



Australian Government



Native Fish Strategy

FISH FACTSHEET: ORIENTAL WEATHERLOACH (JAPANESE WEATHERLOACH, WEATHERFISH)



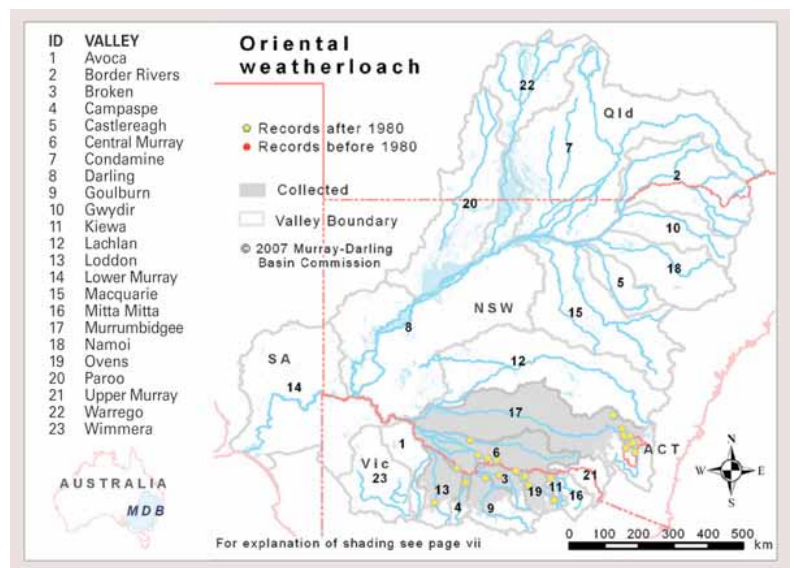
Scientific Name

Misgurnus anguillicaudatus Cantor, 1842

photo by Gunther Schmida

DISTRIBUTION AND ABUNDANCE

Oriental weatherloach are native to Asia and have established feral populations in the mainland states of the USA as well as Hawaii, Palau, the Philippines, Italy and Germany. In Australia, the species is now established in the ACT, NSW and Vic, and there have been isolated records from Qld and SA. Formerly present near Brisbane, that population has been successfully eradicated. Although it has been recorded from the River Murray and tributaries as far downstream as the Barmah-Gunbower area, it has not yet established in SA, but it is only a matter of time. Illegal use as live bait by anglers is thought to be a significant factor in its spread between drainage systems in south-eastern Australia.



IDENTIFICATION

A small, elongate, cylindrical fish with a rounded tail and small eyes. Maximum length 250mm; usually $\leq 190\text{mm}$. The single, short-based dorsal fin is positioned about half way down the body, and a prominent black spot is present at the base of the tail. The females are more solidly built than the males, and the pectoral fin of females is rounder than the more triangular or square-cut fin of males. Five pairs of barbels surround the small down-turned mouth. The mucous-covered body is very slippery, making the species difficult to handle.

BIOLOGY AND HABITAT

The Oriental weatherloach is a benthic fish, native to eastern and central Asia. It was imported into Australia in the 1960s and became a popular aquarium fish. It was first detected as a breeding population in the wild in Australia in 1984 (Victoria) and, consequently, its importation was banned in 1986.

The weatherloach is commonly found in slow-flowing or still water with sand, mud or detritus substrates into which it can burrow to escape predation or hibernate. It is so named because it was thought to be able to predict the weather, becoming restless in response to changing barometric pressure.

The species can occur in a range of habitats, from degraded urban and rural streams and ponds to relatively pristine headwater streams. It can utilise atmospheric oxygen by 'gulping' air and passing it through a highly vascularised hindgut. It is eurythermal, tolerates water temperatures of 2–30°C and has even been recorded in thermal springs at temperatures up to 42°C.

Individuals are mature at approximately 100mm length and may live for up to 13 years. Spawning occurs in summer. A multiple spawner, the weatherloach lays 4,000–8,000 eggs of approximately 1.5mm in diameter per spawning. The eggs are laid onto freshwater plants or mud and hatch after 2–3 days.

The species is omnivorous and senses food using a combination of chemical and tactile cues. Its diet contains freshwater insect larvae, rotifers, algae, gastropods, molluscs, micro-crustaceans and detritus.

IMPACTS ON NATIVE FISH

Little is known of the impacts of Oriental weatherloach, but significant dietary overlap has been recorded with the native Mountain galaxias. It may also be a predator of the eggs of native species, particularly those such as galaxiids with demersal adhesive eggs. The weatherloach also carries a range of parasites not previously recorded from Australia. Laboratory experiments indicate that the species can significantly depress macroinvertebrate numbers, as well as increasing turbidity and nitrogen levels.

GENERAL REFERENCES

- Dove & Ernst 1998;
- Koster et al. 2002;
- Lintermans 2004;
- Lintermans & Burchmore 1996;
- Lintermans et al. 1990a,b;
- McMahon & Burggren 1987;
- Raadik et al. 2005;

PDF LINKS

Fishes of the Murray-Darling Basin: An introductory Guide;
<http://mdba.gov.au/files/publications/MDBA-Fish-species-book.pdf>



First published - January 2009

Murray-Darling Basin Authority

GPO Box 1801 Canberra ACT 2601

Tel 02 6279 0100 Fax 02 6248 8053

www.mdba.gov.au