



## On the validity of *Stegoloxodon Kretzoi*, 1950 (Mammalia: Proboscidea)

GEORGI N. MARKOV<sup>1</sup> & HARUO SAEGUSA<sup>2</sup>

<sup>1</sup>National Museum of Natural History – BAS, 1 Tzar Osvoboditel Blvd., 1000 Sofia, Bulgaria. E-mail: markov@nmnh.bas.bg

<sup>2</sup>Museum of Nature and Human Activities, Yayoigaoka 6, Sanda, Hyogo, 669-1546 Japan.

E-mail: saegusa@nat-museum.sanda.hyogo.jp

The binomen *Stegoloxodon indonesicus* was proposed by Kretzoi (1950) for a dwarfed elephantoid from Java, Indonesia. Based on a single molar from Ci Pangglosoran near Bumiayu initially referred to *Elephas planifrons* by van der Maarel (1932), *Stegoloxodon indonesicus* was considered a synonym of *Elephas celebensis* (Hooijer, 1949) by Maglio (1973). Van den Bergh *et al.* (1992) accepted a close relationship between these two taxa but argued in support of their separate specific status. Notably, in this and later works (e.g. van den Bergh 1999; van den Bergh *et al.* 1996, 2001) the generic name used for the two species was “*Elephas*” between quotation marks, an approach initially adopted for “*E.*” *celebensis* by Sondaar (1984, p.229), who noted that the “so-called “*Elephas*” *celebensis* from Sulawesi is most probably not *Elephas* at all”. The uncertain generic position of “*E.*” *celebensis* (and “*E.*” *indonesicus*) was further emphasized by van den Bergh (1999), who provided a revised diagnosis for “*Elephas*” *celebensis*, argued against Maglio’s (1973) hypothesis of paedomorphosis as the reason for primitive characters in this species, and suggested relationship to *Primelephas* or “one of the Stegotetrabelodontinae”, not entirely rejecting *E. planifrons* as a possible ancestor however. Van den Bergh’s analysis of “*Elephas*” *celebensis* is crucial for the understanding of the affinities of both this taxon and the closely related dwarf from Java but does not take a taxonomical step logically following from the author’s arguments.

Using “*Elephas*” in quotation marks as a generic name for “*E.*” *celebensis* and “*E.*” *indonesicus* would be perfectly justifiable as a provisional taxonomical solution if there was no described genus to which these two species could be assigned. This is the case with the late Miocene amebelodontid “*Mastodon*” *grandincisivus* Schlesinger, 1917, referred in the past to *Tetralophodon* or *Stegotetrabelodon* but—as demonstrated by Tassy (1985; 1999)—actually representing a separate, yet unnamed genus. Speculating on possible relationships between “*E.*” *celebensis* and *Primelephas* or Stegotetrabelodontinae, van den Bergh (1999) quoted the absence of skull material from these African taxa (i.e. impossibility of direct comparisons) as a reason not to refer the Sulawesi species to any of them and instead use the binomen “*Elephas*” *celebensis* (a full analogy with the “*Mastodon*” *grandincisivus* example however would be using “*Archidiskodon*” *celebensis*, the original binomen by Hooijer 1949). An obvious solution, referring “*E.*” *celebensis* to *Stegoloxodon* Kretzoi, was not discussed however. The type species of the genus, *Stegoloxodon indonesicus*, was accepted as valid by van den Bergh (1999); a common origin for “*E.*” *indonesicus* and “*E.*” *celebensis* was postulated; differences with *Elephas* were emphasized; both species were *de facto* referred to the same, separate genus (“*Elephas*”), but despite all these crucial (and, in our opinion, perfectly correct) conclusions, the name *Stegoloxodon* was not employed. Even if future studies prove *Stegoloxodon* to be a junior synonym of one of the known elephantoid genera (which, considering dwarfing-related changes in the two Indonesian species could be a difficult task), the correct usage at present would be *Stegoloxodon celebensis* (Hooijer, 1949), and *Stegoloxodon indonesicus* Kretzoi, 1950. Origins and affinities of the genus remain obscure, but *Stegoloxodon* Kretzoi is not a synonym of *Elephas* Linnaeus, and there are no reasons to suppress or avoid the usage of the name.

### Proposed classification

#### *Stegoloxodon* Kretzoi, 1950

**Revised diagnosis** (modified after Kretzoi, 1950): Molar plates low with thick enamel, forming an imperfect loxodont sinus when worn. Upper intermediate molars with x6x to x8x plates. Small body size.

**Type species:** *Stegoloxodon indonesicus* Kretzoi, 1950