



# **Oriental Weather Loach**

## *Misgurnus anguillicaudatus*

### **DESCRIPTION AND CHARACTERISTICS**

The Oriental Weather Loach is native to Europe and Asia, but was first recorded in Australian waters in 1984. It is easily recognised by its elongated body, five pairs of barbels surrounding the mouth and a single short-based dorsal fin. They are almost circular in cross section, but strongly compressed toward the posterior. The second pectoral ray is long and thick in mature males. The pectoral fin is triangular. They are generally mottled yellow/brown in colour with black spots and a pale underside.



### **BIOLOGY AND LIFE CYCLE**

The Oriental Weather Loach can tolerate a wide range of water conditions, however it prefers to reside in still waters with either a muddy or sandy substrate into which it can burrow. It can tolerate temperatures within the range of 2 and 30 degrees Celsius. This species also has the amazing ability to survive out of water by swallowing air and absorbing atmospheric oxygen through its hind gut. During drought conditions the Weather

Loach will burrow into the mud and remain there for extended periods until conditions improve. They reach sexual maturity at 100 mm in length and are multiple spawners which lay between 4,000 and 8,000 red adhesive eggs in each event. This fish grows to a maximum length of 25cm. They are omnivorous, and feed on a large range of food types including insect larvae, crustaceans, algae and detritus.

### **ENVIRONMENTAL IMPACTS**

Currently little is known about the impacts of the Oriental Weather Loach on Australian waterways. The Oriental Weather Loach is a highly invasive species that is believed to predate on native fish eggs. It may also compete with native fish for food, habitat and spawning sites. They can be particularly troublesome since they have the ability to move over land to colonise new waterways.

Their burrowing habits may also have negative impacts on the aquatic environment by increasing turbidity and uprooting aquatic plants. This species is a particular concern because they display many of the characteristics of previous successful invaders i.e. a broad tolerance to many environmental parameters, low vulnerability to predation, high fecundity and a flexible diet.

## HISTORY OF INTRODUCTION/DISPERSAL

It is believed that the Oriental Weather Loach was either introduced into Australia as a result of thoughtless disposal/release by aquarists or via escape from ponds. It is also a popular live bait used by anglers, so escapees may have contributed to their spread. The first documentation of its presence in Australia was from the Yarra River in 1984. It has since been found in numerous

freshwater localities throughout Victoria and other states. The Oriental Weather Loach has been shown to disperse unaided throughout river systems in Australia. The majority of unaided dispersal is thought to have been in the downstream direction, with no evidence suggesting that upstream migration is possible.

## LEGAL STATUS IN VICTORIA

The Oriental Weather Loach is a Declared Noxious Aquatic Species as affirmed under the Fisheries

Act 1995, therefore it should not be returned to the water after capture.

## POSSIBLE CONTROL MEASURES

One effective control measure is the use of piscivorous poisons such as Rotenone. Unfortunately, this method removes *all* fish present in the waterbody, not just the target species.

It is unlikely that the Oriental Weather Loach could be controlled through a viral, bacterial or parasitic control agent, due to the non species-specific nature of fish disease and parasites.

The Oriental Weather Loach may be removed from wetlands and other closed water bodies through draining and drying. It is possible that this technique may also need to be coupled with tilling of the waterbody bed, to expose any buried Weather Loaches. Non-target species would inadvertently be affected by this technique.

There have been reports that some large predatory fish, such as trout and redfin, may predate

on the Weather Loach. However, these larger predators often avoid the shallow, degraded areas that Weather Loaches seem to reside in. This, along with their ability to burrow, severely limits the effectiveness of large predators as a control technique.

By far the best control method for this species is to prevent further dispersal and introduction to new waterways.

Never replace or relocate the Oriental Weather Loach to *any* water body within Australia - it is illegal under the Fisheries Act, 1995.

If you use equipment i.e. boats, nets etc. in waters known to contain the Oriental Weather Loach, please ensure they are well cleaned and air-dried before next use.



Oriental Weather Loach head and barbels—Source: Joanne Kearns.

