

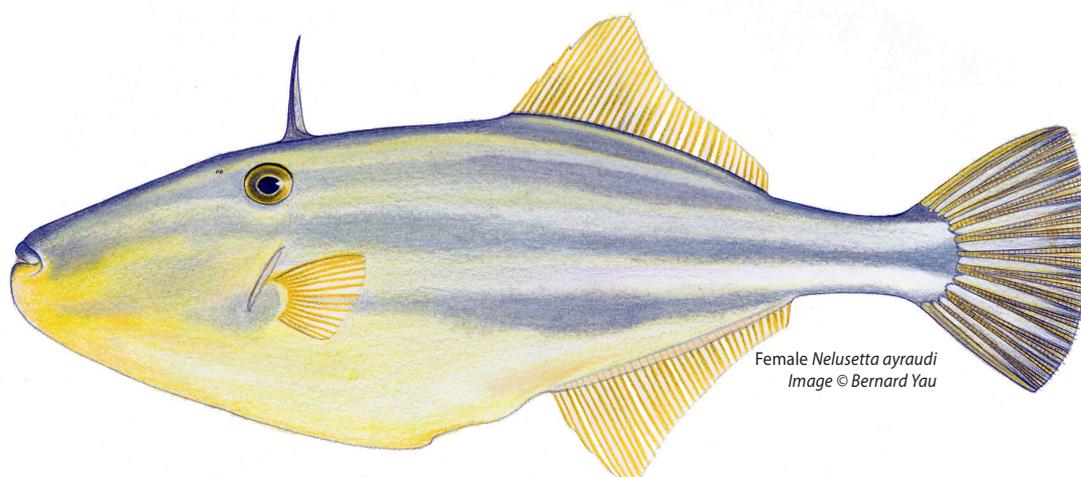
Ocean Jacket

(*Nelusetta ayraudi*)

EXPLOITATION STATUS FULLY FISHED

The abundance of ocean jackets appears to have increased significantly since 1999/2000. Status of all other leatherjacket species is undefined.

SCIENTIFIC NAME	STANDARD NAME	COMMENT
<i>Nelusetta ayraudi</i>	ocean jacket	Constitutes the majority of the leatherjacket catch. Previously known as chinaman leatherjacket.



Background

A number of leatherjacket species are taken by commercial and recreational fisheries operating in NSW waters. In recent years, however, leatherjacket landings have been dominated by ocean jackets (*Nelusetta ayraudi*). Other species of leatherjacket which are significant in landings are the yellowfin (*Meuschenia trachylepis*), velvet (*M. scaber*), sixspine (*M. freycineti*) and fanbelly (*Monacanthus chinensis*). The status of all these species is undefined, due to a lack of biological and fishery data.

Ocean jackets are distributed in southern Australian waters from Cape Moreton in Queensland to North West Cape in WA (including Tasmania). They can be found in waters from 2 m to 200 m in depth. Juveniles of this species occur close to shore in bays and estuaries and have been caught in seagrass, over sand and rocky reefs. Research from the Great Australian Bight suggests that this species schools in size classes with larger fish occurring in deeper water.

The diet of ocean jackets has been recorded as consisting of fish, invertebrates and salps. Recent NSW research has shown that both male and female ocean jackets mature at about 35 cm total length (TL), at about 2 to 3 years of age. They are a relatively fast growing and short lived species, with a maximum observed age of 6 years.

Analysis of historical steam trawl catch and effort data for 1918-23, 1937-43 and 1952-57 from the Australian South East Fishery showed that leatherjackets (assumed to be mostly ocean jackets) were very abundant in the early years of the fishery and then declined in abundance in later years. NSW trap fishers annually landed up to 1000 t of leatherjackets during the 1950s, however this level of harvesting appeared to be unsustainable.

