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FURTHER NOTES ON THE SKULL CHARACTERS OF *GAVIALOSUCHUS AMERICANA* (SELLARDS)¹

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When the characters of the skull of *Gavialosuchus americana* were described by the writer in 1921 certain portions of the skull were unknown. A well-preserved skull was recently discovered by Prof. C. R. Halter, of Lakeland, Florida, and presented by him to The American Museum of Natural History. This skull (Amer. Mus. No. 1651) permits verification of many characters noted in other specimens and also the description of parts of the skull not preserved in them.

The pointed extremity of the rostrum agrees with similar characters in two other American Museum skulls (Amer. Mus. Nos. 5772, 5773), but differs from the type specimen (U. S. Nat. Mus. No. 8816). The relatively large narial aperture, the great length of the latter in comparison with its width, the concave superior profile of the rostrum and its great width with respect to its height, and the positions of the anterior ends of frontal and nasal bones agree with similar characters in previously described specimens. On the palate the form and number of the teeth also agree with the latter, but the teeth are spaced slightly farther apart in proportion to the size of their alveoli than in other American Museum specimens. The skull agrees in this respect with the type specimen. It also agrees with the type and differs from the other American Museum specimens in the position of the posterior extremities of the premaxillaries on the palate. In the specimen described and in the type specimen the maxillo-premaxillary suture on the palate extends backward as far as the level of the spaces between the second and third maxillary teeth; in the other specimens these sutures extend backward to the level of the third maxillary teeth. The premaxillary foramen is somewhat larger than in all the other specimens.

Portions of the quadrate and quadrato-jugal bones, which are not represented in any of the other skulls, are preserved in this specimen, but they are incomplete and exhibit no distinctive characters.

¹Contributions to the Osteology, Affinities and Distribution of the Crocodilia, No. 15.

The pterygoids are partly preserved; they are united along the median line by suture. A portion of the wall of the internal narial aperture is preserved, making it possible to determine the outline of this aperture to a certain extent. A portion of the antero-external border of the aperture, about 70 mm. in length, is preserved on the right side of the skull, also a shorter portion on the left side. These borders are situated approximately at angles of 45° to the longitudinal axis of the skull, and 90° to each other. They indicate that the aperture was of large size, and probably subtriangular in outline, and that its anterior end was approximately a right angle.

This point is of considerable significance, as the living *Tomistoma schlegelii*, as well as *Tomistoma gavialoides* Andrews, possesses small rounded internal narial apertures, and the type of *Gavialosuchus eggenburgense* possesses a triangular aperture whose size cannot be determined. Lydekker,¹ in describing *Tomistoma champsoides* (Owen), rejected *Gavialosuchus* as a genus, considering it synonymous with *Tomistoma*. In 1921 the writer accepted *Gavialosuchus* as a valid genus, giving reasons for so doing, and referred the species *Tomistoma americana* Sellards to it.² The discovery of new material exhibiting a character differing from the type and other species of *Tomistoma* and agreeing with the type species of *Gavialosuchus* tends to confirm the acceptance of this genus and the reference of the Floridian species to it.

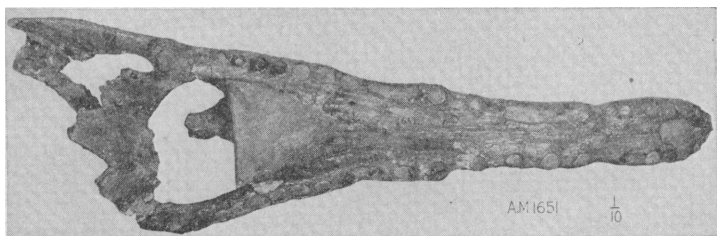


Fig. 1. *Gavialosuchus americana* (Sellards). Skull (Amer. Mus. No. 1651). About one-tenth natural size. Inferior view.

¹1886, Quart. Journ. Geol. Soc. London, XLII, p. 21.

²1921, Bull. Amer. Mus. Nat. Hist., XLIV, pp. 39, 40.