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A NEW CROCODILIAN FROM MONGOLIA¹

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Among the Mesozoic Reptilia collected by the Third Asiatic Expedition in 1923 there is a small crocodilian which represents a new genus and species, possibly a new family. It was found by Mr. Walter Granger at Shabarakh Usu, on the Kwei Hua Chung—Uliassutai trail. The horizon is the Djadochta Beds, of lower Cretaceous, or possibly Comanchean, age. The specimen consists of skull and jaws, moderately well preserved.

***Shamosuchus djadochtaensis*, new genus and species**

TYPE.—Skull and jaws, incomplete. Amer. Mus. No. 6412.

GENERIC CHARACTERS.—Absence of mandibular foramen, prominent postero-external process of squamosal, exoccipital comprising a considerable portion of the condyle.

SPECIFIC CHARACTERS.—Median ridge on frontal bone, prominent ridges on lacrymals, medium size of supratemporal fenestræ, and their position close to the median line and far from the posterior and external borders of the cranial table.

The skull is comparatively broad for its length. The tip of the snout is not preserved, but the convergence of the lateral borders of the skull and of the two rami of the mandibles indicates clearly that the skull was short. The cranial table is relatively large, and its posterior border is strongly curved. It is flat in the portions preserved. The facial region of the skull is broad and flat. The supratemporal fenestræ are of moderate size. They are situated on the anterior portion of the cranial table, relatively near the mid-line of the skull. They are comparatively far from the external and posterior borders of the table. Their length is somewhat greater than their breadth. The orbits are large. The apertures of the anterior portion of the snout are not preserved. The internal narial aperture on the palate has been pushed out of position with respect to its surrounding bones by crushing, but it was apparently similar in form and position to that of the eusuchian crocodiles of to-day and did not resemble the aperture of the Mesosuchia.

The premaxillaries are not preserved. The maxillaries occupy more than two-thirds of the total breadth of the snout. The anterior teeth are

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Fig. 1. *Shamosuchus djadochtaensis*, new species.
Type skull, Amer. Mus. No. 6412. Natural size. A,
superior view; B, posterior view.

lacking. One tooth of the middle region is of average proportions and is moderately sharp. Four small teeth near the posterior end of the left side are short-crowned and sharp. They are considerably longer in their

antero-posterior than in their transverse diameters. Several teeth slightly farther forward on the right side are similar, except that they are slightly sharper. No button-like, crushing teeth are present. The maxillo-nasal sutures converge sharply forward. The borders of the maxillaries, near these sutures, are slightly elevated.

The nasals are very narrow at their anterior ends, where they are broken off. They broaden rapidly in the posterior direction, reaching their maximum breadth at their junctions with both lachrymals and prefrontals. From these points backward they narrow rapidly. The posterior end of each nasal is somewhat abruptly pointed. The two posterior points are separated by the blunt anterior wedge of the frontal. The superior surfaces of the nasals are slightly concave from side to side. Along the median line there is a deep excavation.

The lachrymal is a distinctive bone. It is completely preserved on the left side only. Its suture with the maxillary is very irregular. The inferior process, extending backward below the anterior border of the orbit, is relatively long and slender. The anterior process is both long and broad. On it is situated an elevation which is prominent near the center of the maxillo-lachrymal suture. This elevation extends inward and slightly forward. Near the center of the lachrymo-prefrontal suture it turns sharply forward and extends parallel with the nasal border of the lachrymal, joining the ridge on the maxillary mentioned above. The anterior branch of the elevation is low and narrow and not prominent. The lateral branch is very prominent. It slopes forward and outward with a gentle concavity, and backward and inward with an abrupt depression. There is a small flat area between the elevation and the suture with the prefrontal. The lachrymal occupies a considerably greater portion of the orbital border than does the prefrontal.

The prefrontal bone is roughly triangular, the long base of the triangle being the inner border of the bone, composed of the naso-prefrontal and prefronto-frontal sutures. This border is somewhat convex toward the median line. The other two sides of the triangle are the orbital border of the bone and the lachrymo-prefrontal suture, both of about the same length and both concave outward. The bone is crossed by a low ridge which extends outward and forward from the center of the prefronto-frontal suture to the angle of the ridge on the lachrymal.

