

**Designation of a lectotype for *Crocodilus siamensis*
Schneider, 1801 (Reptilia: Crocodylia)**

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Abstract. — Schneider (1801) named *Crocodilus siamensis* on the basis of three specimens from Siam that were described and figured (but not named) in an earlier publication (Anon. 1688). None of the three specimens are known to have been preserved. Cuvier (1807) considered the syntypal series composite and proposed the replacement name *Crocodilus galeatus* for one of the included species. Cuvier's (1807) replacement name is assessed and rejected as unjustified. In the interest of nomenclatural stability, a lectotype of *C. siamensis* Schneider is designated. The type locality of *C. siamensis* is shown to be Louvo, Siam (= Ayutthaya, Thailand).

Résumé. — Schneider (1801) a créé l'espèce nominale *Crocodilus siamensis* à partir de trois spécimens du Siam décrits et figurés (sans être nommés) dans un travail publié antérieurement (Anon., 1688). Aucun de ces spécimens n'a été conservé. Cuvier (1807) a considéré que la série-type de *Crocodilus siamensis* était composite, et a proposé en conséquence un nom de remplacement, *Crocodilus galeatus*. La validité de ce nom de remplacement est évaluée, et il est rejeté car étant injustifié. Dans l'intérêt de la stabilité de la nomenclature, un lectotype de *C. siamensis* Schneider est désigné. La localité-type de *C. siamensis* est donc fixée à Louvo, Siam (= Ayutthaya, Thaïlande).

Crocodilus siamensis Schneider, 1801, is based on three specimens originally described from Siam (= Thailand) by “les Pères Jésuites François” in a report to the Académie Royale des Sciences, published in 1688. This report, seemingly authored anonymously, is sometimes attributed to Thomas Goüye, and it is so registered in the library of the Muséum National d'Histoire Naturelle, Paris. Pages 1–47 and plates I–III in this report comprise a “Description anatomique de trois crocodiles. Avec les Réflexions de Monsieur du Vernay [sic, = Duverney], de l'Académie Royale des Sci-

ences”. This section is a description of three crocodiles from Louvo, the former capital of the Siamese Kingdom, that measured (in French feet; 1 ft. = 324 mm) 10' 8½", 9' 4", and 1' 4½". The greater part of the description is of the largest of these specimens, which also is illustrated in the five figures of plate I, showing the head, anterior snout, and whole body. Plate II shows a ventral dissection and various internal organs of this same specimen; other internal structures and a gecko foot are illustrated in plate III.

Schneider (1801:158) explicitly based *Crocodilus siamensis* on the text description

and plates I and III in the 1688 report. Although the "Description anatomique de trois crocodiles . . ." appeared in several other forms (see below), only the original 1688 version has the pagination given by Schneider. The date, 1737, given by Schneider apparently is an error.

Cuvier (1807) discussed the three crocodiles reported by the French missionaries but used a later version of their "Description anatomique de trois crocodiles . . ." found on pages 253–280 and plates 64–66 of Perrault (1733). The text is identical to that in the original (1688) version used by Schneider (1801), but the plates are slightly modified, viz., the figure of a gecko foot originally present on plate III is lacking from plate 66. Besides these editions, other reprints appeared in French, English and German.

Neither Schneider (1801) nor Cuvier (1807) examined the specimens described and figured by the French Jesuits. Schneider (1801) and Cuvier (1807) based their descriptions solely on the text and plates contained in the essentially identical 1688 and 1733 versions of the "Description anatomique de trois crocodiles", respectively. Although Schneider (1801) considered the three specimens to be of the same species, Cuvier (1807:52) argued that the third and smallest specimen described by the missionaries actually represented another species, because it lacked the median cranial crests and small eyes of the larger specimens, described and prominently illustrated in plate 64 (= plate I). There are no records of any of the specimens being sent to a museum, and we suspect that none were preserved.

Although Cuvier (1807:52) recognized flaws in the original figures, commenting on the faulty rendition of the feet and tail, evidently he believed the other details to be correct. Because he considered this material to represent two species, and thus that two species of crocodile occurred in Siam, he rejected Schneider's (1801) name, *C. si-*

mensis, as inappropriate, and introduced the replacement name *C. galeatus* for the larger specimens and allocated the third and smallest specimen to *C. biporcatus* Cuvier, 1807 (= *C. porosus* Schneider, 1801).

