

HOU Sukuan and Deng Tao 2013. Reproductive behavior of a Late Miocene fossil pig *Chleuastochoerus* (Suidae, Artiodactyla) *Acta Geologica Sinica* (English Edition), 87(supp.): 861.

Reproductive behavior of a Late Miocene fossil pig *Chleuastochoerus* (Suidae, Artiodactyla)

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The genus *Chleuastochoerus* has been established by Pearson based on the study of fossil materials from the late Miocene deposits of North China, representing a small endemic Suidae lineage which is mainly found in the Late Miocene *Hipparion* Red Clays of North China, and in recent years, fossil remains have also been collected from Russia. *Chleuastochoerus* is in general characterized by a bony arch above the upper canine with a niche in the front for the lower canine to insert in (over-canine arch-niche), and a shelf-like expansion of the anterior end of the zygomatic arch (prezygomatic plate). The skull and mandible morphology of this genus has been studied in detail, but the postcranial skeleton was rarely studied, and no decent morpho-functional or ecological analysis of this genus was ever pursued. Recently, a nearly complete female skeleton was found from the Late Miocene deposits of Linxia Basin, Gansu Province, China, and bellow the hypogastric region of the skeleton, fragment bones and teeth which apparently belong to juvenile individual of this genus were also observed. This unexpected preservation provides important evidences of reproductive behavior of this genus. Based on the tooth eruption, at least two juvenile individuals can be recognized: one is about seven-month old for the M1 being erupting, while the other one is no more than two weeks or maybe still in utero judging from the preservation. Considering the reproductive behavior of the modern pigs, we speculate *Chleuastochoerus* perhaps give birth to one piglet at one time, and may be pregnant twice

a year when there is abundant food supply. The female and their young individuals maybe associate with one or more other mother families, and have loose temporary associations with adult male individuals. The upper canine and the over-canine arch-niche show obvious sexual dimorphism, indicating the male has to compete for mating.

Key words: Linxia Basin, Late Miocene, Suidae, *Chleuastochoerus*, reproduction

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