

THREATENED FISHES OF THE WORLD: *Cobitis vettonica* Doadrio & Perdices, 1997 (Cobitidae)

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SAŽETAK

Cobitis vettonica is an endemic cobitid fish from the Iberian Peninsula with a distribution area restricted to the River Águeda (Douro river basin) and the Alagón and Eljas rivers (Tagus river basin). This species is endangered due to pollution, habitat destruction by sediment removal and damming, and introduction of exotic species.

COMMON NAME

Vettonian spined-loach – Fig 1.

CONSERVATION STATUS

Endangered according to the IUCN guidelines (Crivelli, 2006).

IDENTIFICATION

This small cobitid (maximum 10 cm in total length) is distinguishable from the phylogenetically close (Doadrio and Perdices, 2005) *Cobitis paludica* and *Cobitis maroccana* by having shorter barbels and fins, seven branched rays on the dorsal fin and posterior lamina of the cleithrum not round (nearly making a right angle) (Doadrio and Perdices, 1997). The colour pattern is very characteristic with four rows of dark pigmented blotches along the sides. The fourth row (the more ventral one) has 9–13 rectangular blotches transversally elongated, reaching ventral pigmentation. In males, blotches are fused in a marked dark stripe wider than in other *Cobitis* species.



Fig 1. *Cobitis vettonica* (Photo credit: Ignacio Doadrio)

DISTRIBUTION

Endemic from the tributaries of the Alagón and Eljas rivers (Tagus river basin), and from the River Águeda (Douro river basin).

ABUNDANCE

A decreasing trend in the number of individuals has been detected in recent years (Doadrio, 2001). Monitoring made by Doadrio (2011) showed that the species is in regression, although high abundances were detected in some points within its distribution area.

HABITAT AND ECOLOGY

Data on its biology is still lacking, although it most likely will resemble *Cobitis paludica* (Doadrio, 2011), a phylogenetically close species, from which *C. vettonica* may have diverged around 3 My ago (Doadrio and Perdices, 2005). *C. vettonica* inhabits clean and deep waters with gravel to rocky bottoms (in contrast to *C. paludica*, which is found on sandy bottoms) (Doadrio, 2011). This species feeds on sediment by filtration and spends most of the day burrowed into the bottom.

REPRODUCTION

Spawns between April and June. Marked sexual dimorphism: males are smaller than females and have a wider preorbital distance, larger paired fins and the second and fourth rows of dark blots along the body sizes are fused and appear as dark continuous lines (Doadrio and Perdices, 1997).

THREATS

Introduction of exotic fish species and crayfish *Procambarus clarkii*, pollution, water abstraction for agriculture, habitat destruction by sediment removal and construction of dams. Another threat to this species is the low water level in the upper sections of some tributaries of the Árago River (such as the Árago River) due to the diversion of water into a treating station located downstream. In the summer when the population increases, this situation is aggravated due to the need of treatment of higher sewage volumes.

CONSERVATION RECOMMENDATIONS

Water quality improvement namely by adequate treatment of urban, agricultural and industrial wastes. Being a filter feeder, it is crucial that sediment beds are available to allow for adequate feeding, reproduction and burrowing. Particularly in the Alagón River, the occurrence of *C. vettonica* should be considered in environmental impact studies and the legal removal of sediments should only be allowed in contaminated river stretches from where the species is currently absent. Regarding exotic species, for some areas of the Alagón river basin (especially in tributaries such as the Árago River), their dispersal might be controlled by the selective removal of individuals and, in the case of *Lepomis gibbosus* and *Micropodus salmoides*, by the destruction of nests. Protected areas should also be created in river stretches where the species is currently abundant, as in the upper sections of the rivers Hurdano, Ladrillar, Árago, Ángeles, Acebo and Gata. Although illegal, fishing is traditionally consented and may be locally intense (used for human consumption and as bait) but should be prohibited at least in protected areas.

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UGROŽENE VRSTE RIBA U SVIJETU: *Cobitis vettonica* Doadrio & Perdices, 1997 (Cobitidae)

Sažetak

Cobitis vettonica je endemska vrsta s Iberijskog poluotoka ograničene distribucije na rijeku Águeda (sliv rijeke Douro) te rijeke Alagón i Eljas (sliv rijeke Tagus). Vrsta je ugrožena zbog zagađenja, destrukcije staništa iskorištavanjem sedimenta, gradnjom brana i unošenjem egzotičnih vrsta.

Glavne riječi: *Cobitis vettonica*, endemske vrste, zaštićena

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