

## A new species of *Tinosaurus* from the Paleocene of Kazakhstan (Squamata: Agamidae)

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*Tinosaurus postremus* sp. n. (Dzhylga 1, southern Kazakhstan, uppermost Paleocene) differs from other *Tinosaurus* species in the shallow dentary, homogenic, closely spaced lower crowned acrodont teeth (monocuspid anterior and threecuspid posterior).

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### Introduction

The uppermost Paleocene – early Eocene Dzhylga fauna in southern Kazakhstan has produced a diverse fauna of marine vertebrates (predominantly chondrichthyan and osteichthyan fishes) and extremely rare terrestrial vertebrates (mammals and near-shore birds) (Averianov et al., 1993 and references therein). Up to present, only marine forms were reported among reptiles from this locality: cheloniid turtle *Tasbacka aldabergeni*, sea snakes *Vialovophis zhylan* and *Nessovophis zhylga*, and a choristodere cf. *Simoedosaurus* sp. (Nessov & Udovichenko, 1984; Nessov, 1987; Averianov et al., 1993; Averianov, 1997). Here, I describe the first remain of a terrestrial reptile from this assemblage, an agamid lizard, which is assigned to a new species of *Tinosaurus* Marsh, 1872. The material is deposited in the Paleoherpological Collection of the Zoological Institute, Russian Academy of Sciences (ZIN PH).

### *Tinosaurus postremus* sp. n. (Figs 1-3)

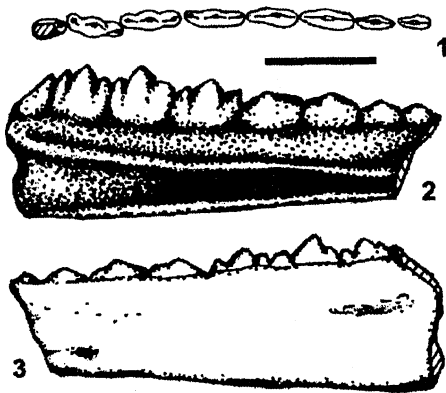
*Holotype*. ZIN PH 1/9, left dentary fragment. Dzhylga 1, southern Kazakhstan. Upper Paleocene. Collected in a concentrate sample by L.A. Nessov in 1985 during dry screening. Recovered from the concentrate by the author in 1986.

*Diagnosis*. Dentary shallow. Acrodont teeth closely spaced, low crowned. Anterior acrodont teeth monocuspid, posterior ones threecuspid. No sharp difference between them. In 10 mm, 18-19 teeth.

*Comparison*. The new species differs from *T. stenodon* Marsh, 1872 (middle Eocene, USA) in the more closely spaced teeth and less deep dentary posteriorly; from *T. pristinus* Leidy, 1872 (middle Eocene, USA) in the less conical teeth; from *T. europeocaenus* Augé & Smith, 1997 (early Eocene, Belgium) in the more closely spaced teeth, less evidently tricuspid anterior acrodont teeth, lacking of sharp difference between anterior and posterior acrodont teeth; from *T. doumensis* Hou, 1974 (Paleocene, China) in the less high posterior tricuspid teeth relatively to the anterior teeth; from *T. lushiensis* Dong, 1965 and *Tinosaurus?* cf. *lushiensis* (middle Eocene, China) in the longer (antero-posteriorly) and clearly acrodont tooth crowns (Dong, 1965; Hou, 1974; Estes, 1983; Li, 1991a; Augé & Smith, 1997). "*Tinosaurus*" *yuankuensis* Li, 1991 (middle Eocene, China), according to the original description (Li, 1991b), has tricuspid upper posterior teeth and monocuspid lower dentition. In the latter character it is different from the new species.

Similarly closely spaced tricuspid teeth are present on the maxilla fragment of *Tinosaurus* sp. from the early Eocene of Premontre, France (Augé et al., 1997, fig. 7) and Condé-en-Brie, France (Augé, 1990, fig. 2-4). *T. postremus* sp. n. differs from *Tinosaurus* sp. from Condé-en-Brie in the simpler, monocuspid anterior acrodont teeth.

Very fragmented remains of *Tinosaurus* sp. were reported from the Early-Middle Eocene Kuldana Formation in Pakistan (Rage, 1987, fig. 1).



Figs 1-3. *Tinosaurus postremus* sp. n., holotype, ZIN PH 1/9, left dentary fragment: 1, occlusal view (only tooth crowns shown); 2, lingual view; 3, buccal view. Scale bar 1 mm.

**Distribution.** Kazakhstan, uppermost Paleocene.

**Material.** Holotype only.

**Etymology.** From "postremus" (Latin), "the last", meaning probably the last fossil species described from the Dzhyлга 1 locality, which was destroyed by the sand quarry recultivation in 1989.

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