# Family Siluridae

## Sheatfishes

A family of approximately 13 genera and 107 species is found in Europe and Asia. A very long anal fin characterises them, as well as the absence of an adipose fin, the lack of a dorsal spine, and, in some cases, the absence of the entire dorsal fin. Some species are relatively small, with an adult length of approximately 50 mm SL, as observed in the glass catfish *Kryptopterus minor* from Southeast Asia. However, other species are considerably larger, with *Silurus glanis* reaching lengths of over 2000 mm. These fishes inhabit the lower strata of rivers and lakes, where they prey on smaller fish. **Further reading.** Bornbusch 1991, 1995 (systematics).

***Silurus glanis***

**Common name.** European catfish.

**Diagnosis.** Distinguished from *S. triostegus* by: ● always two pairs of mental barbels / ● maxillary barbel longer than head length / ● anterior mandibular barbel present, longer than posterior mandibular barbel / ● one patch of vomerine teeth / ● pectoral spine not or slightly serrated on its inner margin. Size up to about 2600 mm SL and 148 kg.

**Distribution.** Lake Urmia basin, Black, Caspian, North, Baltic, and Aral basins, as far north as southern Sweden and Finland; Aegean basin, in Maritza and from Stuma to Sperchios drainages. Not native to Persian Gulf and Mediterranean basins of West Asia. Widely introduced and translocated in Anatolia, Europe, Hari drainage, and Lake Balkhash basin (Kazakhstan). Occasionally stocked in Persian Gulf basin but does not appear to have established (yet).

**Habitat.** Large and medium-sized lowland rivers, reservoirs, backwaters, and well-vegetated lakes. Spawns in shallow, warm, and well-vegetated riverine habitats without current.

**Biology.** Lives up to 80 years in wild. Spawns first time at 2–3 years and 1–2 kg, April–June, in northern areas until August, when temperatures reach about 20°C. Female lay about 30,000 eggs per kilogram of body weight. At spawning sites, males defend small territories and build nests of plant material, dig shallow depressions, or clean spawning substrate such as willow (*Salix*) roots. Males defend nest until larvae emerge.

Spawns in pairs. Male embraces female during spawning. Eggs hatch in 2–3 days, and larvae remain in nest until yolk sac is absorbed (2–4 days). A nocturnal predator, feeding near bottom and in water column. Very sensitive to extra-aquatic sounds. Head sensory canal system allows tracking of wakes (a trail of hydrodynamic and chemical signatures left by a swimming fish) of prey up to 10 seconds old over distances up to 55 times length of prey. Larvae and juveniles benthic and negatively phototactic, feeding on a wide variety of invertebrates and fish. Adults feed on fish and other aquatic vertebrates, documented to feed on pigeons at water edge by lunging out of water during daylight.

**Conservation status.** LC; one of most important invasive species in the Western Palearctic.

**Further reading.** Mohr 1957 (biology); Kobayakawa 1989 (description); Pohlmann et al. 2004 (wakes).

*Silurus glanis*; Danube drainage, Germany; ~750 mm SL. © A. Hartl.



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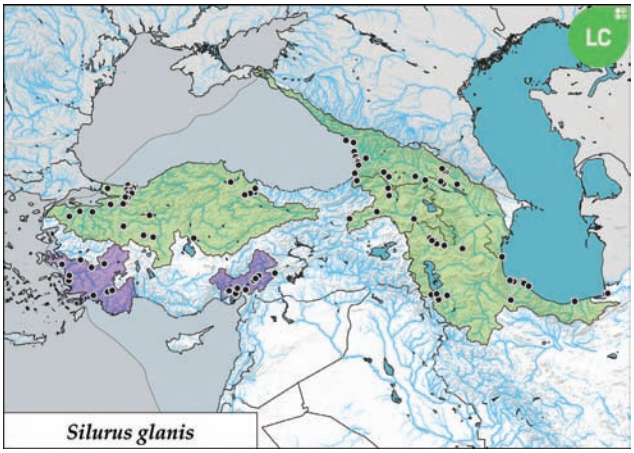


