

Threatened species of the Northern Territory

Great knot

Calidris tenuirostris

Conservation status

Australia: Critically Endangered

Environment Protection and Biodiversity Conservation Act 1999

Northern Territory: Critically Endangered

Territory Parks and Wildlife Conservation Act 1976

Description

The Great Knot is a medium-sized migratory shorebird with relatively short legs, a slender medium-length bill and a wingspan of about 58 cm. In non-breeding plumage (typical of Australian visitors), the upperparts are grey with lighter feather margins and dark central streaks. The head, neck and breast is white with heavy grey flecking and streaking. The underparts and rump are white with some dark flecking along the flanks. The tail is grey and contrasts strongly with the white rump in flight.

When in Australia, the Great Knot can be confused with similar species such as the Red Knot *Calidris canutus* and the Curlew Sandpiper *Calidris ferruginea*, both of which are slightly smaller, less strongly marked on the upperparts and have different relative bill lengths

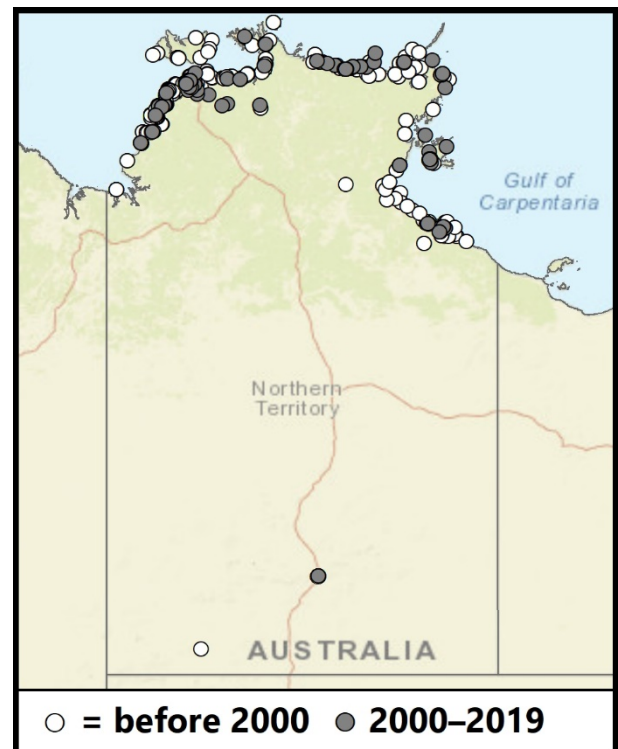
Distribution

The Great Knot breeds in north-east Siberia and far north-east Russia and migrates along the East Asia-Australasian Flyway to overwinter in the southern hemisphere.



Credit: D. Portelli

The majority of the population overwinters in Australia, with the remainder overwintering in parts of south-east and southern Asia.



Caption: Known localities of the Great Knot in the NT (nrmaps.nt.gov.au)

Most that reach Australia settle along the northern coastline between north-west Western Australia and the Gulf of Carpentaria, but significant numbers reach eastern Queensland and there are reports of Great Knots from most Australian coastal areas.

In the Northern Territory (NT), Great Knots have been observed in most coastal areas, from Joseph Bonaparte Gulf, through Darwin, the Tiwi Islands and Arnhem Land to the south-west Gulf of Carpentaria. The species is rarely recorded far inland from the coast.

NT conservation reserves where reported: Barranyi National Park, Casuarina Coastal Reserve, Charles Darwin National Park, Djukbinj National Park, Garik Gunak Barlu National Park, Kakadu National Park, Keep River National Park, Limmen National Park and Tree Point Conservation Reserve.

Ecology and life-history

Great Knots breed in subarctic alpine tundras of north-eastern Siberia. In contrast, the species occurs almost exclusively along the coast during migration and the non-breeding season. It prefers sheltered coastal habitats with extensive tidal mudflats or sandflats, including estuaries, lagoons, inlets and bays. Great Knots are gregarious and frequently occur in large flocks with other shorebirds (including Red Knots), especially when roosting during high tides. They specialise on feeding on bivalves, but also consume other marine invertebrates. Prey are captured on or just below the surface of wet mud or sand. Great Knots have an estimated generation length of 8.6 years¹.

Threatening processes

The main acute cause of population decline for the Great Knot is habitat loss and degradation at migratory staging grounds in the Yellow Sea region, particularly reclamation and development of South Korean wetlands¹⁻³. Threats in Australia, especially along southern and eastern coastlines, include ongoing human disturbance; habitat loss and degradation due to mangrove encroachment, pollution and invasive plants; and changes to

hydrological processes^{3,4}. Significant threats throughout its distribution include anthropogenic climate change—particularly potential loss of intertidal habitats due to sea-level rise—and heavy metal pollution³.

Conservation objectives and management

In the NT, the primary conservation objective is to maintain a stable or increasing non-breeding population by: retaining healthy intertidal mudflat habitats; improving protection of roosting sites; managing anthropogenic disturbance at important sites when Great Knots are present; and incorporating requirements for the species into coastal planning and management.

Secondarily, the Australian Government should be supported in its international endeavours to promote conservation of shorebirds along the East Asian-Australasian Flyway.

References

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- ³ Threatened Species Scientific Committee, 2016. *Calidris tenuirostris* (Great Knot). Conservation Advice. Department of the Environment, Canberra.
- ⁴ Garnett, S.T., Szabo, J.K., Dutton, G., 2011. The action plan for Australian Birds 2010. CSIRO Publishing.
- ⁵ Wetlands International, 2020. Waterbird Population Estimates. <http://wpe.wetlands.org/> (accessed on 21 April 2020).
- ⁶ Rogers, D., Hassell, C., Oldland, J., Clemens, R., Boyle, A., Rogers, K., 2010. Monitoring Yellow Sea Migrants in Australia (MYSMA): North-western Australian shorebird surveys and workshops, December 2008. Birds Australia; Department of Water and the Arts, Victoria.
- ⁷ Studds, C.E., Kendall, B.E., Murray, N.J., Wilson, H.B., Rogers, D.I., Clemens, R.S., Gosbell, K., Hassell, C.J., Jessop, R., Melville, D.S., Milton, D.A., 2017. Rapid population decline in migratory shorebirds relying on Yellow Sea tidal mudflats as stopover sites. *Nat. Commun.* 8, 1–7.