

Family Mastacembelidae

Spiny eels

Mastacembelids are a small, distinctive family of perch-like fishes with elongate bodies. They are widespread in tropical Asia and Africa. About 50 species and all genera are found in Asia, while a monophyletic radiation of 41 species is present in Africa. In the Nile drainage, spiny eels are absent except in Lake Victoria. The only species in West Asia is the sister group of all the African species, indicating that the invasion of these eels from Asia to Africa occurred through West Asia. The divergence between African *Mastacembelus* and *M. simack* is estimated to have occurred between 18 and 15 million years ago (95 % CI: 27.5–8.8 Mya). Mastacembelids

have a peculiar rostral appendix bearing a tubular nostril on either side of a central rostral tentacle. The spinous part of the dorsal fin of percomorph fishes is dissociated into individual short spines in spiny eels. These spines can be erected, and handling spiny eels might be dangerous. They twist very fast in a way that the spines cut into the skin of the aggressor, and the spines can produce severe wounds on hands and arms, especially if the eel is large. In West Asia, fishers treat spiny eels with caution. In some regions, spiny eels are a highly sought-after food source; in others, they are not consumed due to cultural beliefs. **Further reading.** Brown et al. 2010 (African spiny eels); Near et al. 2013 (phylogeny); Day et al. 2017 (phylogeny).



Mastacembelus simack; Tigris drainage, Türkiye; 280 mm SL.



Mastacembelus simack; Lesser Zab drainage, Iraq; ~400 mm SL.

Mastacembelus simack

Common name. Mesopotamian spiny eel.

Diagnosis. Distinguished from *Anguilla* species in West Asia by ● movable nasal appendix / ● marbled body colour / ● dorsal and anal spines present. Size up to 1000 mm SL, usually up to 400 mm SL.

Distribution. Qweiq, Euphrates, Tigris, and Karun drainages and tributaries to Persian Gulf in Iran south to Helleh and Dalaki.

Habitat. Reservoirs, large rivers, up to small mountain streams. Often very common in rapids and riffles in fast-flowing waters.

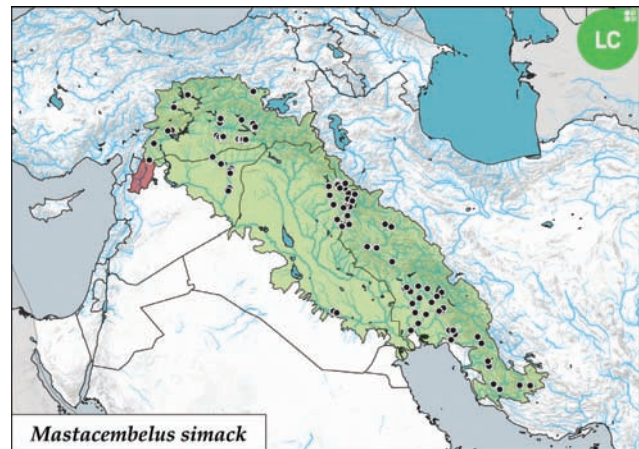
Biology. Lives up to 21 years. Matures at 2 years, measuring about 250 mm SL and 125 g. Spawns May–July in shallow water between rocks or vegetation. Predatory, juveniles feed on benthic invertebrates, and adults mainly feed on fish and shrimp. Often hides during day in gravel in riffles, roots or caverns of various kinds but may also lie motionless on bottom in bright sunshine, camouflaged in shallow areas to prey on small fish.

Conservation status. LC; extirpated from Qweiq.

Remarks. Often still found as *M. mastacembelus*, which is a synonym. Records from the Kor, an endorheic drainage

in central Iran, and the Orontes could not be confirmed. Russell (1756) reported that this fish was “found in great abundance” and was “esteemed a lighter and more delicate food” than the eel at Aleppo. Spiny eels are often seen in fish markets of Syrian cities in Orontes drainage, imported from the Euphrates.

Further reading. Russell 1756 (value as food); Coad 2010a (biology); Coad 2015b (distribution, biology); Kottelat 2022 (*M. simack*).



The Tigris at Şırnak in Türkiye, the habitat of *Mastacembelus simack* and many other river fishes.