Rehabilitation of *Barbus lorteti* Sauvage, 1882, and comments on the validity of the generic names *Bertinius* Fang, 1943, and *Bertinichthys* Whitley, 1953 (Pisces: Cyprinidae)

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Abstract

The validity of *Barbus lorteti* Sauvage, 1882, a cyprinid fish endemic to the lower course of the Orontes river in Syria and Turkey which Karaman synonymized with *Barbus longiceps*, is reaffirmed. A lectotype is designated and a redescription is given. The most outstanding morphological feature of *Barbus lorteti* — a pharyngeal formula of 2.3.4-4.3.2, the first tooth of the inner row being enlarged and molariform, which is shared by *Barbus subquincunciatus* from the Tigris-Euphrates basin and *Barbus longiceps* from the Jordan river basin — is regarded as an adaptation to a molluscan diet. Its occurrence in the three species in question is due to convergence and does not indicate a monophyletic origin. Modified pharyngeal teeth are the major definitional character of the genus *Bertinius*, which was erected by Fang (1943) to contain *Barbus lorteti* and extended to *B. subquincunciatus* and *B. longiceps* by Karaman (1971). Consequently, *Bertinius* is synonymized with *Barbus* Cuvier, 1817. Whitley's (1953) statement that *Bertinius* is preoccupied by *Bertinia* is rejected, the genus *Bertinichthys* he proposed as a substitute is also placed in the synonymy of *Barbus*. Molariform pharyngeal teeth, originating from a molluscivorous *Barbus*, are reported from Pliocene deposits of a former lake in the central course of the Orontes river.

Abbreviations


Introduction

*B. lorteti* was briefly described by Sauvage in 1882. He characterized the species as having 10 dorsal fin rays, the last unbranched ray being smooth, 8 anal fin rays, 60 scales in the lateral line series, 12 scales above and 9 scales below the lateral line. The collecting site was given as ‘Antioche, canal de l’Oronte à Antioche’ (Antakya, Orontes channel at Antakya). Two years later Sauvage redescribed the species and quoted ‘Lac d’Antioche’ (Amik Gölü) and ‘canal de l’Oronte à Antioche’ as localities of origin. In the Museum National d’Histoire naturelle, Paris, one specimen from Antakya and two specimens from the Amik Gölü were labelled as types.

Fang (1943) stated that *Barbus lorteti* is ‘related’ to *Barbus* and *Varicorhinus* but differs from both in the structure of the pharyngeal teeth and the reduction of scales on the ventral surface. As a conclusion he erected the monospecific genus *Bertinius* which, according to him, is characterized by the mouth being ventral with a horny mandibula, first pharyngeal tooth of the inner row mammilliform and extraordinarily enlarged, prepelvic scales reduced and becoming gradually isolated towards the head.

Berg (1949) retained *B. lorteti* in *Barbus*. He mentioned the genus *Bertinius* but did not comment on it.
According to Whitley (1953) *Bertinius* is preoccupied by *Bertinia* Jousseaume, 1883, a genus of Mollusca. He proposed the name *Bertinichthys* as a substitute.

Beckman (1962), who carried out extensive collections in Syria, did not catch any *Barbus lorteti*. He obviously took his description from Sauvage (1884).

Karaman (1971) synonymized *Barbus lorteti* with *Barbus longiceps* Val. in Cuv. & Val., 1842, without having seen any specimens of the former species, as, according to him, 'the figure and description given by Sauvage agree perfectly with the description of *Barbus longiceps*'. Karaman furthermore quoted Fang's statement that 'the mandible is horny' and concluded that *B. lorteti* might well be a hybrid of *B. longiceps* and *Capoeta damascina*. Furthermore he referred *B. longiceps* and *Barbus subquincunciatus* Günther, 1868 to the genus *Bertinius*, without mentioning Whitley's generic reassignment. Only very few subsequent authors (Banister, 1980; Banister & Clarke, 1980) were critical of Karaman's revision.

**Synonymy of Barbus lorteti**


*Barbus lorteti*: Beckman 1962, Freshwater fishes of Syria: 105, Orontes river.


*Bertinius longiceps longiceps* non sensu Val. in Cuv. & Val., 1842: Kuru 1980, Türkiye Faunasl, (12) 1: 19, SE Turkey.

**Material**

1. LECTOTYPE, 365 mm sl; Orontes at Antakya (= Antiochia), 36°12'N 36°13'E, 1881, leg. H. Chantre. MNHN A.3935.

2. PARALECTOTYPES, 2 specimens, 356–389 mm sl; Amik Gölü (formerly Lake of Antiochia, outflow at 36°19'N 36°15'E), 1881, leg. H. Chantre. MNHN 3936.


4. 1 specimen, 422 mm sl; same locality and collector as (1). MGHN 3552.

5. 1 specimen, 334 mm sl; same locality and collector as (2). MGHN 3551.

Counts and measurements follow Krupp (1983). Morphometric measurements were taken with dial calipers to the nearest 0.1 mm.

**Redescription of Barbus lorteti**

D IV, 8       A III, 5       LL 56–63     11–13

The lectotype (MNHN A.3935) is a specimen of 365 mm sl and 445 mm total length with 60 scales in the lateral line series, 26 scales around the caudal peduncle at 11 gill rakers on the lower limb of the first gill arch.

The shape of the body can be seen in Fig. 1. Morphometric characters are listed in Table 1. The body is deep and cylindrical to moderately compressed, the largest depth occurring about half way between the tip of the snout and the dorsal fin origin. A well-developed nuchal hump is present on large specimens. The head is very short, the snout being moderately pointed.

The mouth is small and ventral, the upper lip being slightly thickened. The lower lip is missing. Four short barbels are present.