

Leatherjackets

(Monacanthidae)

EXPLOITATION STATUS FULLY FISHED

Majority of the leatherjacket catch in NSW is ocean leatherjacket (*Nelusetta ayraudi*). Stock abundance appears to have increased significantly since 1999/2000.

SCIENTIFIC NAME	STANDARD NAME	COMMENT
<i>Nelusetta ayraudi</i>	ocean jacket	Constitutes the majority of the catch.
<i>Eubalichthys mosaicus</i>	mosaic leatherjacket	Only small quantities caught.
<i>Meuschenia scaber</i>	velvet leatherjacket	Only small quantities caught.
<i>Aluterus monoceros</i>	unicorn leatherjacket	Only small quantities caught.
<i>Meuschenia freycineti</i>	sixspine leatherjacket	Only small quantities caught.
<i>Eubalichthys bucephalus</i>	black reef leatherjacket	Only small quantities caught.
<i>Meuschenia trachylepis</i>	yellowfin leatherjacket	Only small quantities caught.



Background

A number of leatherjacket species are taken by commercial fisheries operating in NSW waters. In recent years, however, leatherjacket landings have been dominated by ocean jackets. 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 have been caught in seagrass, over sand and rocky reefs

and occur close to shore in bays and estuaries. Research from the Great Australian Bight also 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. Most of the leatherjacket species caught in the Ocean Trap and Line Fishery are thought to be reasonably wide ranging in their distribution, and occur in inshore and shallower continental shelf waters.

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 ocean jackets were very abundant in the early years of the fishery and then declined in abundance in later years. NSW trap fishers landed up to 1000 t annually of leatherjackets during the 1950s, however this level of harvesting appeared to be unsustainable.

Additional Notes

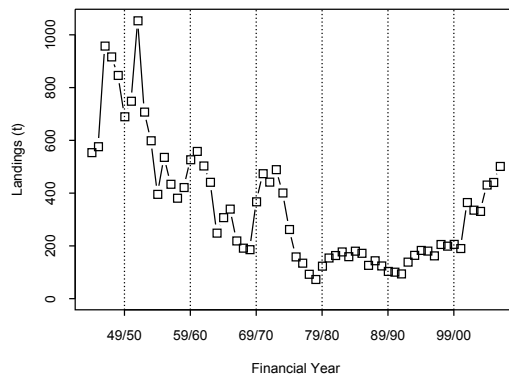
- Ocean jackets are a short lived species (up to 6 years) and grow to 70 cm. The species is mature (L50) at 35 cm. The age structure in commercial landings is dominated (~85%) by 2-3 year old fish.
- Other species of leatherjackets harvested within this group will need to be better identified in the catch records or require an observer program to clarify the species composition.
- There are significant issues in the commercial catch records of leatherjackets, where most catches recorded as “unspecified leather jacket” are probably ocean jackets.
- Creel surveys in the Recreational Fishing Havens indicated large declines in the recreational harvest of other leatherjacket species (fanbelly (*Monacanthus chinensis*), yellowfin and sixspine leatherjackets).
- There is a recreational bag limit of 20 leatherjackets.

Catch

Recreational Catch of Leatherjackets

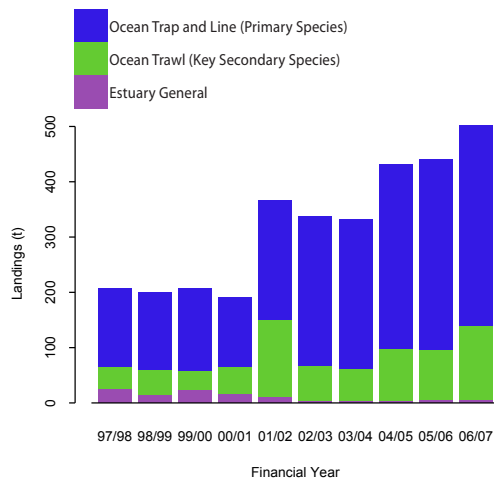
The annual recreational harvest of leatherjackets in NSW is likely to lie between 110 and 180 t. This estimate is based upon the results of the offsite National Recreational and Indigenous Fishing Survey (Henry and Lyle, 2003) and onsite surveys undertaken by NSW DPI.

