



Australian Government



Native Fish Strategy

FISH FACTSHEET: AUSTRALIAN SMELT (SMELT)

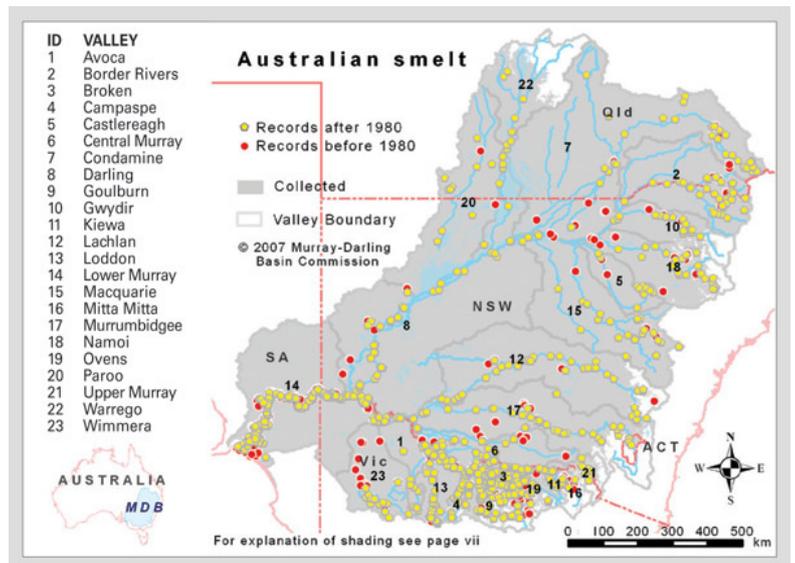


Scientific Name

Retropinna semoni (Webber, 1895)

DISTRIBUTION AND ABUNDANCE

The Australian smelt is one of the most widespread and abundant species at lower and mid altitudes in south-eastern Australia. It is not generally found in upland headwater streams with fast flows in the southern Basin, but occurs in these habitats in the northern parts of its range. In the Murrumbidgee catchment it is rarely recorded above 600 m asl. In the Basin, it has been recorded from most lowland streams and is also common in coastal streams from central Qld through to the Murray mouth in SA.



IDENTIFICATION

A small, elongate, laterally compressed fish. Maximum length 100mm; commonly 40-60mm. Slender, silvery and largely transparent apart from a prominent silver-orange to bluish lateral band. The eyes are large, the opercula are silvery and the tail is moderately forked. A small adipose fin is present. The pectoral and pelvic fins of males are larger than in females. Nuptial tubercles are present on the body and head, and are larger in males. A cucumber-like odour is apparent in freshly caught individuals.

BIOLOGY AND HABITAT

Two species of smelt are currently recognised, but recent genetic investigations suggest that there are as many as five species present in Australia; only one occurs in the Murray-Darling Basin. Consequently, some of the information summarised below is likely to refer to a number of closely related species.

Typically, smelt are a pelagic species in the southern Basin, usually recorded from slow moving or still water in a variety of habitats (e.g. river channel, wetlands, lakes) where they can be found in large numbers (thousands of fish). They are at their highest abundance in lakes or non-flowing environments. However, in Queensland smelt is commonly encountered in riffles or along shorelines in association with fringing vegetation. In Murray River tributaries, larval smelt were collected from a range of habitats, but prefer deeper billabongs. Upstream migrations of juvenile and adults have been recorded during daylight hours in the Murray and Murrumbidgee rivers, with fish as small as 21mm migrating. Migration rates in the Murrumbidgee tended to peak in the afternoon.

Both sexes mature towards the end of their first year and may live for two or more years, although most only live for a year. Fecundity ranges from 100 to 1000 eggs depending on fish size. Spawning occurs when water temperatures reach about 11-15°C, generally in spring and early summer in the Basin, but for up to 9 months of the year in the Campaspe River. In the Lower Murray, smelt are multiple batch spawners, and females produce discrete batches of eggs every 3-4 days. The eggs are about 1mm diameter, demersal and adhesive; they sink and adhere to aquatic vegetation, sediment or debris. Hatching occurs in 9-10 days and the larvae are \leq5mm long.

Smelt are carnivorous and the diet consists primarily of terrestrial insects and microcrustaceans, although a variety of small aquatic insects are also consumed. Smelt does not tolerate handling well, and considerable care is required if mortality is to be avoided.

POTENTIAL THREATS

None known, but barriers to fish passage may be fragmenting populations.

GENERAL REFERENCES

- Baumgartner 2003;
- Hammer et al. 2007;
- Humphries et al. 2002;
- Leigh 2002;
- Llewellyn 1971;
- McDowall 1996a;
- Milton & Arthington 1985;
- Mallen-Cooper 1994;
- Moffat & Voller 2002;
- Pusey et al. 2004;
- Wedderburn & Hammer 2003.

PDF LINKS

Fishes of the Murray-Darling Basin: An introductory Guide;

<http://mdba.gov.au/files/publications/MDBA-Fish-species-book.pdf>

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