

NT Coastal Reef Fish Population and Biology of the Stripey

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INTRODUCTION

The Stripey (*Lutjanus carponotatus*) is a member of the Lutjanid family of tropical snappers. Whilst snappers are distributed throughout the Indo-Pacific region, *L. carponotatus* is mainly found in the Indo-Australian Archipelago and up to India. It is usually associated with shallow tropical reefs, but has been trawled up from 80 m. The stripey has a white belly and sides with a slightly darker back and eight or nine yellow or golden/brown stripes on its sides. It can be further distinguished by its yellow fins and a black spot at the base of the pectoral fin. Stripeys are small fish (usually less than 40 cm) and are often found in large schools.

Stripeys are easily caught and often large numbers of them can be encountered when reef fishing in coastal areas. They are easily targeted using handlines or rods with a patanoster reef fishing rig. Squid, pilchards or fresh fish can be used as bait. As they are more commonly caught when around 20-30 cm in length, smaller hooks should be used. They are a good eating fish and are most commonly kept whole due to their small size. There is no size limit for stripeys, but you may not possess more than 30 per person, under the general personal fish possession limit in the Northern Territory.

RESEARCH

Although there has been a lot of research into Lutjanids, it has usually concentrated on the larger species such as saddle tail snapper (*Lutjanus malabaricus*), red snapper (*Lutjanus erythropterus*) and red emperor (*Lutjanus sebae*). There has been little research on the biology of *L. carponotatus* although DPIFM Fisheries has conducted some basic biological studies on this species.

Information on the length, weight, age, sex, maturity, gonad condition and otoliths (ear bones) of the stripey was collected from research trips around Darwin and by sampling the catches of commercial fishermen from around the NT coast.

The information presented here was derived from 120 stripey samples caught during research trips around Darwin. The fish ranged between 14 and 36 cm in fork length (FL), with weights between 40 and 950 g, respectively. The relationship between length and weight is illustrated in Figure 1.

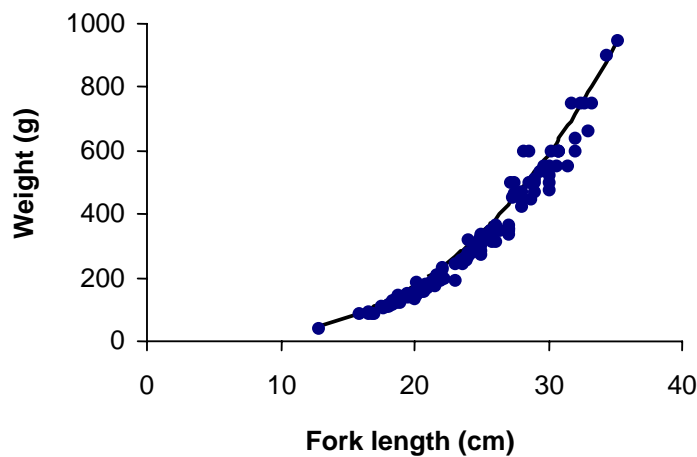


Figure 1. Length-weight relationship of *L. carponotatus*

The length frequency of male and female *L. carponotatus* (Figure 2) shows that similar numbers of males and females were caught and they were of a similar size range.

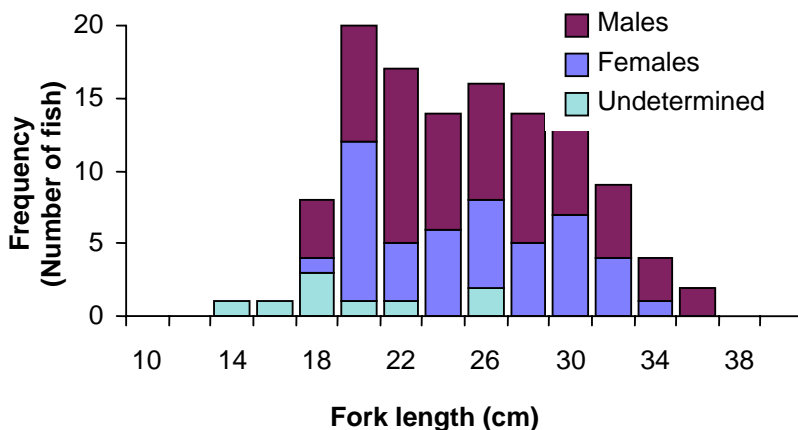


Figure 2. Length frequency of male and female *L. carponotatus*. and those of undetermined sex

Until now there has been insufficient data to accurately determine the spawning period. Preliminary indications are that they begin to mature at over 20 cm FL.

A small number of *L. carponotatus* have been aged by counting the rings on the otoliths. It appears that they can grow up to 20 cm FL within their first year and may reach over 10 years in age.

Due to their fast initial growth rate, we need to undertake more ageing, especially of the smaller size classes (0+ age groups) before we can accurately model their growth. Furthermore, we need to conduct validation procedures to ensure that the rings are indeed annual. Figure 3 shows initial age-length results.

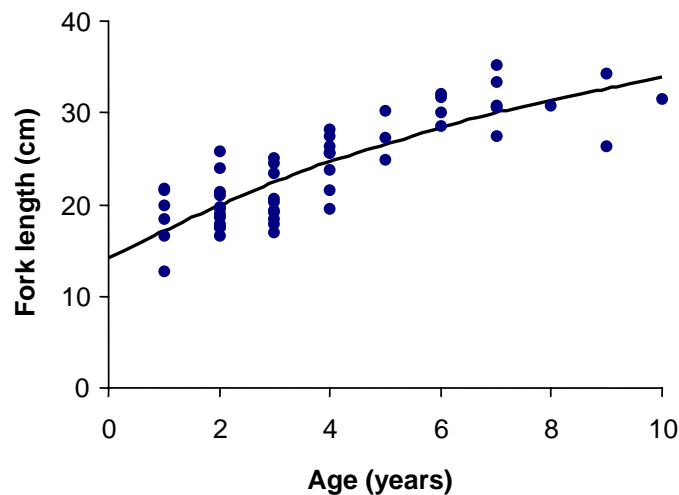


Figure 3. Preliminary age-length key for *L. carponotatus*

It is important to remember that the information summarised in this Fishnote is of a preliminary nature and was derived from fish collected from a relatively small area over a limited time period. Therefore, use of this data for wider temporal and spatial scales should be done with caution.

The Coastal Research Unit will continue to collect relevant information on the stripey and other common coastal reef species, so we can better understand and manage the impact of fishing on their population dynamics and long-term sustainability. Please help us by practising responsible fishing. In this way, we can ensure that this important NT resource can be enjoyed by future generations of Territorians.

ACKNOWLEDGEMENTS

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RECOMMENDED READING

Allen, G. R. (1989). FAO Species Catalogue. Vol. 6. Snapper of the world. FAO Fisheries Synopsis. No. 125, Volume 6. Rome FAO. 208 pp.

Grant, E. M. (1985). Guide to fishes. The Department of Harbours and Marine, Brisbane, Queensland. 895pp.

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