

New progress of the Neogene Suidae research

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Fig.1 Cranium of *Chleuastochoerus linxiaensis* (holotype) Credit: HOU Sukuan

Dr. Hou Sukuan and Prof. Deng Tao from the Institute of Vertebrate Paleontology and Paleoanthropology (IVPP), Chinese Academy of Sciences reported a new species of *Chleuastochoerus* from the Linxia Basin, Gansu Province, China, and discussed the systematic position of

the genus. Their latest research result was published online in the journal *Zootaxa*.

Chleuastochoerus is a small late Miocene-early Pliocene fossil pig from North Asia (mainly discovered from the upper Miocene "Hipparion Red Clays" of northern China). In general, this genus is characterized by the "supra-canine arch-niche" (a bony arch above the upper canine, with a niche in front of the upper canine to accommodate the lower canine when the mouth is closed), and the "pre-zygomatic plate" (a shelf-like expansion of the anterior end of the zygomatic arch). Most of the reported specimens were found from northern China since the genus *Chleuastochoerus* being erected by Pearson in 1928, and were included into a single species, *C. stehlini*; until Vislobokova reported a new genus, *C. tuvensis*, from the Asiatic Russia in 2009. The systematic position of *Chleuastochoerus* was only simply studied.

The new species (*Chleuastochoerus linxiaensis*) from the Linxia Basin is contemporary with the type species (*C. stehlini*), but bears longer facial region than in *C. stehlini*; more anteromedial-posterolaterally compressed upper canine; strong pre- and postprotocrista, "protoconule" and "metaconule," and lingual part of anterior and posterior cingula in P4; shorter trigonid, higher talonid, transversely arranged proto- and metaconid, and ridge-like ectoconid in p4; more pointed main cusps with deep and complex furrows of the cheek teeth; stronger anterior, posterior and buccal cingula in the upper molar.

Bearing both primitive tayassuid-like or palaeochoerid-like characters and some progressive character like in modern Suinae, the systematic position of *Chleuastochoerus* was highly controversial, which was assigned to either the subfamily Hyotheriinae or the subfamily Suinae. Now based on the traditional morphological study, the authors of this paper performed a cladistic analysis to re-study the phylogenetic relationships of *Chleuastochoerus* with respect to the other [genus](#) of the

family Suidae. The matrix included 41 taxa and 133 morphological characters, and the final result support to place *Chleuastochoerus* in the subfamily Hyotheriinae as a relatively basal taxa.

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Fig.2 Mandible of *Chleuastochoerus linxiaensis*. Credit: HOU Sukuan

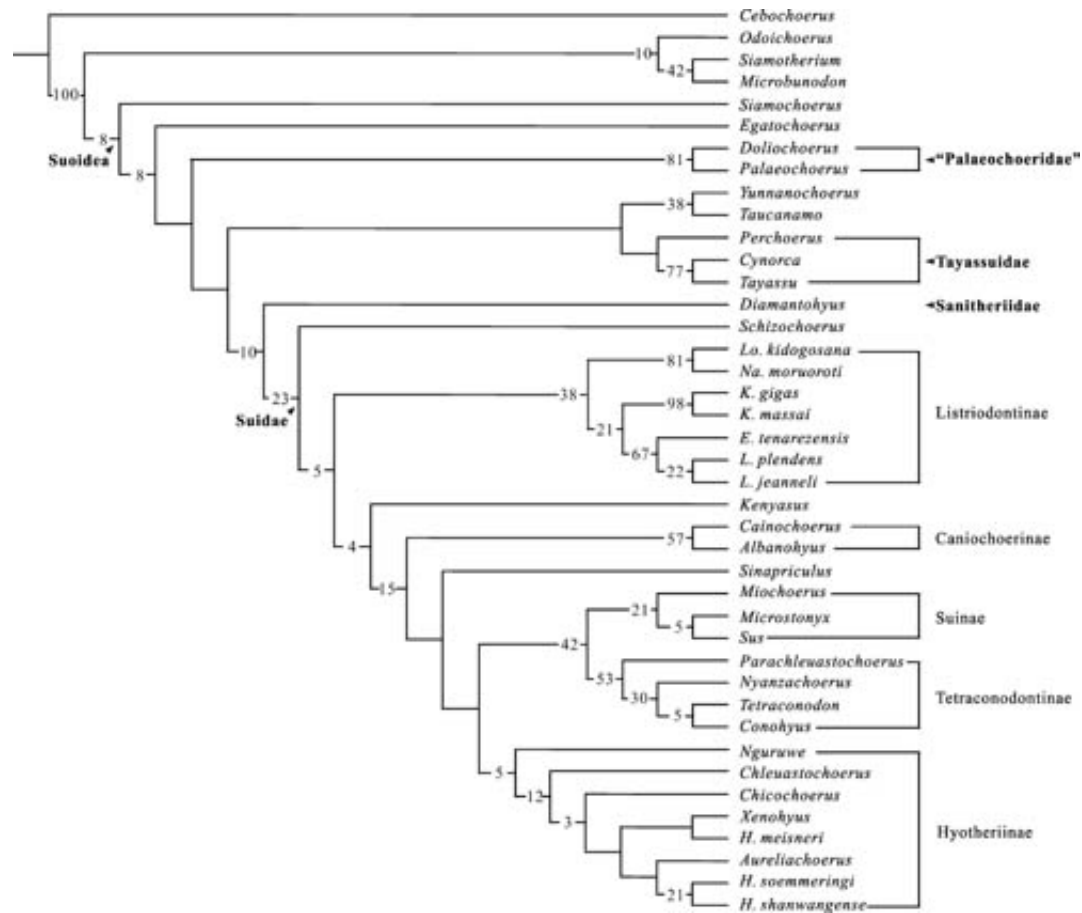


Fig.3 Cladogram of Suoidea. Credit: HOU Sukuan

Provided by Chinese Academy of Sciences

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