Historical Landings of Leatherjackets



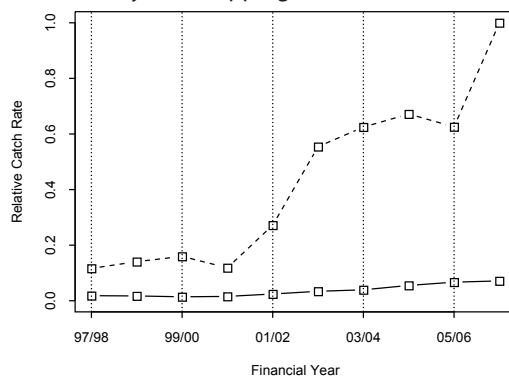
Commercial landings (including available historical records) of leatherjackets for NSW from 1944/45 to 2006/07 for all fishing methods.

Landings by Commercial Fishery of Leatherjackets



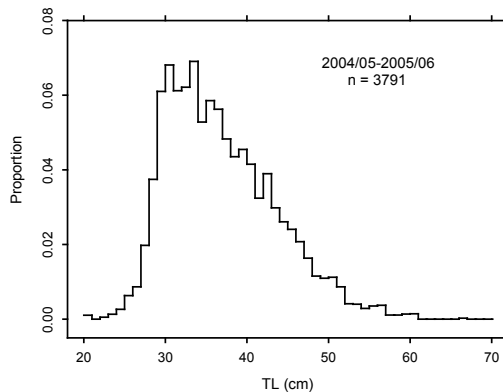
Reported landings of leatherjackets by NSW commercial fisheries from 1997/98. Fisheries which contribute less than 2.5% of the landings are excluded for clarity and privacy.

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



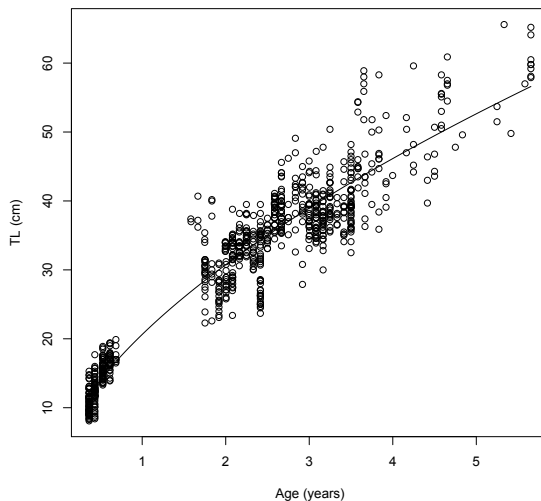
Catch rates of leatherjackets harvested using fish trapping for NSW. Two indicators are provided: (1) median catch rate (lower solid line); and (2) 90th percentile of the catch rate (upper dashed line). Note that catch rates are not a robust indicator of abundance in many cases. Caution should be applied 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, under review). Lengths are presented as total length (TL).

Further Reading

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[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.

Hutchins, B. (1980). Leatherjackets of Australia. [Master Guide to Practical fishing](#). Sydney, Bay Books: 892 pp.

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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. (under review). Key biological parameters and commercial fishery for ocean leatherjackets (*Nelusetta ayraudi*) Monacanthidae off New South Wales, Australia. University of Wollongong. MSc thesis.

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'](#). 103pp. Cronulla, NSW Fisheries.

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Stewart, J. and D.J. Ferrell (2002). [Escape panels to reduce by-catch in the NSW demersal trap fishery](#), *Marine and Freshwater Research* **53**: 1179-1188.

Stewart, J. and J.M. Hughes (in review). Determining appropriate sizes at harvest for species shared by the commercial trap and recreational fisheries in New South Wales. FRDC Project 2004/035. Cronulla, NSW Department of Primary Industries.

Please visit the CSIRO website, <http://www.marine.csiro.au/caab/> and search for the species code (CAAB) 37 465006, 37 465003, 37 465005, 37 465022, 37 465036, 37 465039 and 37 465059, common name or scientific name to find further information.



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