Gray (1862) was the first author to allocate correctly a museum specimen (illustrated by Günther, 1864) to *C. siamensis*. We now know that two specimens of *C. siamensis* from Java, variously misidentified as *Crocodylus raninus* Müller & Schlegel, 1844, *Crocodylus rhombifer* Cuvier, 1807, and *Crocodylus vulgaris* Cuvier, 1807 (= *C. niloticus* Laurenti, 1768), had previously reached Europe (Ross 1992). Gray (1862, 1867, 1872) briefly described the British Museum (Natural History) specimen, collected in "Cambogia" (= Kampuchea) by M. Mouhot (BMNH 61.4.12.22), and, in comparing its head with that figured in the description (plate I) used by Schneider (1801), suggested that (1862:270, 1867:144, 1872:13) "the two keels which are present in that specimen [i.e., the specimen in plate I] are either an individual peculiarity, or perhaps a character that developed itself as the animal approached old age."

Crocodylus siamensis remained poorly known until the 20th century, when detailed descriptions and analyses were published by Smith (1919) and Müller (1923). These authors and our examination of museum specimens (American Museum of Natural History 28358, 49231; Museum Zoologicum Bogoriense 15; Rijksmuseum van Natuurlijke Historie, Leiden, 7939 and one skull with no number; Natur-Museum Senckenberg 8090) clearly indicate that the original figures used by Schneider (1801) and Cuvier (1807) to formulate their concepts of the species exaggerated the size of the distinctive longitudinal interorbital ridge (which is poorly developed or absent in young animals), depicted a greatly exaggerated crest at the posterior end of the cranial table, and incorrectly showed the eyes to be much smaller than in other crocodile species. Cuvier's (1807) belief that the third

and smallest specimen referred to *C. siamensis* by Schneider (1801) was probably *C. biporcatus* (= *C. porosus* Schneider) thus was unfounded, albeit possibly correct.

As no type specimens of *C. siamensis* are known to exist, it is possible Cuvier's (1807) view that the type series included two species might be correct. Because of this confusion, and in the interest of nomenclatural stability, we believe that a lectotype should be designated, and, hereby designate as lectotype of *Crocodylus siamensis* Schneider, 1801, the specimen whose head is figured on plate I of the 1688 "Description anatomique de trois crocodiles . . ." (International Commission on Zoological Nomenclature [ICZN] 1985, Art. 72c(v) and 74c). This specimen was the largest of the three individuals and the subject of the greater part of the text and other figures. The figure of the head of this specimen was reproduced by Cuvier (1807, pl. 2, fig. 9) and by Tiedemann et al. (1817, pl. 11, fig. 2), who also reproduced, with modifications based on Cuvier's comments (1807:52), other parts of plate I of the 1688 "Description anatomique de trois crocodiles . . ." (pl. 11, figs. 1, 3). Following provisions of the International Code of Zoological Nomenclature (ICZN 1985: Art. 72e), this specimen also becomes the lectotype of *Crocodylus galeatus* Cuvier, 1807, which is a junior objective synonym of *C. siamensis* Schneider, 1801.

Few authors subsequent to Schneider (1801) and Cuvier (1807) apparently have examined the original version(s) of the Jesuits' descriptions and accompanying plates. Neither Schneider (1801) nor Cuvier (1807) provided precise locality data for the material described by the missionaries to Siam, and invariably the type locality has been given simply as "Siam" (e.g., Smith 1931; Mertens 1943; Wermuth 1953; Wermuth & Mertens 1961, 1977; King & Burke 1989). Upon examining the original text (Anon. 1688), we were surprised to discover that the Jesuits' gave a precise locality for their three specimens. Accordingly, and follow-

ing Recommendation 72H of the International Code of Zoological Nomenclature (ICZN 1985), the type locality of *C. siamensis* Schneider can be stated fully as the "Menam qui baigne le pied des remparts de Louvo", Siam (= the Chao Phraya River, at Ayutthaya, Ayutthaya Changwat, Thailand).

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