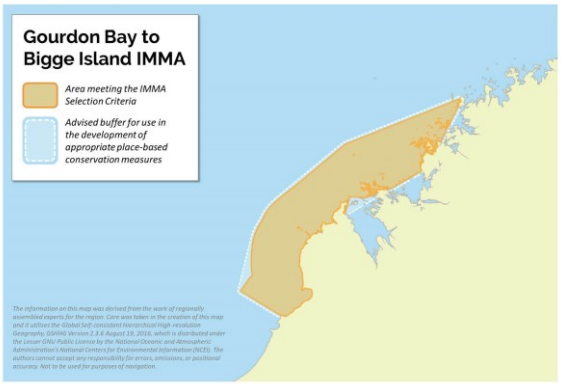
Gourdon Bay to Bigge Island IMMA



Area Size

55,269km²

Qualifying Species and Criteria

Humpback whale – *Megaptera novaeangliae*

Criterion B2, C1

Other Marine Mammal Species Documented

Balaenoptera edeni, Balaenoptera physalus, Orcaella heinsohni, Physeter macrocephalus, Pseudorca crassidens, Sousa sahulensis, Stenella longirostris, Tursiops aduncus, Tursiops truncatus

Summary

The Northwest Australian humpback whale breeding area is located in the Kimberley region in the East Indian Ocean (~15˚S – 18˚S), a remote region of Western Australia. The West Australian humpback whale population annually migrates from their Antarctic summer feeding grounds along the western Australian coastline to mate and calve during winter in nearshore, lower latitude waters, with the Kimberley region being a key area for breeding. Within the Kimberley region, Lalang-garram (Camden Sound) is a key area for calving, with other important areas including Pender Bay and Buccaneer Archipelago.

Description:

The main Northwest Australian humpback whale breeding area extends from Eighty Mile Beach in the south to Lalang-garram (Camden Sound) in the north (~15˚S – 18˚S). It encompasses the Lalang-garram / Camden Sound Marine Park (Dept. of Parks and Wildlife, 2013), which was one of the first Marine Parks established in the Kimberley region that provides special management mechanisms to protect humpback whales. The Marine Park recognises the important habitat of the area for humpback whales and other species of special conservation interest (sawfish, saw toothed rays) and includes sea country of several saltwater country people (e.g. Yawuru, Bardi Jawi, Mayala and Dambimangari). This area contains several large marine embayments, an elaborate arrangement of islands and reef and complex bathymetry of shoals, rock platforms and soft sediment. Humpback whales occur in large numbers between June and November each year during the austral winter and utilise different areas during the breeding season. Peak whale abundance occurs in August with the main use of the region at this time in the northern extent near Lalang-garram, with other important areas including Pender Bay and Buccaneer Archipelago (Jenner et al. 2001, Thums et al. 2018).

Figure 1 - A mother and calf humpback whale (*Megaptera Noveangliae)* Photo: Chandra Salgado Kent

Figure 2 – Humpback whales (*Megaptera novaeangliae*). Photo: Chandra Salgado Kent

Criterion B: Distribution and Abundance Sub-criterion B2: Aggregations

The IMMA is a well-known seasonal aggregation area for humpback whales and encompasses the core breeding area for this population. A large proportion of the population aggregate here off the Kimberley coast each year during austral winter between July and September (Dawbin and Gill 1991, Jenner et al. 2001, Thums et al. 2018). Satellite tag data indicates this is the terminal destination for the majority of the population (Gales et al. 2010; How et al., 2020). Within the breeding area, Jenner et al. (2001) and Thums et al. (2018) have identified from boat-based and aerial survey data several key areas where whales have been observed to aggregate: Pender Bay, Tasmanian Shoals and Buccaneer Archipelago. The time of peak abundance in the breeding grounds is in August, with greatest occupancy occurring between Pender Bay and Lalang-garram (Thums et al. 2018).

Criterion C: Key Life Cycle Activities Sub-Criterion C1: Reproductive Areas

This area is critical to reproduction for this population of humpback whales, with the majority of mating and calving occurring here. The occurrence of mating and calving in this area is based on observations of newborn calves, increasing numbers of calves in this area throughout the breeding season and all breeding behaviours (e.g. competitive groups, mother-calf pairs, newborn calves, singing) (Dawbin & Gill, 1991, Jenner et al. 2001, Thums et al. 2018).

