helpful feature of the descriptions.

FiIGURES
Fig. 4 caption line 9 - What is ‘databeen’? The only use I could find of this on the ‘net was for an analytic tool for gathering information about internet users, which is not the use here.

Fig. 4A - A symbol for ‘detrital zircon sample’ is included in the legend, but it’s not on the image itself.

Fig. 5B caption - The caption refers to four type localities but only a single star (indicating fossil localities) appears on the image. Those on 5C are so small that they are difficult to see without explicitly searching for them.

Fig. 6C & E images - The labelling letters (‘C’ & ‘E’) do not show up well against the background.

Fig. 7B caction - Correct the specific name. It would useful on the image for 7B to indicate the anatomical directions, i.e,, anterior, dorsal, etc.

Fig. 8H - It would helpful to the reader to include an outline of a sauropod manual print for comparison.

Fig. 8 caption - I don’t see ‘los’ on the image.

Fig. 9 caption - I think the reference to Fig. 5 here is incorrect, maybe Fig. 8 is meant (see also caption to Fig. 11).
The authors might wish to consider reversing the image of *D. matlldae* for ease of comparison by the reader (even though this is done in the following figure). Of course the interested reader can copy the image into a graphics program & reverse it themselves.

Fig. 10 - The ‘r’ in the figure (C) is not identified in the caption.

Fig. 27 - This certainly make s a dramatic figure, but images A, B & H are difficult for me to make out. Perhaps tweaking the contrast might help.

Fig. 28 - This is another dramatic image, but I’m not entirely immediately clear on what I’m seeing here. A brief explanation of “‘x-ray’ renders” should suffice. Remember many readers will look at the images before reading the text, & some will likely only look at the images - especially these.

Fig. 34 caption - Define the abbreviation (‘pne’) on the image.

Fig, 35 caption - Image L requires some explanation, because this is a different rendering than in any previous image.

Fig. 36 - Abbreviations As, Ay, Dc, El, Gb, Ng & Pl are not indicated on the graphs. Ds on the graph is not mentioned in the caption, however, I think that Dc in the caption should be the Ds of the graph. Even though the readers should be able to work out what HC, HL, FC, & FL on the graph indicate it wouldn't hurt to include them in the caption. What is the short horizontal bar above the ordinate of graph C at 2000?

These are remarkable images, & (hopefully!) should set a standard for illustrating vertebrate fossil remains (& maybe invertebrate fossils as well).

COMMENTS ON CONTENT:

Abstract
ll. 35-6 - I think the authors are to be commended for refraining from conducting yet another unhelpful phylogenetic analysis. Too often one sees phylogenetic analyses conducted simply for the sake of it, or because they are felt to be compulsory.

ll. 38-9 - All (or at least most) of us thought that it would be very good to have all specimens collected together in a central location, for ease of access. The burning of the national museum in Rio, even though more palaeontological material survived than expected, has changed our views on this.

ll. 48-50 - Given the sparsity of material so far discovered, the final sentence of the abstract is not unexpected. Hopefully this will change with the discovery of more material.

GEOLOGICAL SETTING
Given the transitional nature of the Winton-Mackunda boundary, and the seeming implausibility that the inland sea retreated (geologically) abruptly across the entire basin, what is the likelihood that the base of the Winton is diachronous? Which would (unfortunately) further add to the difficulties in assessing the relative chronological ages of the different specimens. BUT SEE ll. 448-9

Can the zircons be recycled downsection in the formation, thus resulting in misleadingly young ages?

pdf page 23, ll. 552-9 - My experience suggests that under some circumstances (in the northern part of the basin) stream banks may be relatively quickly eroded and exposed fossils broken and scattered downstream.

p. 25, l. 617 ff. - How do the authors know that the cracking occurred after burial? From the text, I think they are correct, but they need to state explicitly why they think the cracking was not pre-burial.

p. 27, l. 655 - Presumably water flow pre-burial(?) Yes, the authors do indicate this later, but it would be nice to state this here at the beginning of the discussion.
ll. 720-2 - check the exposures at 'Navarre', near Ilfracombe.