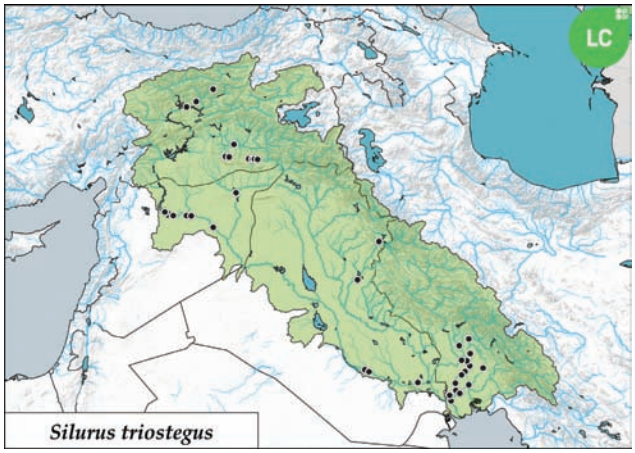


*Silurus triostegus*; Tigris, Türkiye; ~500 mm SL.

***Silurus triostegus***

**Common name.** Mesopotamian catfish.

**Diagnosis.** Distinguished from *S. glanis* by: • usually one pair of mental barbels in adults larger than 400 mm SL / • maxillary barbel usually about equal to head length / • if anterior mandibular barbel present, shorter than posterior mandibular barbel / • usually two patches of vomerine teeth / • pectoral spine strongly serrated on its inner margin. Size up to about 2000 mm SL.

**Distribution.** Euphrates, Tigris, and Karun drainages.

**Habitat.** Large rivers, marshes, lakes, and reservoirs.

**Biology.** Lives up to 12 years in the wild, likely much longer. Spawns first time after 2–3 years (Atatürk reservoir).

**Conservation status.** LC.

**Remarks.** All the diagnostic characters may overlap with those of *S. glanis*, but the combination of all the characters should allow its identification. So far, and despite many introductions of *Silurus*, the two species are still allopatric.

**Further reading.** Oymak et al. 2001 (biology).

# Family Sisoridae

## Torrent catfishes

The family comprises approximately 17 genera and 220 species of rheophilic catfishes, with the greatest diversity observed in South and Southeast Asia. One species, *Bagarius bagarius*, reaches up to 1400 mm SL, while most species are small. Most are highly adapted to live in rapids and very fast-flowing waters, with some (*Oreoglanis*) inhabiting the vertical part of waterfalls. Some species are found in high-altitude streams in the Himalayas, while the greatest diversity of species is observed in rapids of tropical rivers. In West Asia, only *Glyptothorax* is found, which is the most speciose genus of the family. *Glyptothorax* is immediately identified by a thoracic adhesive organ on the breast between the pectorals. The adhesive organ is sometimes referred to as a "sucker," which does not suck to the substrate, but instead adheres with small unculi on elevated skin folds, a structure similar to the feet of gecko lizards. *Glyptothorax* are adapted to live in fast-flowing waters and are commonly found in foothill rivers and mountain streams.

In our region, 13 species are recognised, but six species from Iran are closely related, and their status is under discussion. Two of these (*G. alidaeii* and *G. galaxias*) occur in sympatry and are good biological species. Other species may be conspecific with *G. silviae*, but not all morphological differences have been studied in detail. Three widespread species inhabit large- or medium-sized rivers, while others are restricted to fast-flowing headwater streams with more restricted distribution ranges. A single record of *Glyptothorax* from the Yeşilırmak in the Anatolian Black Sea basin has been identified, although the integrity of this record cannot be confirmed. **Further reading.** Hora & Silas 1952 (diversity); Sayyadzadeh et al. 2022 (diversity in Gulf basin).

Large, fast-flowing rivers such as the Greater Zab in Iraq are the habitat of a rich fish fauna, including *Glyptothorax*, *Mystus,* and *Silurus*.



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