

A new pleurodire turtle (*Chelonii*) from Adamantina Formation (Bauru Group), Upper Cretaceous of Brazil

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Background. A new podocnemidid taxon from the Adamantina Formation (Campanian to Maastrichtian), Bauru Group - Paraná Basin (southeastern Brazil) is presented. Some multifragmented specimens were discovered near 30 years ago, in the region of Álvarez Machado (State of São Paulo) on the farm of Mr. Yoshitoshi Myzobuchi (a.k.a "Myzobuchi Site"), and they were mounted piece by piece of a huge puzzle. The remains comprise two incomplete carapace, 4 fragmented plastra, some cervical vertebrae, scapular and pelvic girdles, and limb bones of at least 4 specimens. The sauropod *Gondwanatitan faustoi* was described from this same site that also provided some crocodile remains.

Methods. This new Adamantina taxon was codified according Gabriel S. Ferreira's pleurodire dataset (unpublished MSc thesis) which comprises an extensive taxonomic sampling (85 taxa, 226 characters, some multistate), including fossil and recent taxa from all pleurodiran lineages. Three software packages (PAUP*, WinClada and TNT) were used to evaluate its phylogenetic position.

Results. All searches resulted on most parsimonious trees of same length (1011 steps), and similar strict consensus topology. The new Adamantina taxon is in *Bairdemys-Stereogenys* lineage, after the *Podocnemis* split and sequentially between the eocenic Egyptian fossil *Neochelys fajumensis* and the recent South American *Peltocephalus dumerilianus*.

Discussion. The plastral bones of this new taxon are relatively thick and the most striking feature is the ankylosed suture between the pubis and the xiphiplastron. In any other pleurodire the articular faces between the pubis and the xiphiplastron have several osseous lamellae but in the new taxon this ankylosed articulation is simply broken (to the contrary, the articular faces between the ischium and xiphiplastron are preserved and have these lamellae). This apparently is also the case for *Podocnemis harrisi* Pacheco, 1910, which is considered a *nomen dubium* by several authors. It also has a thick xiphiplastron, which is the only

holotypic bone preserved (but lost long time ago) and shows the pubic articular face apparently with no lamellae, but the ischiadic one clearly showing them, as illustrated in Pacheco (1910). It also shows some minor differences in the morphology with an intumescence mainly in the region of the pubic articular face which is absent in the present specimens. *Podocnemis harrisi* is also from Adamantina Formation, but from the City of Colina away 300 km NE from the City of Álvarez Machado, and the ankylosed puboxiphiplastral suture suggest a close phylogenetic relationship between both that is here expressed as a new combination with the Álvarez Machado new nominative genus.