Supporting Information

Dawbin, W.H. and Gill, P.C. 1991. Humpback whale survey along the west coast of Australia: a comparison of visual and acoustic observations. Memoirs of the Queensland Museum 30:255-257.

Department of Parks and Wildlife 2013, Lalang-garram / Camden Sound Marine Park management plan 73 2013–2023, Department of Parks and Wildlife, Perth.
URL: https://www.dpaw.wa.gov.au/images/documents/parks/management-plans/20120451_Lalang-garram_Camden_Sound_Marine_Park_MP_2013-2023_WEB.pdf

Gales, N., M.C. Double, M.C., Robinson, S., Jenner, C., Jenner, M., King, E., Gedamke, J., Childerhouse, S. and Paton, D. 2010. Satellite tracking of Australian humpback (*Megaptera novaeangliae*) and pygmy blue whales (*Balaenoptera musculus brevicauda*). Report (SC/62/SH21) to the Scientific Committee of the International Whaling Commission. URL: http://www.marinemammals.gov.au/__data/assets/pdf_file/0017/137312/sc-62-sh21.pdf

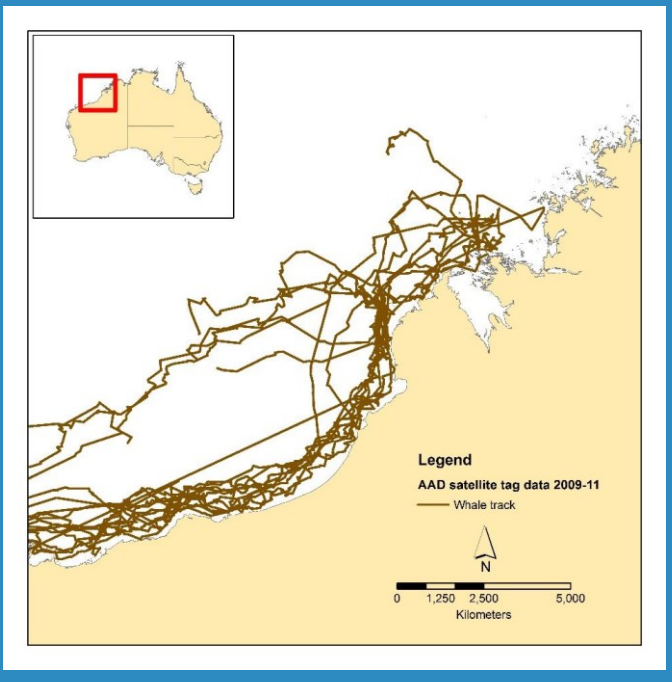


Figure 3 – Movement of satellite tagged humpback whales between 2009 and 2011 (n = 31) in the Kimberley off the west coast of Australia. Source: Gales et al. (2010).

How, J., Coughran, D., Double, M., Rushworth, K., Hebiton, B., Smith, J., Harrison, J., Taylor, M., Paton, D., McPherson, G., McPherson, C., Recalde Salas, A., Salgado-Kent, C. & de Lestang, S. 2020. Mitigation Measures to Reduce Entanglements of Migrating Whales with Commercial Fishing Gear Frdc 2014-004. Fisheries Research Report No. 304. Department of Primary Industries and Regional Development, Western Australia. url: https://www.fish.wa.gov.au/Documents/research_reports/frr304.pdf

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Jenner, K.C.S., M.N.M. Jenner and K. A. McCabe. 2001. Geographical and temporal movements of humpback whales in western Australian waters. APPEA Journal 38:749-765

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Thums M, Jenner C, Waples K, Salgado Kent C, Meekan M. (2018) Humpback whale use of the Kimberley; understanding and monitoring spatial distribution. Report of Project 1.2.1 prepared for the Kimberley Marine Research Program, Western Australian Marine Science Institution, Perth, Western Australia, 78pp. URL: https://wamsi.org.au/wp-content/uploads/bsk-pdf-manager/2019/07/Final-Report-WAMSI-KMRP-Whales-Humpback-Whale-Use-of-the-Kimberley-Thums-et-al.pdf

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PDF made available for download at: https://www.marinemammalhabitat.org/portfolio-item/Gourdon-Bay-Bigge-Island/