Oriental Weather Loach

*Misgurnus Anguillicaudatus* (Gunther, 1888)
syn. *Misgurnus crossochilus, M. lividus, M mizolepis, Cobitis anguillicaudata, C. fossillis, Usursia leptocephala*

**Overview:**

The oriental weather loach is a ray-finned fish of the loach family, Cobitidae, which belongs to the order, Cypriniformes, which also includes carps and minnows. They are native to Eastern Asia, from Siberia South to Vietnam, and including Japan. Oriental weather loach have been introduced to Hawaii and the continental U.S., Australia, Mexico, and parts of Europe. This fish is commonly used for bait, as a food source, and as an aquarium fish (Dojo loach), most of which are likely routes of introduction. The activity level of the oriental weather loach increases as barometric pressure changes, hence the common name: weather fish.

Oriental weather loach are highly tolerant of extreme conditions and marginal habitat. They can survive droughts by burrowing into mud or silt. They are also capable of air-breathing in low oxygen waters via an adaptation of the digestive tract. Weather loaches tend to burrow into mud and leaf litter with just their heads sticking out.

The oriental weather loach exhibits many characteristics of a successful invader: broad environmental tolerances, flexible diet, high reproductive potential, and high survivorship. The oriental weather loach is considered established in the border states of Washington and Idaho, as well as some states bordering the Great Lakes.

As of January 1, 2016, the possession, sale, or transport of this species in Alberta is illegal under the Fisheries Act.

**Habitat:**

Oriental weather loach live and feed on or near the bottom of still or gently flowing freshwater. They prefer muddy or siltly bottoms with abundant vegetation. Normal water temperature range is 5 to 25°C but can tolerate temperatures as low as 2°C and as high as 30°C. They can survive low oxygen concentrations.

**Identification:**

Body colour is yellow-brown to green-brown mottled with darker greenish-gray to dark brown markings. The ventral surface is paler in colour. The body is cylindrical (eel-like) and commonly 15 cm long, but can reach 28 cm. The mouth is small and surrounded by five pairs of barbels around the thick, fleshy lips.

Pectoral fins are triangular with a stout...
Oriental Weather Loach (continued)

spine. The dorsal fin originates above the pelvic fin, is short and has 9 soft rays. The pelvic fins have 6-7 rays and the anal fin 7-8 rays. Conspicuous fatty crests are present along the ventral and mid-dorsal lines of the tail, just in front of the tail fin. There is a characteristic dark spot on the upper caudal fin. The lateral line is very short and does not extend past the pectoral fins. Males have larger pectoral fins and the second ray is long and thick. Females have fuller abdomens. Males are smaller than females.

Ecology:
Oriental weather loach spawn in batches, releasing and fertilizing eggs several times during a season. Breeding males will clasp females by bending their body around the female body. Females can release as much as 18,000 eggs in one batch, which the male then fertilizes. The fertilized eggs are scattered in the water and not guarded.

The oriental weather loach is a generalist feeder, which senses prey with its barbels. They feed on benthic invertebrates, detritus, insects, and gastropods (snails).

Economic Impacts:
Oriental weather loach compete directly with native fish for food, but they also prey on the eggs and larvae of native fish. The decline of native sportfish populations could have impacts on recreation and tourism. Declines in water quality caused by loaches could impact shoreline property values.

Environmental Impacts:
Oriental weather loach can cause significant reductions in macro invertebrates and compete directly with native fishes for food resources. The oriental weather loach also compete with native fish for shelter and spawning sites, and prey on the eggs and juveniles of native fish. The oriental weather loach can also impact water quality via increased ammonia and nitrate levels, as well as turbidity.

Sociological Impacts:
The transformation of native aquatic communities results in the intrinsic loss of natural capital and enjoyment of natural areas.

Prevention:
Learn how to identify oriental weather loach and how to prevent spread. Do not purchase or grow weather loaches. Never empty your aquarium into natural water bodies.

Control:
Currently there are no established control options for the oriental weather loach other than preventing introduction. If caught, oriental weather loach should be killed and not released. Report any sightings.
Oriental Weather Loach (continued)

REFERENCES:


