

Fisheries Scientific Committee

January 2008

Ref. No. FD35
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FINAL DETERMINATION

Mogurnda adspersa - Purple spotted gudgeon

The Fisheries Scientific Committee, established under Part 7A of the *Fisheries Management Act 1994* (the Act), has made a final determination to omit *Mogurnda adspersa* - purple spotted gudgeon from Part 2 of Schedule 4 Endangered Populations of the Act and insert *Mogurnda adspersa* - purple spotted gudgeon into Part 1 of Schedule 4 Endangered Species of the Act. The amendment of the threatened species lists is provided for by Part 7A, Division 2 of the Act.

The Fisheries Scientific Committee, with reference to the criteria relevant to this species, prescribed by Part 11B of the *Fisheries Management (General) Regulation 2002* (the Regulation) has found that:

Background

1. *Mogurnda adspersa* - purple spotted gudgeon is a valid, recognised taxon and is a species as defined in the Act.
2. Purple spotted gudgeon are found in slow moving or still waters of rivers, creeks and billabongs, often amongst weeds, rocks and snags.
3. They feed mainly on insect larvae, but also consume worms, tadpoles, small fish and some plant matter.
4. Female *Mogurnda adspersa* may lay several batches of eggs per season (30-1,300 per batch). The eggs are deposited in clusters on solid objects such as rocks, wood or broad-leafed plants. The male guards and fans the eggs until hatching (3-8 days).
5. *Mogurnda adspersa* - purple spotted gudgeon has the following conservation status:
 - i. NSW *Fisheries Management Act 1994*: Endangered Population;
 - ii. IUCN 2004: - no listing;
 - iii. Victoria *Flora and Fauna Guarantee Act 1988*: - Threatened;
 - iv. South Australia *National Parks and Wildlife Act 1972*; Endangered;
 - v. Australian Society for Fish Biology 2001: - Lower Risk.
6. *Mogurnda adspersa* is part of the Endangered Aquatic Ecological Community in the Natural Drainage System of the Lower Murray River Catchment, the Endangered Aquatic Ecological Community in the Natural Drainage System of the Lowland Catchment of the Darling River and the Endangered Aquatic Ecological Community in the Natural Drainage System of the Lowland Catchment of the Lachlan River.

Criteria – reduction in abundance, geographic distribution or genetic diversity (Regulation clause 340F)

1. Two populations occur in NSW. The eastern population of the purple spotted gudgeon occurs north of the Clarence River catchment in the coastal drainage of NSW. Targeted sampling at sites where this species has previously been found has

not produced any new records, although there are unconfirmed records from student research projects in the Tweed and Brunswick river catchments.

2. The western population of *Mogurnda adspersa* was once widespread throughout the Murray-Darling system, but its distribution is now very limited and has significantly declined in recent years. Historically it was found in disjunct areas, and now is found only in three areas west of the dividing range.
3. Conservation stocking of this species has not resulted in the establishment of a viable population.
4. In light of the above, the Fisheries Scientific Committee has found that the species has undergone a very large reduction in abundance within a time frame appropriate to the life cycle and habitat characteristics of the taxon; this meets the criteria of Endangered, but not Critically Endangered.

Criteria – threatening processes (Regulation clause 340G)

1. The causes of the decline in the two populations of *Mogurnda adspersa* may include: predation by introduced fish such as gambusia and redfin perch; habitat loss; rapid fluctuations in water levels (due to water regulation) that have deleterious effects on successful reproduction and recruitment.
2. In light of the above, the Fisheries Scientific Committee has found that these threatening processes continue to operate throughout the geographic distribution of the species and existing reserve systems or other forms of refuge do not protect the species.

Conclusion pursuant to section 220F(3) of the Act

In the opinion of the Fisheries Scientific Committee:

- a. *Mogurnda adspersa* - purple spotted gudgeon is facing a very high risk of extinction in New South Wales in the near future, as determined in accordance with the criteria prescribed by the Regulation as discussed above, and
- b. That it is not eligible to be listed as a critically endangered species.

The species is eligible to be listed as an ENDANGERED SPECIES.

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Chair
Fisheries Scientific Committee