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A NEW GENUS OF STEGOCEPHALIA FROM THE TRIASSIC OF ARIZONA

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Recently the American Museum received by gift from Mr. Henry Bird a specimen that is of unusual interest as it represents a group of the Stegocephalia not heretofore known to occur in America. Its discovery throws additional light on the age of the Triassic strata of Arizona, which will be discussed in a succeeding paper.

This specimen is a natural mold of the palate and an impression of a part of the inside of the pterygoid region of the skull not connected. No bone is present, but the impressions are so perfect and faithful in detail that casts of the bones have been made permitting an accurate description.

It was found by Mr. R. T. Bird while on a motorcycle trip through Arizona, and it gives me great pleasure to name the species for him. The following record accompanied the specimen: "Picked up six and six-tenths miles southwest of Winslow, Arizona, near the road to Pine and Payson along the edge of a small mesa with other fossil remains. Triassic sandstone, November 9, 1932."

The other fossil remains referred to that I have seen are unidentifiable plant impressions.

Stanocephalosaurus birdi, new genus and species

TYPE OF GENUS AND SPECIES.—A. M. N. H. No. 3029. Impressions of a palate and the internal pterygoid region of skull.

LOCALITY.—Six and six-tenths miles southwest of Winslow, Arizona.

HORIZON.—Middle Triassic.

GENERIC AND SPECIFIC CHARACTERS.—Skull much longer than broad, triangular, with obtuse rounded snout. Parasphenoid very slender. Internal nares narrow, elongate and in line with vomerine and palatine tusks. A transverse row of small teeth between the vomer tusks and another row along the inner border of the internal nares.

A complete skull will probably disclose characters of distinct family rank which may be characterized by this genus, but I hesitate to designate a family without defining it more clearly than can be done with an impression.

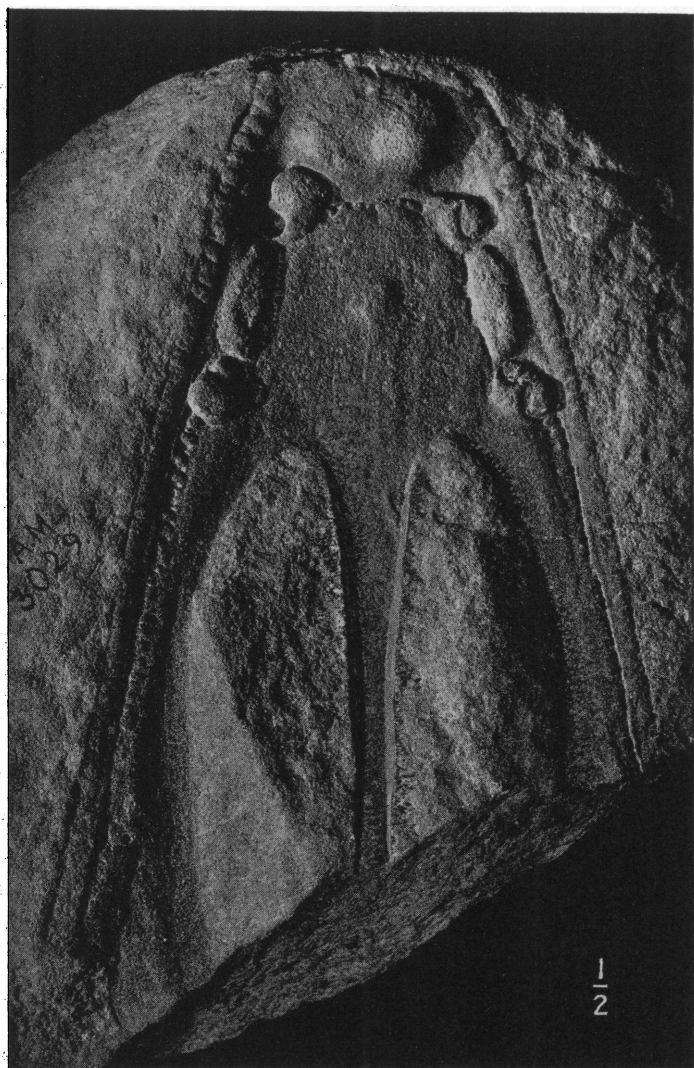


Fig. 1.—*Stanoccephalosaurus birdi* (A. M. N. H. No. 3029). Natural impression of palate. Ventral view. One-half natural size.



Fig. 2.—*Stanocephalosaurus birdi* (A. M. N. H. No. 3029). Cast of palate taken from natural impression. One-half natural size.

The palate as a whole establishes the relationship of this genus among the Stereospondylous Stegocephalia, and its nearest relatives are apparently among the Capitosauridae, where I provisionally place it.

The narrowness of the palate and the reduced parasphenoid, markedly elevated where broken, are strong arguments for an affinity to the Trematosauridae, but consideration of the regional development excludes it from this family. In general proportions there is a resemblance to *Mastodonsaurus acuminatus* Fraas, which I believe is superficial, however, for it is very unlike other genera and species of this family.

The more uniform generic characters among the Metoposauridae immediately exclude it from association in this family.

The impressions indicate an elongated skull nearly twice as long as broad with slender parasphenoid, elongated narrow palatal vacuities and, if I interpret the second fragment correctly, with orbits far back. Sutures are not indicated on this mold except those between the vomers and parasphenoid.

THE PARASPHENOID.—Is a narrow bar that extends forward in a narrow processus cultriformis terminating at the depressed pit 2 c.m. back of the transvomerine teeth. Anteriorly it unites with the vomers a distance equal to nearly one-half the length preserved. Its palatal surface is flat with lateral margins thickened posteriorly, indicating a wide endocranial groove as in *Trematosaurus brauni*. Posteriorly it rises considerably above the plane of the palate from which I infer a skull deeper than *Buettneria*.

The palatines and ectopterygoids are relatively broader than in other described forms available for comparison, excepting in the Capitosauridae.

TEETH.—At least 100 teeth and spaces can be counted on the combined maxillary and premaxillary of each side, and 50 in each combined palatine and ectopterygoid row. They increase in size gradually toward the front but without indication of greatly enlarged teeth in the extreme front. Apparently the bases were compressed anteroposteriorly. On each palatine and vomer there were two relatively large tusks alternately functioning, and the vomerine tusks at least were directed backward as in *Mastodonsaurus*. The row of transvomerine teeth were larger than those on the inner border of the internal nares, but shape or number cannot be determined.

PALATE OPENINGS.—The palatine vacuities are large, elongated openings unusually reduced in width by the narrowness of the skull and the relatively increased expansion of the pterygoids and palatines. The posterior nares are narrow, their width equaling one-third their length. The premaxillary openings are obscure, but they were probably confluent as in *Cyclotosaurus*, as there is no indication of a premaxillary bridge.

MEASUREMENTS.—Length of palate anterior border to last maxillary tooth in straight line, 24 c.m. Width of palate at last maxillary tooth, 7 c.m.

Stegocephalia that conform nearest in general development are from the Lower and Middle Triassic of other continents.