

Threatened Species of the Northern Territory

OLIVE RIDLEY PACIFIC RIDLEY

Lepidochelys olivacea

Conservation status

Australia: Endangered

Northern Territory: Vulnerable



Photo Queensland, DERM

Description

The olive ridley is the smallest Australian sea turtle, with a mean curved carapace length of 70 cm. Carapace colour is olive-grey. The carapace has a diagnostic six pairs of costal scales.

Eggs are small in size (mean diameter = 3.6 cm) compared with all other marine turtles that breed in the Northern Territory (NT).

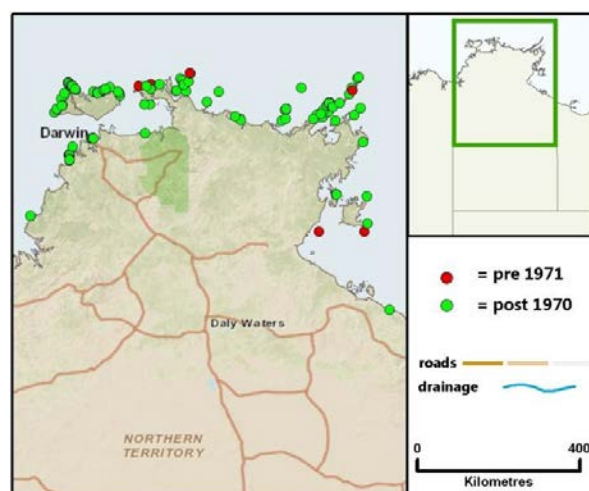
Distribution

Olive ridleys occur in tropical and subtropical waters throughout the world.

The vast majority of the nesting population in Australian waters occurs in the NT. Nesting has been recorded from Melville Island to Groote Eylandt with the highest nesting occurring on Melville Island, islands to the east of Croker Island and some islands off north-east Arnhem Land (Chatto 1998).

Conservation reserves where reported:

Anindilyakwa Indigenous Protected Area, Casuarina Coastal Reserve, Dhimurru Indigenous Protected Area, Djelk Indigenous Protected Area, Garig Gunak Barlu National Park, Kakadu National Park and Laynhapuy Indigenous Protected Area.



Known locations of the Olive Ridley

Ecology

Olive ridleys live in shallow protected waters and feed on benthic molluscs, crabs, echinoderms and gastropods. Studies elsewhere indicate some long-distance dispersal between feeding and breeding grounds.

In the NT, olive ridleys breed at a wide range of sites on islands and, less commonly, mainland beaches. Olive ridleys often nest just above the high-tide mark and may suffer more breeding losses through tidal inundation than do other species of marine turtle (Chatto 1998).

Conservation assessment

The number of mature adults in the NT is estimated as <10 000, but data on population trends is very limited. There is some anecdotal evidence of at least localised decline of marine turtles in general in Territory waters (Kennett et al. 2004). There is no definitive study to indicate that NT and Queensland (QLD) populations are distinct, so the combined population should be treated as one genetic unit. Of the marine turtles, this species is probably the most vulnerable to ghost net mortality. Major mortality of juveniles and adults in marine debris occurs in Territory waters each year. The Ghost Net program does not supply quantitative estimates, but a previous summary indicates this would be in the order of hundreds per year (Kiessling 2003).

An annual Indigenous hunting mortality of 60 olive ridleys has been documented at one beach in Yirrkala. Dogs are known to prey on eggs in nests on the Tiwi Islands. Egg harvesting by Indigenous populations occurs, but is probably lower than historical levels. There is increasing predation by crocodiles, but probably returning to previous historical levels – approximately two kills per week is estimated on the Tiwi Islands.

In QLD there has been major egg mortality from pigs on Cape York over the past three decades (Limpus 2009). Pig culls have taken place periodically but pig predation of eggs continues. Female recruitment to the Cape York beaches is extremely low (anecdotal report from QLD Department of Environment and Resource Management)

The species' generation time is approximately 20 years. With both poor recruitment (from feral animal predation) and adult mortality (through both ghost nets and hunting), a decline of >30 per cent over 60 years (three generations) is likely.

The Olive Ridley is classified in the NT as **Vulnerable** (criterion A4e) based on:

- An inferred or suspected population reduction of >30 per cent over 60 years (including past and future), where causes of reduction have not ceased (ghost nets).

Threatening processes

As with other marine turtles, many factors may that threaten this species. These include

by-catch in commercial fisheries (Poiner and Harris 1996); Indigenous harvest; predation of eggs and young by dogs, pigs and goannas; marine pollution, including entanglement in ghost nets; and disturbance at main breeding sites.

Mortality of animals does occur due to capture in fishing nets. The worst recorded occurrence was in Fog Bay in 1991 when an estimated 300 turtles were killed in one incident. Of 100 turtles examined from this kill, 85 per cent were olive ridleys. However, this level of mortality is exceptional and annual bycatch is likely to be normally much lower.

Conservation objectives and management

A national recovery plan for this species, and other marine turtles, was implemented in 2003 (Environment Australia 2003).

This plan includes actions that:

- i. aim to reduce mortality of turtles (principally through ameliorative actions within commercial fisheries, and maintenance of sustainable harvest by Indigenous communities);
- ii. develop and integrate monitoring programs;

- iii. manage factors that affect reproductive success (in this case, outside NT);
- iv. identify and protect critical habitat (including sea grass beds);
- v. enhance communication of information; and
- vi. enhance international actions and cooperation.

Increasing numbers of wild dogs on Melville Island were thought to be causing unusually high levels of nest predation. Since 2005, dog numbers on this island have been controlled through joint actions of Tiwi and Parks & Wildlife rangers.

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References

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