

Speaking principally of *T. fimbriatus*, which is the better known species, it has glabellar furrows, though not so well developed as in the typical *Tretaspis*, but, so far as I can learn, lacks the simple eyes and eye-lines of that genus. But the greatest obvious peculiarity of the species is the character of the fringe, which, instead of being marked by concentric rows of perforations, is crossed by a system of radiating ridges and furrows. Reed has recently studied the fringes of the various English species of "*Trinuclens*", and he speaks thus of the fringe in *Trinuclens fimbriatus*:¹² "The upper surface has all the pits arranged in radial sulci except near the genal angles." And again: "the dividing radial ridges vary from the extreme development in *T. fimbriatus*, Murchison, to the scarcely differentiated structures in *T. nicholsoni*." I am aware that Reed also says of the arrangement of the pits in concentric or radial rows that "Frequently different stages occur in the same species or different parts of the fringe of the same individual," and that he does not seem to give very high classificatory value to the pattern of the fringe. Still, we have here an extreme development along one line, which, taken with the other characteristics of the specimens, form a combination which may have the value of a generic group. The principal characters seem to be as follows: Glabella obovate, glabellar furrows present, but weaker than in *Tretaspis*, eye-lines and simple eyes absent in the adult, fringe ornamented with radiating furrows separated by strong ridges. I would therefore propose to select Murchison's second species, *Trinuclens fimbriatus*, as the type of *Trinuclens*, and let the genus stand or fall on the basis of that species. Ruedemann's *Tretaspis diademata*¹³ would certainly belong to the genus as thus restricted, and probably *Trinuclens coscinorhinus*, Angelin¹⁴, as well. Professor F. R. Cowper Reed has announced his intention of revising the British species of *Trinuclens*, and it will be interesting to see if, when the species are better known, such a grouping will be of value. We seem to have four possible courses open to us, and of them I personally prefer the fourth:

First, use *Cryptolithus* and make *Trinuclens* a direct synonym.

Second, ignore *Cryptolithus* and continue to use *Trinuclens* on the score of convenience.

Third, make *Trinuclens fimbriatus* the type of the genus and make a broad enough definition to include the type of *Tretaspis*, in which case *Trinuclens* would replace *Tretaspis*, the latter

¹²Geological Magazine, vol. 9, Dec. 5, pp. 349, 385, 1912.

¹³Bull. N. Y. State Museum, No. 49, p. 46, pl. 3, figs. 12-14, 1901.

¹⁴Pal. Scandinavia, vol. 1, 3d ed., 1878, p. 65, pl. 34, fig. 4.