Additional Notes

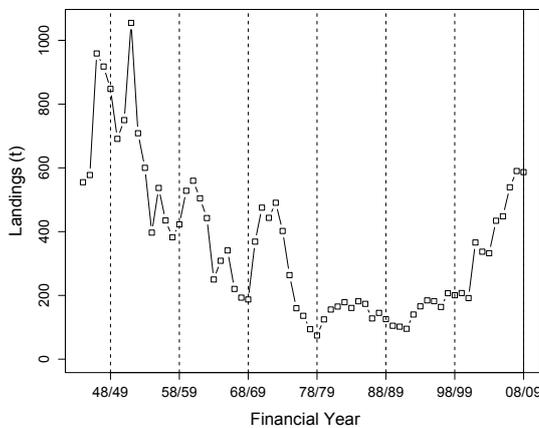
- Ocean jackets are a short lived species (up to 6 years) and grow to 70 cm. 50% of the species is mature (L50) at 35 cm TL.
- The age structure of commercial landings of ocean jackets during 2003/04 was dominated (~85%) by 2-3 year old fish.
- A number of secondary species are known to be important in landings, but there is a lack of biological and fishery data.
- There is a recreational bag limit of 20 leatherjackets.

Catch

Recreational Catch of Leatherjackets

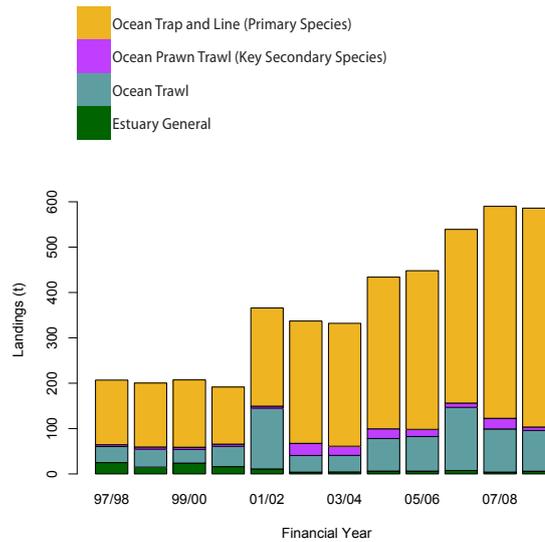
The annual recreational harvest of leatherjackets in NSW (all species combined) is likely to lie between 110 and 180 t. This estimate is based upon the results of the offsite National Recreational and Indigenous Fishing Survey (Henry and Lyle, 2003) and onsite surveys undertaken by I & I NSW.

Historical Landings of All Species of Leatherjackets



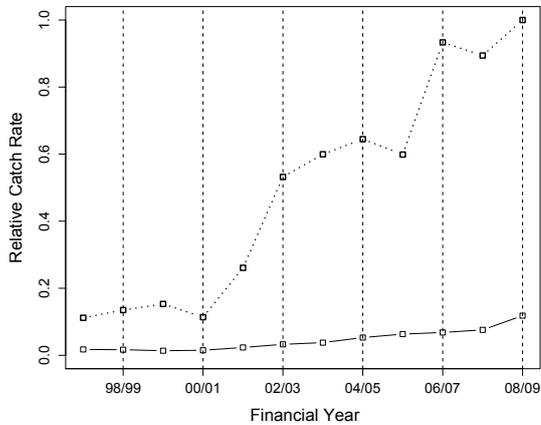
Commercial landings (including available historical records) of all species of leatherjackets for NSW from 1944/45 to 2008/09 for all fishing methods.

Landings by Commercial Fishery of All Species of Leatherjackets



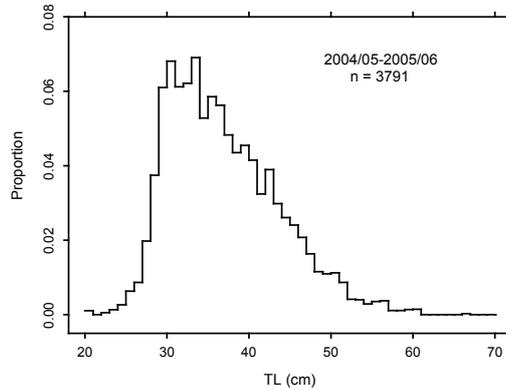
Reported landings of all species of leatherjackets by NSW commercial fisheries from 1997/98. Fisheries which contribute less than 2.5% of the landings are excluded for clarity and privacy.

