

ART. III.—*Note on a New Permian Xiphosuran from Kansas*; by CHARLES E. BEECHER.*

THROUGH the courtesy of Mr. J. W. Beede, of Indiana University, the writer has had an opportunity to examine a portion of the cephalothorax of a large Xiphosuran from the Permian of Kansas. It apparently belongs to the genus *Prestwichia* and it is chiefly interesting, aside from its large size, on account of its coming from a higher horizon than any other American species yet known.

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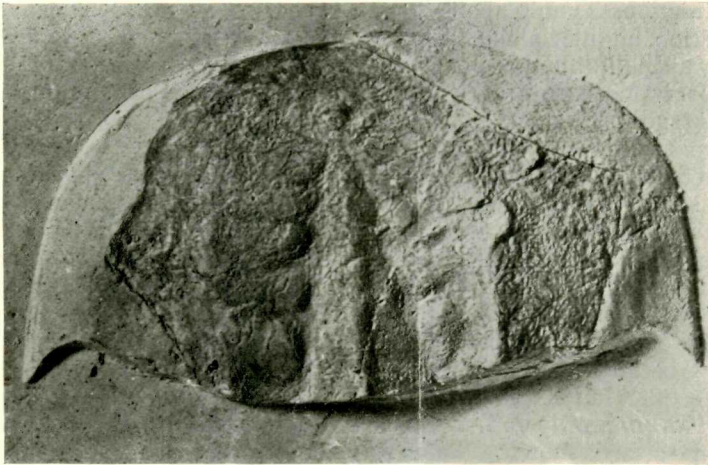


FIGURE 1.—*Prestwichia signata* restored and of natural size. The smooth lateral or genal regions are the parts restored.

In the March number of the *American Geologist* for 1902, the writer described a species of *Prestwichia* from the Chemung (Devonian) of Pennsylvania, which carried the geological distribution of the genus from the Coal Measures to the Upper Devonian. The present species extends its range in the other direction as far as the lower Permian. The Carboniferous forms of *Prestwichia* in general show very little evidence of the segmental nature of the cephalothorax, and it was of considerable interest to describe in the Chemung species a series of nodes on each side of the glabellar region corresponding, it was believed, to five of the six pairs of appendages on the ventral side. The new Permian form also exhibits a similar series of appendicular lobes on each side of the axis, which agree in

* Among the papers of the late Professor Beecher was found the manuscript of this article as here printed. The manuscript was compared with the cast of the fossil and found to be complete as far as the very imperfect but interesting specimen will permit.—CHARLES SCHUCHERT.

position and form with the earlier species. It is also possible to detect an additional anterior pair, making the full number of six altogether.

Prestwichia signata, sp. nov. (figure 1).

A diagnosis of the species is necessarily quite incomplete, owing to the fact that thus far only a portion of the internal mold of a single cephalothorax has been discovered. It is believed, however, that the characters preserved will readily serve to identify the species, which is geologically quite important.

Cephalothorax large, depressed, convex, flattened on the dorsal side between the eyes, slightly arched in a longitudinal direction. The glabellar region is marked by a subconical elevation, angular along the median line, and terminating in front by a small, round ocellar node, distant from the anterior margin about one-sixth of the estimated length of the cephalothorax. Extending from the posterior margin of the cephalothorax are two low subangular ridges starting at points from the median line equal to the basal diameter of the glabellar cone, passing forward and curving slightly outward to the eyes, thence turning a little toward the axis and merging into the general contour before reaching the anterior end of the cone. The space thus enclosed on each side is occupied by five low rounded nodes, of which the posterior one is somewhat the larger and obliquely pointed behind. Just at the apex of the cone, and behind the ocellar node, is a pair of small transverse nodes, thus making six on each side. The second and third of each series are faintly delimited, while the fourth, fifth, and sixth are very clearly shown. The glabellar axis also shows extremely faint annulations corresponding to the lateral lobes. Opposite the third pair of lobes are the reniform or crescentic eyes, which are large and prominent for the genus. Two minute spots on each side of the small anterior median lobe, and distant from each other about 1.5^{mm} , indicate the ocelli.

The surface of the specimen represents a mold of the inner surface of the test, and is covered with a plexus of very slender anastomosing vascular furrows and ridges, much like those in the modern *Limulus*.

The cephalothorax as preserved has a length of 45^{mm} . The glabellar cone measures 33^{mm} in length and 18^{mm} across at the base. The outer edge of the eyes is about 20^{mm} distant from the median line and measures fully 5^{mm} in anteroposterior diameter.

Genal regions, abdomen, and telson unknown.

Horizon and Locality.—In the Fort Riley limestone of the lower Permian, three miles west of Stockdale, Kansas. The plastotype is in the Yale University Museum.

Laboratory of Paleontology, Yale University Museum,
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