The observations of this section are useful and thorough, and hopefully will serve as an example for other workers.

MATERIALS & METHODS
Presumably the authors have checked the accuracy of the digital models, before conducting retrodeformation, against the specimens. This has not been stated, but should be included as part of the procedure. One can always question whether some systematic bias is introduced by the scanning process, but one must realize that this is not the only potentially weak link the reasoning process. We all assume that fossil bones are accurate representations of the bones in vivo other than where obviosuly dsitorted. But there are plastic deformations, see Fig. 15 of Walker's 1961 monograph on *Stagonolepis* for an example. Neogene fossils can be compared with bones of living forms, but for taxa (like *Stagonolepis*) that are extinct without living representatives, there remains the possibility that biases are sometimes introduced by the fossilisation process. Since this is rarely of concern, there should logically be even less concern over the use of properly checked digital models.

DIAGNOSIS
ll. 1071-2 - Is there any point in quantifying the position of the ridge? From Fig. 9 A it seems that the ridge if about 85-90% of the ay from the antero-dorsal margin to the poster-ventral margin

DESCRIPTION, HOLOTYPE
p. 50. ll. 1374-6 - Why do the authors ascribe the deformation to trampling, rather than to some other, later process? This is also mentioned elsewhere, but given the reference to wombat action earlier, the authors need to state explicitly why they feel the deformations are due to trampling and not wombats or some other factor.

p. 51, ll. 1401-2 - This is an important point, because this ulna exhibits a distinctive form.

p. 59, l. 1639 - The name 'trochanter shelf' calls to mind the trochanteric shelf, a taxonomically important feature of (nonavian) theropods, particularly ceratosaurs. If this 'trochanter shelf' is, or seems, homologous, to the trochanteric shelf of theropods,it may have significant consequences for phylogenetic studies of theropods. From the description I think it is not homologous, but the authors should be aware the some readers will immediately think 'theropod' when encountering this term. It would be worth while mentioning the distinction in the text, or to change the term used. On the other hand, if the features are homologous the authors need to discuss the implications.

The authors describe the preservation of these elements in admirable detail, without mentioning any indication of scavenging. Do they think there was no scavenging, or could it be that the preservation is such that they cannot be certain whether or not scavenging took place? Of course, I"m referring to scavenging that left traces on the bones.

DISCUSSION

p. 76, ll. 2178-9 - Why do the authors think that the olecranal process in *Wintonotitan* is likely similar to that of *Diamantinasaurus*, when it isn't preserved in *Wintonotitan*?

Body size and palaeoecology of sauropods in the Winton Formation.

The considerations discussed in this section point up the importance of having fossil records from different regions for the understanding of the evolution of a taxonomic group. Looking only at titanosaurs from South America or Asia would give a incomplete picture, whilst looking only at those from Europe or North America would hardly suffice.

CONCLUSION

p. 87, l. 2515 - I think, technically, the authors are referring to a lineage, rather than a clade. There is current opinion to use 'clade' (in its original sense) for a group of related contemporaneous taxa, as for example, living whales, but 'lineage' for genealogically related taxa of different ages, as for example, Neogene whales. This seems appropriate to me.

GENERAL COMMENTS ON THE MS

This is the first comprehensive description of Winton Fm throughout the artesian basin. The Winton promises to be a major window into the Cretaceous terrestrial tetrapod faunas of Australia, & hence of East Gondwanaland.

This is the first comprehensive effort to place the discovered Australian sauropod material in a chronostratigraphic context. Something that is too-rarely done overseas as well.

The description of both preservation and form of the bones recovered is admirably thorough.

Explicitly stating the orientation of the element described is a particularly helpful feature of the descriptions.

The figures;
1- integrate form & preservation,
2- in Fig 27 & 28 provide a surrogate for 3-dimensional images,
3- provide a series of cross-sectional forms for the elements.

The introduction & use of illustrations that provide information on both form (including illustrating the suite of cross-sections foe the elements described) & preservation in a single image will hopefully set a standard for furture description. The use of such images could alleviate one of the major problems of the phylogenetic method, specifically verifying (or not, as the case may be) other workers' assessments of character states.