

Of the numerous dorsal paramedian scutes, many of the anterior-most dorsal paramedians were preserved on edge, clearly showing an arching of the paramedians. This arching in a nearly complete, undistorted specimen thus refutes Long and Murry's (1995) contention that the arching of *T. coccinarum* scutes is due to post-mortem deformation. We note that *T. coccinarum* scutes thus are broadly arched, whereas the scutes of *Redondasuchus* are abruptly flexed.

Long and Murry (1995) reinterpreted the holotype of *Redondasuchus reseri* as a lateral scute of *Typothorax coccinarum*, but did not provide any justification for this reassignment. In their diagnosis of the genus *Typothorax*, Long and Murry (1995, p. 101) noted that the "lateral scutes [are] dorsoventrally-compressed, acutely folded into a laterally-directed sharp edge." Based on examination of the cast of the nearly complete *T. coccinarum* (NMMNH P-12964) mentioned above, we concur with this observation. This contrasts with the holotype scute of *R. reseri*, which is not acutely folded, but has an obtuse angle between the ventral margin of its dorsal side and the medial margin of its lateral side, and does not have a sharp, laterally-directed edge. In addition: (1) lateral scutes of *T. coccinarum* are triangular in dorsal view, whereas the holotype of *R. reseri* is rectangular; (2) no ventral bar is present on the lateral scutes of *T. coccinarum* as it is on the holotype of *R. reseri*. Thus, there is no basis for considering the holotype of *R. reseri* to be a lateral scute of *T. coccinarum*.

Martz (2002), in an unpublished thesis, synonymized *Redondasuchus* with *Typothorax*, while retaining the species name *reseri*, thus forming the new binomial "*Typothorax reseri*." He based this conclusion on the following four ostensible differences: (1) *Redondasuchus* is smaller than, but otherwise similar to, *Typothorax*; (2) both taxa have "arching" of the scutes at the center of ossification, although it is more pronounced in *Redondasuchus*; (3) both have a ventral keel that is reduced abruptly medial to the center of ossification/arching, but it does so more sharply in *Redondasuchus*; and (4) there is no reason to suspect *Redondasuchus* lacked lateral scutes, which are present in all other aetosaurs (Martz, 2002, p. 36).

Martz (2002) also noted the following features as similarities between *Redondasuchus* and *Typothorax*: the scutes of *Redondasuchus reseri* are "arched" to a greater degree than those of *Typothorax* and that the pitting is finer at the "center of ossification," but that this, too, is similar to *Typothorax*.

However, one of the primary problems when reading Martz is a general vagueness of terminology. Thus, Martz consistently used the term "arched" even when discussing *Redondasuchus reseri* scutes. We define arched, as it pertains to aetosaur scute morphology, to mean that the scute is parabolic, or continuously curvilinear, in anteroposterior view. This definition of arched clearly does not pertain to *R. reseri*, which we instead refer to as flexed. We define flexed, as it pertains to aetosaur scute morphology, to mean that the direction of otherwise linear portions of the scute changes abruptly at a distinct, anteroposteriorly-

oriented plane, that we refer to as the point or plane of flexure and that Martz (2002) refers to as the "center of ossification." Thus, as noted above, undistorted *Typothorax* scutes are noticeably arched, whereas *Redondasuchus* scutes are, instead, flexed. Martz (2002, fig. 3.1) illustrates a *Typothorax coccinarum* paramedian scute that is supposedly flexed, and that he maintains appears similar to that of *R. reseri*. However, it is evident from his photograph that there are numerous anteroposteriorly-directed fractures through the scute. Such fractures, when reconstructed incorrectly, can make a paramedian scute appear flexed. The general lack of such fractures on *R. reseri* paramedians, together with the demonstrated arching of *T. coccinarum* paramedian scutes, make the assertion of Long and Murry (1995) that both scute morphologies are due to distortion that much more puzzling. Thus, we interpret the "flexed" paramedian of Martz (2002, fig. 3.1) as incorrectly reconstructed and distorted.

Martz (2002) noted that the scutes of both *Typothorax coccinarum* and *Redondasuchus reseri* have a ventral keel that is reduced abruptly medial to the "center of ossification/arching." This feature is difficult to assess due to the incongruence of *Redondasuchus* and *Typothorax* scute nomenclature as presented above. The apex of the arch in *Typothorax* scutes would likely be equivalent to the "center of arching," as used by Martz (2002). While this feature is an interesting similarity between the two taxa, it is not sufficient to suggest a synonymy.

Martz (2002) contended that there is no reason to believe that *Redondasuchus* lacked lateral scutes, as originally proposed by Hunt and Lucas (1991) and reinforced by Heckert et al. (1996). However, with the reorientation of the holotype and its ramifications for the carapace reconstruction (Fig. 1), the "lateral protection" that the paramedians offered in previous interpretations is nullified. While this does not strengthen the case for the absence of lateral scutes in *Redondasuchus*, neither does it demonstrate that *Redondasuchus* did possess lateral scutes. Because the paramedians of *Redondasuchus* are so unique among aetosaurs, other novel features of the carapace should not be ruled out. Unfortunately, at the present time there is no definitive evidence for or against *Redondasuchus* possessing lateral scutes.

In summation, the arguments against the validity of *Redondasuchus* as a taxon distinct from *Typothorax* result from a misinterpretation of the fossil material or a misunderstanding of aetosaur scute morphology. Thus, we maintain *Redondasuchus* as a genus distinct from *Typothorax*.

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