



ORIENTAL WEATHERFISH

Misgurnus anguillicaudatus

Photo courtesy of Gourami Watcher, Wikimedia Commons.



The oriental weatherfish, also called the dojo and Chinese loach, is a small eel-like fish that gets its name from its ability to forecast the weather. It is sensitive to changes in barometric pressure, so increases in activity and swimming in fast circles can indicate that major weather changes are imminent. This species is also popular in the aquarium trade because it is hardy and has a voracious appetite that can help keep tanks clean. Unfortunately, the release of this species into natural waterways has caused negative impacts to water quality, native species, and the food web.

SPECIES DESCRIPTION

The oriental weatherfish has a long, cylindrical, eel-like body with greenish grey-brown marble markings on top, and pale silver sides and underbelly. Many specimens have a large pigmented spot located above the base of the caudal fin. The mouth is small and narrow with thick fleshy lips surrounded by ten barbels. The lateral line is short and doesn't extend past the pectoral fin. The pectoral fin has a stout spine, and the caudal fin is rounded. Average size is up to 28 cm (11 in) long. This species exhibits sexual size dimorphism, with the average length of the female being considerably larger than that of males.

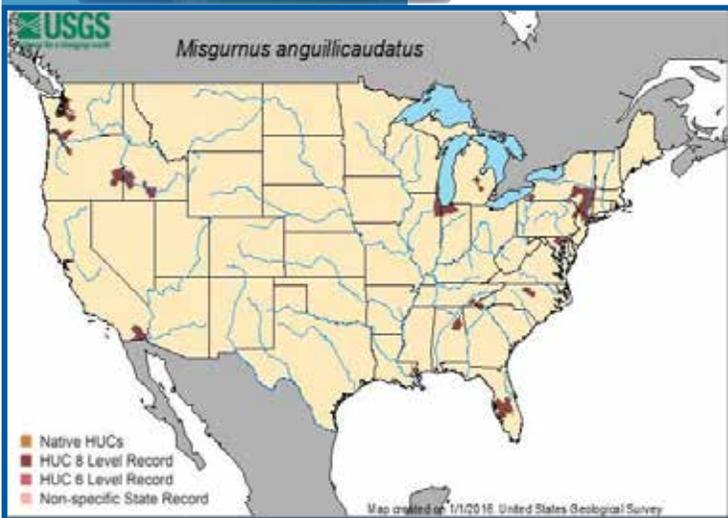
Because of its eel-like body, the oriental weatherfish may be confused with species of lamprey; however, lamprey are typically thinner and don't have the characteristic barbels on the mouth.

NATIVE & INTRODUCED RANGES

Native to eastern Asia, the oriental weatherfish was most likely introduced to natural waters of the United States by fish farm and aquarium escapes. It has not yet been introduced into Pennsylvania, but is established in drainages in New York and New Jersey.

BIOLOGY & SPREAD

Used as bait, and commonly sold in the aquarium trade, the oriental weatherfish may be released when aquariums are dumped, or when bait buckets are emptied. Their use as a food fish is also linked with their intentional introduction into the wild to create harvestable populations. Once introduced, this species matures quickly, can reproduce multiple times in a season, and produces a great number of offspring.



Map courtesy of United States Geological Survey.

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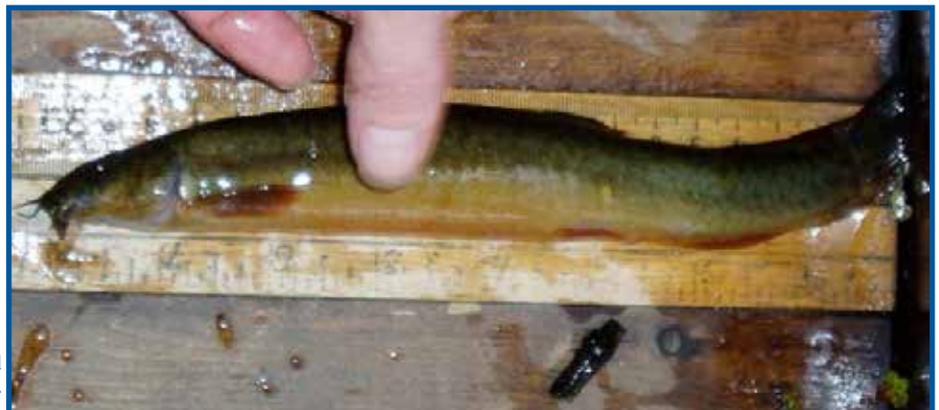


Photo courtesy of the New York Department of Environmental Conservation archive, Bugwood.org.

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Photo courtesy of USGS NAS Database.



Photo courtesy of Information Center,
Chinese Academy of Sciences, EOL.

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HABITAT

This species is very hardy and can survive a wide range of temperatures and environmental conditions. It is typically found in slow or still waters with muddy or silty bottoms abundant with aquatic plants. It feeds on bottom-dwelling animals, insect larvae, snails, and worms. The oriental weatherfish can breathe atmospheric oxygen by using its intestine as an accessory respiratory organ, allowing it to live in oxygen-poor waters and to bury itself in soft substrates to survive long droughts.

IMPACTS

Threat to Biodiversity

Oriental weatherfish can negatively impact native species by predation and competition for food, habitat, and spawning sites. They are voracious feeders and can reduce populations of aquatic insects that are important as food to native species, as well as feed on the eggs, larvae, and fry of native fish. They can also increase turbidity and nitrogen levels in standing water, which can negatively impact water quality.

Health Risks

This species has been found to transport non-native pathogens and parasites that can harm fish and other organisms.

PREVENTION & CONTROL

Preventing the introduction and spread of oriental weatherfish into water bodies is the best and most cost effective line of defense. Never release unwanted aquarium pets and plants into the wild. Instead, look for alternatives, such as contacting a retailer for proper handling advice or for possible returns. Give or trade with another aquarist, pond owner, or water gardener, or donate to a local aquarium society, school, or aquatic business. Disposal of live organisms should be considered a last resort; however, if this is an option be sure to contact a veterinarian or pet retail for proper guidance about humane disposal of animals.

If prevention efforts fail and oriental weatherfish are introduced to a new location, know how to identify and report them. Always check for and remove and plants, mud, and debris from boats, trailers, clothing, and equipment before leaving a water body. Clean gear and equipment with either hot water (104°F or 40°C) or salt water and let dry thoroughly for five days before entering a new water body. Since oriental weatherfish have been used as bait, it is important to drain water from bait buckets, bilges, and live wells before transporting to new areas.



Photo courtesy of Wikipedia Commons.

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