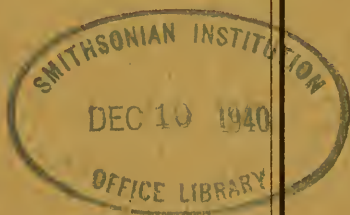


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UPPER CRETACEOUS OF UTAH

BY
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In 1937 a Smithsonian paleontological expedition to central Utah, under the direction of the writer, was fortunate in finding a locality rich in well-preserved and articulated skeletal remains of a new and unique member of the Sauria. Further collecting here in 1938, 1939, and 1940 by parties working under the leadership of Dr. C. L. Gazin found many additional specimens, among which were included some fragmentary remains of a much smaller but undescribed lizard.

Although these specimens are among the most ancient Sauria known from North America, they have the further distinction of being more completely preserved than any members of this suborder yet discovered on this continent.

From a study of all available materials of the first-mentioned form, practically the entire skeletal structure is now known, except the distal half of the tail. A detailed osteological description with illustrations of all important elements is given in a manuscript submitted for publication to the United States Geological Survey; but since a year or more may elapse before the published article appears, it seems desirable to prepare this preliminary paper giving the names and brief diagnoses of the new genera and species. Detailed description of the skeleton, discussion of affinities, and illustrations will appear in the more extended article.

SUBORDER SAURIA

POLYGLYPHANODON, new genus

POLYGLYPHANODON STERNBERGI, new species

FIGURE 1

Type.—U.S.N.M. No. 15477, consists of the skull, lower jaws, and many skeletal parts.

Paratype.—U.S.N.M. No. 15816, consists of a nearly complete articulated skeleton.

Type locality.—South Dragon, Manti National Forest, Emery County, Utah.

Horizon.—North Horn formation, Upper Cretaceous.

Diagnosis.—Dentition subacrodont, heterodont; 6 teeth in premaxillary, 18 in maxillary, 19 in dentary; posterior teeth much widened with sharp transverse cutting edges; upper and lower teeth indistinguishable; skull deep, strongly constructed; pineal foramen in fronto-parietal suture; premaxillary with long spine; postfrontal

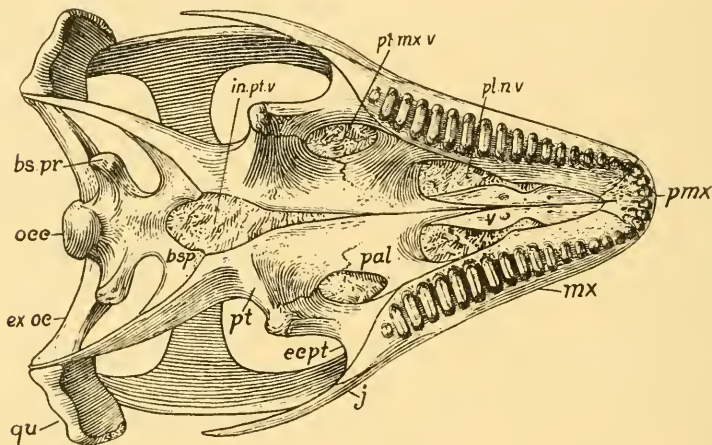


FIG. 1.—Skull of *Polyglyphanodon sternbergi*. Type, U.S.N.M. No. 15477. Palate view. bs. pr, basioccipital process; bsp, basisphenoid; ecpt, ectopterygoid; ex oc, exoccipital; in. pt. v, interpterygoid vacuity; j, jugal; mx, maxillary; ooc, occipital condyle; pal, palatine; pl. n. v, palatonarial vacuity; pmx, premaxillary; pt, pterygoid; pt. mx. v, pterygo-maxillary vacuity; qu, quadrate; v, vomer. Natural size.

distinct; postorbital present; splenial extensive but falling short of symphysis; surangular and angular distinct; angular greatly restricted on external surface; vertebrae procoelus; zygosphene and zygtrum well developed; centra tapering; 29 presacrals; 2 sacral vertebrae; coracoid with one emargination; clavicles perforate; interclavicle anchor-shaped with bifurcated anterior extremity; ischium and pubis like *Iguana*; limb bones of moderate length; stout; feet typically lacertian; digital formula of manus 2, 3, 4, 5, 3; pes 2, 3, 4, 5, 4.

The unique character of the dentition is alone sufficient to distinguish *Polyglyphanodon sternbergi* from all other Sauria; its main features are clearly shown in figure 1.

PARAGLYPHANODON, new genus**PARAGLYPHANODON UTAHENSIS**, new species

FIGURE 2

Type.—U.S.N.M. No. 15668, consists of a left maxillary containing eight teeth.

Type locality.—South Dragon, Manti National Forest, Emery County, Utah.

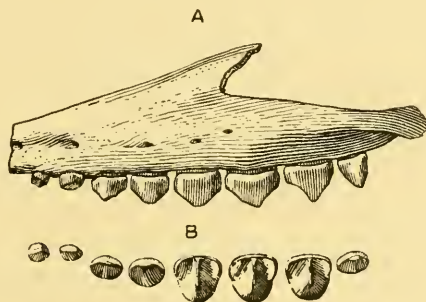


FIG. 2.—Left maxillary of *Paraglyphanodon utahensis*. Type, U.S.N.M. No. 15668. *A*, lateral view; *B*, superior view of teeth. Five times natural size.

Horizon.—North Horn formation, Upper Cretaceous.

Diagnosis.—Dentition subacrodont, heterodont; teeth short, stout, with sharp lateral and transverse cutting edges; anterior teeth reduced, with simple crowns; vertebrae procoelus; individuals small.

The principal characters of the type are clearly indicated in figure 2.