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Aphanius farsicus, a replacement name for *A. persicus* (Jenkins, 1910) (Teleostei, Cyprinodontidae)

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Abstract

Gaudant (2011) has shown that *Brachylebias* Priem, 1908 is a junior synonym of *Aphanius* Nardo, 1827 and that therefore the new name for the Late Miocene species *Brachylebias persicus* Priem, 1908 is *Aphanius persicus* (Priem, 1908). In addition, he stated that a new name has to be assigned to the extant *A. persicus* (Jenkins, 1910). However, before a new species name can be assigned, it is necessary to demonstrate that the two species, currently named *A. persicus*, are different. Here we show that slight differences are present in the meristic characters between the fossil *A. persicus* (Priem, 1908) and the extant *A. persicus* (Jenkins, 1910), and that clear differences are present with regard to the size and morphology of the scales and also with regard to the shape of the jaw teeth. We demonstrate that the epithets *blanfordii* and *pluristriatus*, both introduced for *Aphanius* species by Jenkins (1910), do not represent alternative names, and we introduce *A. farsicus* as replacement name for *A. persicus* (Jenkins, 1910).

Key words: *Brachylebias*, tooth-carps, taxonomy, Maharlu Lake Basin

Introduction

Species of the genus *Aphanius* Nardo, 1827 (Cyprinodontidae, tooth-carps) inhabit coastal lagoons, marshes and salty rivers of the circum-Mediterranean area and the Arabian Peninsula as far as Iran and Pakistan; they are suggested to be descendants of the Tethys fauna (Villwock 1999). Two hot spots of the *Aphanius* diversity are known, i.e. Anatolia (Hrbek & Meyer 2003) and Iran (Coad 2000). In Iran, *Aphanius* is represented by *A. dispar (*Rüppell, 1829) which occurs in all coastal drainages of the Persian Gulf and Sea of Oman, and by further six endemic species, i.e. *A. sophiae* (Heckel, 1847) from the Kor River Basin, *A. persicus* (Jenkins, 1910) from the Maharlu Lake Basin, *A. ginaonis* (Holly, 1929) from a hot spring near the Persian Gulf, *A. vladykovi* Coad, 1988 from the upper reaches of the Karun River in the Zagros Mountains, *A. isfahanensis* Hrbek *et al*., 2006 from the Zayandeh River Basin, and *A. mesopotamicus* Coad, 2009 from the Tigris–Euphrates Basin.

The fossil record of *Aphanius* is well known for the areas of the Western and Central Paratethys and Mediterranean Sea (Reichenbacher & Kowalke 2009), but poorly known for the Eastern Paratethys, Middle and Far East, from where only three fossil *Aphanius* species have been described (Vasilyan *et al*. 2009). A fourth fossil *Aphanius* species from that area was described by Gaudant (2011), who showed that *Brachylebias* Priem, 1908 is a junior synonym of *Aphanius* Nardo, 1827 and that therefore the fossil species *B. persicus* Priem, 1908 from the Late Miocene of NW Iran is now *A. persicus* (Priem, 1908). Gaudant (2011) also mentioned that (the extant) *A. persicus* (Jenkins, 1910) now becomes a homonym of *A. persicus* (Priem, 1908), calling for a replacement name.

However, before a new species name can be assigned, it is necessary to demonstrate that the two species, currently named *Aphanius persicus*, are different. The objectives of this study are (i) to show that clear differences are present between the fossil *A. persicus* (Priem, 1908) and the extant *A. persicus* (Jenkins, 1910), (ii) to demonstrate that the specific names *blanfordii* and *pluristriatus*, both introduced for *Aphanius* species by Jenkins (1910), are not alternative epithets, and (iii) to introduce *A. farsicus* as replacement name for *A. persicus* (Jenkins, 1910).

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