The anterior portion of the frontal is preserved. It is finely pitted and is elevated along the median line into a keel. Consequently the portion preserved resembles one of the nuchal scutes of the exoskeleton. The breadth of the interorbital portion is considerable. The

anterior process is broad and blunt, wedging apart the posterior terminations of the two nasals. Near the borders of the anterior wedge there are two deep pits opposite the ends of the prefrontal ridges.

A portion of the left postorbital is preserved. Its orbital border is incomplete. It occupies only about one-fourth of the external border of the cranial table,—an unusually small proportion.

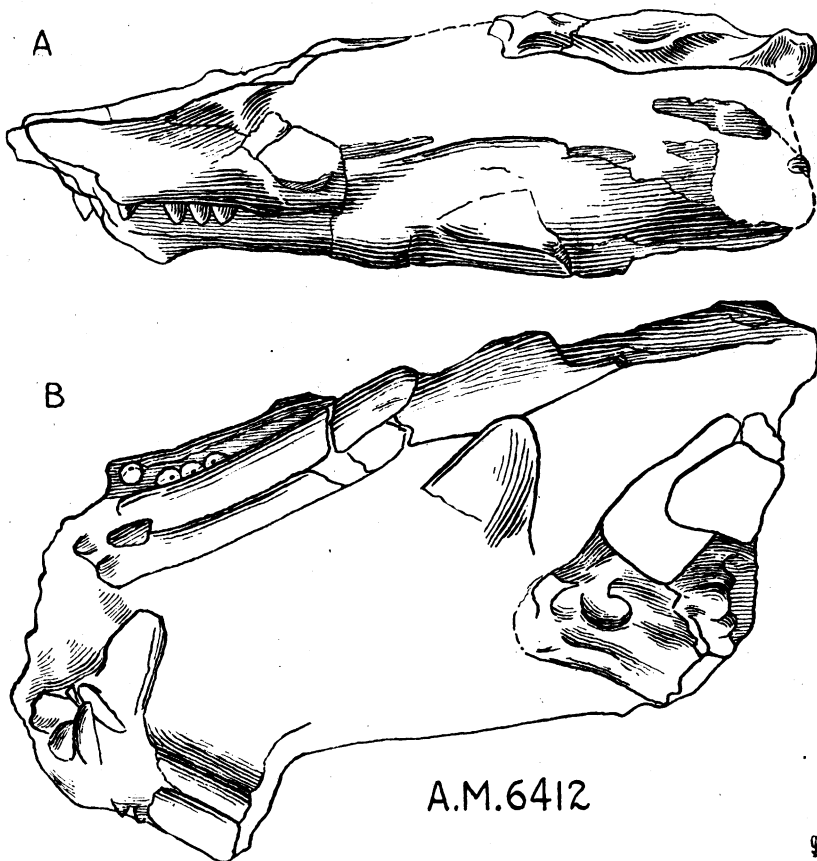


Fig. 2. *Shamosuchus djadochtaensis*, new species. Type skull, Amer. Mus. No. 6412. Natural size. A, lateral view, left side; B, inferior view.

The squamosal of the left side is preserved. It is relatively large, occupying about three-fourths of the external border of the cranial table. This unusual proportion is due to the backward extension of the postero-external corner of the bone backward in the form of a prominent

posterior process. This process is thickened at its end, and there is a shallow concavity anterior to the thickening, extending as a groove over the side of the cranial table and separated from the anterior portion of the bone by a shallow oblique ridge.

The parietal is not preserved, but the squamosal ends in the specimen at what is apparently the squamoso-parietal suture. This extends forward and slightly inward. The parietal must have occupied not more than 40 per cent. of the posterior border of the cranial table, and perhaps much less.

A portion of the supraoccipital is preserved. This bone evidently occupied a small portion of the posterior of the cranial table, also a very small portion of the surface of the table. The postero-inferior plate of the bone extends downward more than one-half the distance from the cranial table to the foramen magnum.

The exoccipitals almost entirely surround the foramen magnum, only a small portion of the condyle being composed of basioccipital. The region of the pterygoids is so badly crushed that its characters are not positively distinguishable.

Portions of both mandibular rami are preserved. They converge sharply toward each other in the anterior direction. Their most notable characteristics are a considerable lateral thickness, especially of the splenial bones, and the absence of a mandibular foramen.

