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Threatened fishes of the world: *Phoxinellus epiroticus* (Steindachner 1895) (Cyprinidae)

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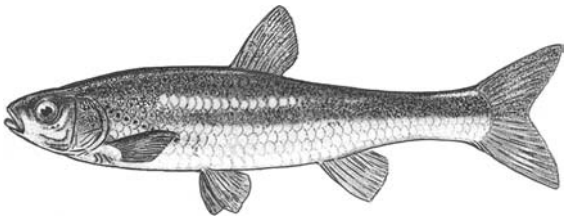

Common name: Tsima. **Conservation status**: This species is listed as data deficient in IUCN, World Conservation Monitoring Centre (Baillie & Groombridge 1996). **Identification**: Body laterally compressed; dark green back, fading gradually to silver or white in the abdomen; a dark single wide stripe on each side of the body. Caudal peduncle relatively thin; pelvic fins narrow and relatively long; the mouth is terminal. The first rays of the dorsal and anal fins are relatively short reaching to the half of each second ray. Scales tiny cycloid, thin and deeply inserted in the skin; lateral line is incomplete, extends maximally up to the height of the ventral fins. Vertebrae 31, D III, 6-7, P I, 14-15, A III, 6-7, V II, 7, principal caudal rays 22 (19-23), pored LL 15-22, pharyngeal teeth 5-5. Gillrakers 11 rather dense, long and thin. *P. epiroticus* is short-lived, longevity is about 2–3 years, with rapid growth during the first year of life, attaining 5–6 cm TL. Maximum size 10 cm TL, rarely exceeding 7 cm (Prassa et al. 2003). **Distribution**: *P. epiroticus* is endemic in Lake Pamvotis of Epirus, NW Greece (Stephanidis 1974). **Abundance**: Until the end of the 1980s, *P. epiroticus* was very abundant but heavily exploited. It is now considered critically endangered. **Habitat and ecology**: *P. epiroticus* is a schooling fish often found in association with spring outflows and adjacent to aquatic macrophytes. They feed on a wide range of small aquatic invertebrates especially crustaceans, algae, larvae of winged insects, small insects and worms. **Reproduction**: Sexual maturity is reached during the first year of life. Spawning occurs from middle of March to end of April. Spawning sites are near springs and inflows of water. Eggs are yellowish, adhesive and deposited mainly on aquatic plants. **Threats**: *P. epiroticus* is nearly extinct due to the cumulative impacts of habitat degradation and fragmentation by ecologically unsustainable agricultural development. This includes excessive water abstraction, eutrophication, changes in the physicochemical parameters of the water, water level fluctuations during spring and the absence of submerged macrophytes (due to the increased turbidity and alien fish species (e.g. *Ctenopharyngodon idellus*) nutritional preferences). Its current status may also be attributed to the presence of indigenous predatory species such *Silurus aristotelis* but in particular European eels (*Anguilla anguilla*). The numbers of eels have increased recently due to management of the population by local fishermen. Alien cyprinid species have also been introduced (Economidis 1991) which compete with *P. epiroticus* for feeding and/or spawning grounds. Furthermore, the species is subject to predation from water snakes and several aquatic birds, especially great cormorants (*Phalacrocorax carbo*) which have increased in numbers during the last decade (Perdikaris et al. 2003). The above threats in combination with the intensive fishing pressure, practiced by local fishermen, have significantly decreased the *P. epiroticus* population. **Conservation action**: *P. epiroticus* is included in the Annex II of the European Council Directive 92/43 ''The Conservation of Natural Habitats, Wildlife and Flora''. **Conservation recommendation**: Provisions should be made to protect the species and its habitat in order to ensure its survival. The long-term key remains effective habitat conservation and rehabilitation, including prevention of the further spread of invasive alien fishes, the education and co-operation of fishermen. A detailed study of current distribution, population status and the biology and ecology of species is required. Spawning protocols must be established in order to increase the size of the population. Moreover, it is absolutely necessary to list this species as critically endangered.

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