

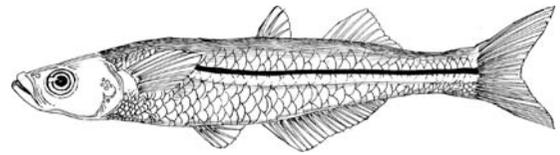
## Threatened fishes of the world: *Poblana alchichica* (de Buen, 1945) (Atheriniformes: Atherinopsidae)

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**Common names:** Alchichica silverside (English), charal de Alchichica (Spanish). **Conservation status:** Endangered, NOM-059-ECOL-2001 (SEMARNAT 2002); and critically endangered (CR) (A1ac+2c, B1+2c, C2b) (IUCN 2008). **Identification:** D 4–5;



A 13–15; P 14–15. Gill rakers on the first gill arch, 13–16. Scales 45–56 in a longitudinal series, commonly >50 (De Buen 1945). Size 50–60 mm (SL), maximum 11.5 mm (SL). **Abundance:** Alcocer et al. (2009) and Arce Uribe (2006) estimated the population abundance between 16, 000 and 21, 000 organisms >1 cm in length. **Distribution:** Endemic to Lake Alchichica, Puebla, Mexico (19° 24' N, 97° 24' W, 2345 m asl) (Alcocer et al. 2009). **Habitat and ecology:** Lentic, saline ( $8.5 \pm 0.2 \text{ g} \cdot \text{L}^{-1}$ ) and alkaline ( $\text{pH} = 9.0 \pm 0.1$ ) water. Inhabits temperate ( $15.9 \pm 1.5^\circ \text{C}$ ), well oxygenated ( $>4 \text{ mg} \cdot \text{L}^{-1}$ ), clear (euphotic zone 13–38 m), and oligotrophic water (Adame et al. 2008). **Reproduction:** Iteroparous, from February to April, and July to September, with a spawning peak in March. The fish spawns entangling eggs with numerous chorionic filaments that adhere to the submersed macrophytes and on the tufa deposits. **Feeding:** Feeds mainly on benthic macroinvertebrates (chironomid larvae and amphipods). Preys vary according to the seasonal patterns of stratification of Lake Alchichica (Flores Negrete 1998). **Threats:** The very limited distribution puts the population at risk for rapid or

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sudden extinction due to habitat loss due to groundwater over-extraction (Alcocer et al. 1998). *Conservation actions*: Alchichica is located in the Oriental basin declared Priority Hydrologic Region (Arriaga et al. 2002). However, no further specific action has been taken. *Conservation recommendations*: Effective habitat protection; drastic reduction of groundwater over-extraction; pollution control. Long-term study of population status and biology is required. *Remarks*: The conservation status of *P. alchichica* was previously underestimated, should be “in danger of extinction” as indicated by Alcocer et al. (2009) and Arce Uribe (2006).

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