



## *Squalius janae*, a new species of fish from the Adriatic Sea basin in Slovenia (Actinopterygii: Cyprinidae)

NINA G. BOGUTSKAYA<sup>1,3</sup> & PRIMOŽ ZUPANČIČ<sup>2</sup>

<sup>1</sup>Zoological Institute, Russian Academy of Sciences, Universitetskaya Emb. 1, St. Petersburg, 199034, Russia.

<sup>2</sup>Dolsko 14, 1262 Slovenia. E-mail: primoz.zupančič@guest.arnes.si

<sup>3</sup>Corresponding author. E-mail: nbogutskaya@rambler.ru

### Abstract

*Squalius janae*, **sp. nov.**, is described from the upper Dragonja River system in the Adriatic Sea basin in Slovenia. The new species is distinguished from other members of the *S. cephalus* species group by a combination of the following characters: a long head, head length, 29–32% SL, always markedly exceeding body depth; a pointed conical snout; a slightly subterminal mouth, with a clearly projecting upper jaw; a long straight mouth cleft; lower-jaw length 39–45% HL, always greater than caudal-peduncle depth; a large eye, its diameter 19–25% HL; a large triangular 5<sup>th</sup> infraorbital; a marked discontinuity between the dorsal profile of the head and body; usually 44–47 total lateral-line scales; usually 9½ branched anal-fin rays; usually 44 total vertebrae (24+20 and 25+19); a strong silvery tint in colouration; scales easily lost; iris, pectoral, pelvic and anal-fin pigmentation with yellow shades; flank scales margined by a few black pigment dots along their free margin and intense pigments on scale pockets, forming vertically elongate black spots.

**Key words:** Adriatic Sea basin, Slovenia, freshwater fishes, taxonomy, morphology, Cyprinidae, *Squalius*, new species

### Introduction

The genus *Squalius* is widely distributed throughout Europe and the Middle East, and shows an especially high diversity in the Mediterranean basin. About 40 species are currently recognised in the genus: *S. albus* (Bonaparte), *S. anaticus* (Bogutskaya), *S. ahipsi* (Aleksandrov), *S. aradensis* (Coelho *et al.*), *S. berak* Heckel, *S. carolitertii* (Doadrio), *S. castellanus* Doadrio *et al.*, *S. cephalus* (Linnaeus), *S. cii* (Richardson), *S. fellowesii* (Günther), *S. illyricus* Heckel & Kner, *S. keadicus* (Stephanidis), *S. kosswigi* (Karaman), *S. kottelati* Turan, Yilmaz & Kaya, *S. laietanus* Doadrio *et al.*, *S. lepidus* Heckel, *S. lucumonis* (Bianco), *S. malacitanus* Doadrio & Carmona, *S. microlepis* Heckel, *S. moreoticus* (Stephanidis), *S. orientalis* (Nordmann), *S. orpheus* Kottelat & Economidis, *S. pamvoticus* (Stephanidis), *S. peloponensis* (Valenciennes), *S. prespensis* (Fowler), *S. pursakensis* (Hankó), *S. pyrenaicus* (Günther), *S. spurius* Heckel, *S. squalus* (Bonaparte), *S. svallize* Heckel & Kner, *S. tenellus* (Heckel), *S. torgalensis* (Coelho *et al.*), *S. valentinus* Doadrio & Carmona, *S. vardarensis* Karaman, and *S. zrmanjae* Karaman. *Squalius cephalus ruffoi* (Bianco & Recchia) may in fact be a distinct species. There are also at least four still unnamed species in the Balkans (Sanjur *et al.* 2003; Stoumboudi *et al.* 2006; Kottelat & Economidis 2006; Doadrio & Carmona 2006; Doadrio *et al.* 2007a; Kottelat & Freyhof 2007; Zupančič 2008).

*Squalius cephalus* auctorum has long been considered a complex species (commonly as ‘*Leuciscus cephalus* complex’ or ‘*Leuciscus cephalus* species group’) with a number of subspecies and morphs found from the Iberian Peninsula eastwards to the south Caspian Sea basin and Tigris-Euphrates drainage (e.g. Kottelat 1997; Durand *et al.* 1999, 2000). Since 1997, most of its subspecies have been given a rank of species and, as can be seen from the list of species above, a number of new species was described based on both morphological and molecular data. For example, the species inhabiting the drainages along the northern and eastern Aegean Sea have been briefly discussed by Stoumboudi *et al.* (2006) and Kottelat and Economidis