

A fossil scute of *Crocodile* from the Miocene Mizunami Group, central Japan

Susumu Tomida

2-20-63, Hime-cho, Tajimi City, Gifu 507-0061 Japan

<t_susumu@ob.aitai.ne.jp>

A fossil scute of *Crocodile* was noted briefly by Hasegawa and Tomida (1977) without a photograph. The identification of the species is a future problem, but the author reports again this note for the purpose of showing the photographic figures of the scute and the data about the paleoenvironment.

Crocodile sp.

(Fig. 1.A–D)

Material examined: A scute (MFM17852).

Locality: The river-bed of Toki River, in Oginoshima, Kamado-cho, Mizunami City, Gifu Prefecture (Long. 137° 19'45"E; Lat. 35° 25'6"N) (Loc. No. 07: Itoigawa, 1974).

Horizon: The specimen used for the description, was obtained from

the sandstone of the early Middle Miocene Shukunohora Facies of Akeyo Formation, Mizunami Group.

Measurements: Maximum length 32 mm; maximum width 24 mm; maximum thickness 5 mm (MFM17852).

Remarks: A scute is quasi quadrangle in outline, slightly elongated anteriorly and posteriorly. Outer side is flattened but slightly convex at central part, with about 23 holes; circle and oval in outline; no ridged at center. Inner side is smooth. However the scute is wholly polished and its corners are somewhat rounded by erosion. Judging from the preservation, it was separated from a body and transported after death. This scute has no ridge at the center of the outer surface. It is thought to be the scute situated at the posterior or lateral part of the body of *Crocodile*, however it is difficult to determine the generic and specific

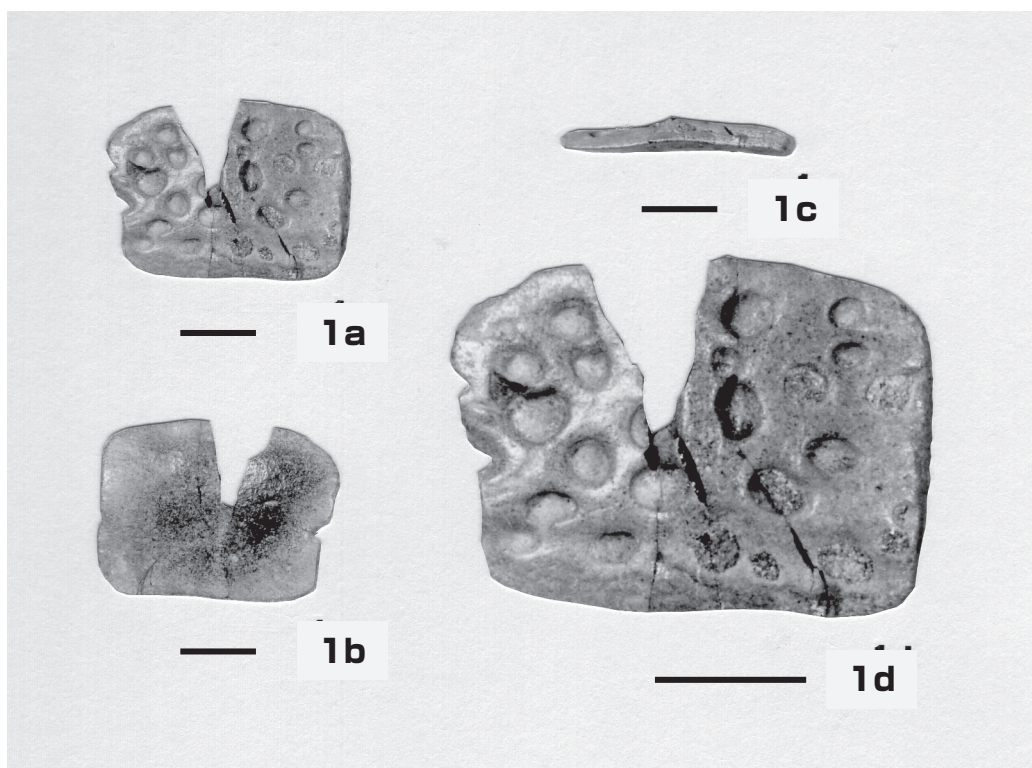


Fig. 1. *Crocodile* sp. (scute)

A–D: A, outer view; B, inner view, C, lateral view, D, enlarged outer view, (MFM17852); from the lower Middle Miocene Shukunohora Facies of the Mizunami Group, at Oginoshima, Kamado-cho, Mizunami City, Gifu Prefecture. (Scale bar represents 10mm)

ranks by only a scute.

Okazaki (1975) reported a crocodilian tooth obtained from the Kujiri Facies of the Mizunami Group in Jorinji, Izumi-cho, Toki City. However, in this paper the author cannot mention whether the scute from Oginoshima is identified with the tooth from Jorinji in the genus and species, because of only partial specimen.

Associated molluscan fossils: *Diodora minoensis* Itoigawa, *Miohaliotis amabilis* Itoigawa and Tomida, *Cellana depressa* Itoigawa and Shibata, *Tristichotrochus takeharai* Itoigawa and Shibata, *Suchium jyoganjiense* Fujii, *Turbo (Marmarostoma) minoensis* Itoigawa, *Terebralia* sp., *Calyptrea tubura* Otuka, *Neverita (Glossaulax) coticae* Makiyama, *Chelyconus* sp., *Aturia cubaensis* (Lea), *Scapharca abdita* Makiyama, *Glycymeris cisshuensis* Makiyama, *Isognomon minoensis* Itoigawa, *Chlamys itoigawae* Masuda, *Chlamys iwamurensis* Itoigawa, *Hytissa hyotis* (Linnaeus), *Phacosoma odosensis* (Nomura), *Mactra* sp., *Siliqua minoensis* Itoigawa, and so on.

Discussion: The coast of the Mizunami area was under the tropical marine climate during the early Middle Miocene, as already mentioned by Itoigawa (1978, 1989). Judging from the associated molluscan fossils and the preservation of this scute, it is thought that the present scute of *Crocodylus* has been transported as the allochthonous fossil from the living site after death to the sandy bottom of the upper sublittoral zone.

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