

Threatened fishes of the world: *Poecilia sulphuraria* (Alvarez, 1948) (Poeciliidae)

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Common names: Sulphur molly (US), Topote del Azufre (MX). **Conservation status:** Listed as ‘critically endangered’ by the IUCN based on highly localized occurrence, small area inhabited, and decline of habitat quality. The species is federally protected by the Mexican government (SEDESOL 1994). **Identification:** A small molly with a large head. The abdomen is turquoise. The Baños del Azufre population possesses conspicuous lip appendages that facilitate aquatic surface respiration (Winemiller 1989). This trait, however, is missing in the Ojos del Azufre population. **Illustration by** Madlen Ziege. **Distribution:** Known from the Baños del Azufre, west of Teapa, Tabasco and Chiapas, Mexico. A second population was recently discovered in a second spring complex (Ojos del Azufre), Chiapas, Mexico. **Ecology:** *Poecilia sulphuraria*



inhabits spring pools and their outflows that contain high concentrations of toxic hydrogen sulfide (Tobler et al. 2008). It is among very few fishes able to tolerate high and sustained concentrations of sulfide. At high sulfide concentrations ($>80 \mu\text{M H}_2\text{S}$), *P. sulphuraria* is the only fish species present. At lower concentrations, *P. sulphuraria* co-occurs with *Gambusia eurystoma* at the Baños del Azufre, and *Xiphophorus hellerii* and *Heterandria bimaculata* at Ojos del Azufre. **Threats:** The remote Ojo del Azufre population receives minor impacts from farming. The Baños del Azufre population is threatened by intense habitat alterations: the springs are heavily used for recreational purposes, and the riparian buffer zone, originally consisting of forest, has been destroyed by clear cutting and replaced by pastures. **Conservation recommendations:** No specific conservation actions have been taken to date. Appropriate steps should be taken to minimize the impact of and pollution by recreational habitat use. Also, the riparian buffer should be restored.

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