Catch Per Unit Effort Information of All Species of Leatherjackets Harvested by Fish Trapping in NSW



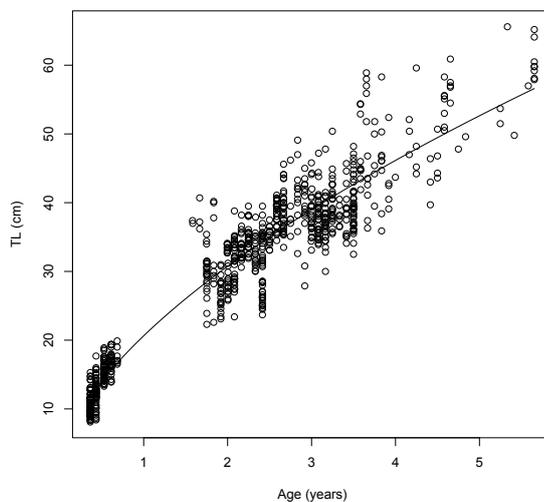
Catch rates of all species of leatherjackets harvested using fish trapping for NSW. Two indicators are provided: (1) median catch rate (lower solid line); and (2) 90th percentile of the catch rate (upper dashed line). Note that catch rates are not a robust indicator of abundance in many cases. Caution should be applied when interpreting these results.

Length Frequency of Ocean Jacket



The length distribution of ocean jacket landed by NSW commercial fishers in recent years comprised mainly fish between 30 and 50 cm total length (TL). There is no minimum legal length for leatherjackets in NSW.

Growth Curve of Ocean Jacket



Age-length data with fitted growth curve for ocean jacket (Miller, 2007). Lengths are presented as total length (TL).

Further Reading

- Bell, J.D., J.J. Burchmore and D.A. Pollard (1978). Feeding ecology of three sympatric species of leatherjackets (Pisces: Monacanthidae) from a *Posidonia* seagrass habitat in New South Wales. *Australian Journal of Marine and Freshwater Research* **29**: 631-643.
- Grove-Jones, R.P. and A.F. Burnell (1991). Fisheries Biology of the Ocean Jacket (Monacanthidae: *Nelusetta ayraudi*) in the Eastern Waters of the Great Australian Bight, South Australia, South Australian Department of Fisheries.
- Henry, G.W. and J.M. Lyle (2003). [The National Recreational and Indigenous Fishing Survey. Final Report to the Fisheries Research & Development Corporation and the Fisheries Action Program Project FRDC 1999/158](#). NSW Fisheries Final Report Series No. 48. 188 pp. Cronulla, NSW Fisheries.

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Lindholm, R. (1984). Observations on the chinaman leatherjacket *Nelusetta ayraudi* (Quoy & Gaimard) in the Great Australian Bight. *Australian Journal of Marine and Freshwater Research* **35**: 597-599.

Miller, M. E. (2007). Key biological parameters and commercial fishery for ocean leatherjackets, *Nelusetta ayraudi*, (Monacanthidae) off New South Wales, Australia. School of Biological Sciences, University of Wollongong. **MEnvSc thesis**.

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Steffe, A.S., J.J. Murphy, D.J. Chapman and C.C. Gray (2005). [An assessment of changes in the daytime recreational fishery of Lake Macquarie following the establishment of a 'Recreational Fishing Haven'](#). Cronulla, NSW Fisheries. 103 pp.

Steffe, A.S., J.J. Murphy, D.J. Chapman, G.P. Barret and C.C. Gray (2005). [An assessment of changes in the daytime, boat-based, recreational fishery of the Tuross Lake estuary following the establishment of a 'Recreational Fishing Haven'](#). Final Report Series No. 81. Cronulla, NSW Fisheries. 70 pp.

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Stewart, J. and J. M. Hughes (2008). [Determining appropriate sizes at harvest for species shared by the commercial trap and recreational fisheries in New South Wales](#). FRDC Project No. 2004/035. Fisheries Final Report Series No.97 Cronulla, NSW Department of Primary Industries: 282 pp.

Please visit the CSIRO website, <http://www.marine.csiro.au/caab/> and search for the species code (CAAB) 37 465006, 37 465005, 37 465036, 37 465009 and 37 465059, common name or scientific name to find further information.



