

Order Siluriformes

Catfishes

Catfishes, or Siluriformes, are a large group of primary freshwater fishes. There are approximately 4200 species worldwide. Eight families of catfishes are found in West Asia, six of which are native, one purely marine (Plotosidae), and one predominantly marine (Ariidae). Catfishes are particularly diverse in the tropics, especially in South America, where many species, sizes, morphologies, and feeding types can be found. They represent one of the most species-rich groups in freshwaters. The earliest fossils of a catfish are Campanian (83–72 million years ago) and Maastichtian (72–66 million years ago) from Argentina and

Bolivia. However, Bayesian relaxed molecular clock analyses of Siluriformes resulted in an average posterior crown age estimate of 121 million years ago, with a credible interval between 111 and 131 million years ago. Catfishes are the sister group of Neotropical knifefishes (Gymnotiformes), renowned for their electric organs and electrosensory systems.

The majority of catfishes are nocturnal. Many species engage in parental care, with the male guarding the eggs and larvae. All catfishes lack true scales, and most West Asian species are either naked or have small, ossified prickles on the skin. Some catfishes can breathe air and drown if not allowed to do so. Most catfishes are tolerant

Key to families of catfishes in West Asia

1a - Adipose absent.

.....2

1b - Adipose present.

.....4

2a - Nasal barbel absent.

.....Siluridae

2b - Nasal barbel present, very long.

.....3

3a - Two dorsals, first short, with a spine, second long, continuous with caudal and anal.

.....Plotosidae

3b - One dorsal, not continuous with caudal and anal.

.....Clariidae

4a - An adhesive organ on thorax between pectorals.

.....Sisoridae

4b - No adhesive organ on thorax between pectorals.

.....5

5a - Nasal barbel absent.

.....Ariidae

5b - Posterior nostril with a nasal barbel.

.....6

6a - Anal with 6–10 rays; adipose longer than anal base.

.....Bagridae

6b - Anal with 16–30 rays; adipose shorter than anal base.

.....Ictaluridae

to only freshwater, but the salinity tolerance of several species extends to, or is even limited to, estuarine or oceanic levels. One of the marine catfishes, *Plotosus lineatus*, is frequently found along the shores of the Persian Gulf and the Red Sea and has invaded the Mediterranean through the Suez Canal. It is known that this species enters brackish and freshwater habitats in Southeast Asia, but it has never been found in freshwaters in West Asia. Therefore, it is included in the family key only. Ariid catfishes are a second, mostly marine family, and they can occasionally be found on mudflats and in shallow, brackish waters of

the Persian Gulf, including lower parts of rivers such as the Shatt al Arab/Arvand and Hammar marshes. *Netuma bilineata*, *N. thalassina*, *Plicofollis dussumieri*, *P. layardi*, and *P. tenuispinis* have been recorded from the region. Still, these require critical identification, and almost nothing is known about their distribution in the Persian Gulf's habitats. They are included in the family key only because they do not enter freshwaters. **Further reading.** Sullivan et al. 2006 (phylogeny of catfishes); Coad 2010a (species from Persian Gulf); Hughes et al. 2018 (molecular phylogeny and evolutionary origin).



Lake Balık (Gölbaşı/Hatay) in Türkiye is the last habitat of *Mystus misrai*.