



In this issue of The Bite we look at paua (abalone), which is unique to New Zealand and is an important part of our culture.

HIGHLY VALUED

- This shellfish is highly valued by Māori, recreational fishers, and the commercial industry.
- Paua has always been a food source for Māori, and plays a significant role in manaakitanga ki nga manuhiri (hosting of visitors).
- The recreational paua fishery is an important component of the New Zealand lifestyle.
- Commercial exploitation of paua developed and expanded through the 1970s and 1980s into the lucrative commercial industry it is today. The paua industry is an important component of the New Zealand economy, providing jobs and export earnings that benefit all New Zealanders.
- Because paua is highly valued it is also subject to illegal fishing. While reliable figures are difficult to obtain, illegal fishing is thought to have a lot to do with the recent decline in paua numbers worldwide.

BIOLOGY AND LOCATION

The most common species of paua in New Zealand is the blackfoot paua (*Haliotis iris*). Less common, is the yellowfoot paua (*Haliotis australis*).

Paua form large aggregations on rocky reefs and hard substrates – extending from the inter-tidal zone to about 20 – 30 m in water depth. Generally, juvenile paua are found in shallow sub-tidal areas, and adults are found in deeper water. This pattern is likely to be influenced by harvesting pressure causing adults to generally inhabit deeper water than juvenile paua.

Black-footed paua may be considered sedentary, as movement is over a small spatial scale. In contrast to black-footed paua, yellow-footed paua tend to be more mobile and solitary.

SPAWNING

Paua aggregations typically consist of adult paua, and recruitment to these patches is generally low. Successful spawning and recruitment of paua is related to the number and size of aggregations of spawning animals. The reduction of aggregations below a minimum threshold level can impact on spawning success.

Paua are broadcast spawners, meaning they release eggs and sperm directly into the water column. Spawning time and number of spawning events appears to vary between locations and years.

Populations in north-east New Zealand have a long breeding season extending from summer through autumn and winter into early spring. Populations in the southern North Island spawn in March and again in September. Spawning in South Island populations occurs from late summer to early autumn, although some spawning may also occur in winter.

PREDATORS

Paua are an important herbivore within the inshore ecosystem. There is a large range of paua predators. These include blue cod, wrasses, octopus and rock lobster which predate mainly juvenile paua. Starfish and rock cod predate paua of all sizes.

LAND-BASED EFFECTS

Sedimentation from runoff settling in and around reefs is likely to reduce the amount of seaweed for paua to eat. High silt loadings may reduce available habitat and affect paua metabolism. Suspended sediments may result in slower growth rates as the affected paua expend considerable energy ridding themselves of the silt.

DISEASE

Currently, a herpes-like virus is causing high levels of mortality in abalone stocks in Victoria, Australia. It attacks the nervous system of abalone and causes loss of muscular control. This may be a serious threat to New Zealand paua stocks if it were to arrive here. MAF Biosecurity New Zealand has put strict border measures in place to prevent the virus from being brought into New Zealand.



Paua knife used to safely remove paua from their habitat.