GOVERNMENT OF WESTERN AUSTRALIA
Department of Biodiversity, Conservation and Attractions
PARKS AND WILDLIFE SERVICE

Monte-Barrow News

Montebello/Barrow Islands marine and terrestrial reserves

Issue 6, Autumn 2020

Welcome to Issue 6 of a new-look Monte-Barrow News

In this issue:

Marine park update

By Parks and Wildlife Service, Karratha

A lot has been happening at the Montebello and Barrow Islands conservation reserves since our last update in 2018.

On the water, education and compliance patrols by Parks and Wildlife Service staff continue, including joint operations with the Department of Primary Industries and Regional Development (DPIRD).

The North-west Marine Parks Network Management Plan came into effect on 1 July 2018. This network lies within Commonwealth waters (3-200 nautical miles from shore) and is managed by Parks Australia. It contains 13 Australian Marine Parks, including Montebello and Dampier Marine Parks.

Under the water, researchers have been keeping a close eye on our precious marine life, with coral settlement tiles deployed and retrieved, coral bleaching assessed, new seagrass and fish monitoring sites evaluated and water temperature data loggers re-deployed.

On land, there was the decommissioning of the historical Hermite Island Field Station, monitoring of sand temperature for turtle nesting, of seasonal shorebird communities, as well as monitoring of the island's threatened mammals.

We also took part in oil spill training in Dampier, and refreshed our skills to safely disentangle whales in the lead-up to whale migration season.

We welcomed Suzie Glac (previous page), who took on the role of Marine Program Officer in May 2019, based in Karratha. Suzie works alongside the Marine Program Coordinator and Senior Marine Ranger. She replaces Marissa Speirs and Joanne King in the role and brings with her a broad background in marine park and island conservation and management. Suzie has been thoroughly enjoying her new role and looks forward to continuing the great work of her predecessors.

New patrol vessel based on Barrow Island

By Pat Cullen, Reserves Officer Barrow Island Nature Reserve

Parks and Wildlife Service's Barrow Island work centre received delivery of a new vessel in late 2018. *Patrol Vessel (PV) Ardenna* is a 6m collared aluminium centre console with twin 90 hp motors and long-range fuel tanks.

Designed to specific requirements by Barrow Island reserve officers, and custom built by Cordina Marine in Henderson, it has evolved to be a great asset to conservation programs in the Barrow Group Nature Reserves (BGNR) and surrounding marine park waters.

Ardenna is the genus name of the wedge-tailed shearwater (*Ardenna pacifica*), a relatively common seabird that breeds on the BGNR islands. *PV Ardenna* was specifically designed to access the network of islands, reefs and shallow waters that surround Barrow Island. With a very shallow draft to navigate shallows, and reinforced hull, it can be anchored and left to dry out on tidal flats. The special working deck can accommodate up to six personnel, and equipment, while stair and ladder access from the bow allows safe transfer of materials and personnel to reef tops, rocky points, and sandy beaches to conduct work.

PV Ardenna provides staff at the Barrow Island work centre an offshore-based, quick-response capability to protect the BGNR islands from exotic species and other threats such as fire, to respond to marine incidents and to perform ongoing monitoring and research.

As well as being on hand to assist with emergency response, *PV Ardenna* has been an efficient enabler of departmental marine programs. Its load capability and stability has been essential for the survey and in-water capture of male green turtles this season, and it has enabled the change-out of important marine data loggers.

Below: PV Ardenna landing on Middle Island to retrieve abandoned fuel cans. Photo - Brett Fitzgerald/DBCA

Joint agency patrols at the Montebello Islands

By Parks and Wildlife Service, Karratha

Karratha-based Parks and Wildlife Service staff and Department of Primary Industries and Regional Development (DPIRD) have conducted joint agency patrols to the Montebello and Barrow Islands Marine Conservation Reserves aboard *PV Sirenia III* (pictured below).

Following *Sirenia's* successful maiden voyage to the island group in March 2019, both agencies have been conducting more regular education and compliance patrols, gaining an increased presence within the Montebello Island Marine Park and island reserves. DPIRD officers also patrol Commonwealth waters within Montebello Marine Park on behalf of Parks Australia.

"We've done significant preparation on our patrol vessel over the past couple of years and acquired suitably qualified staff, which means we're now in a position to facilitate these joint patrols more regularly and educate visitors to the islands and marine reserves" said Parks and Wildlife Service Marine Program Coordinator Dr Tim Hunt.

"The collaboration between the two agencies in the Karratha region is very strong, and we'll continue to work together to ensure visitor education and compliance, both from a fishing activity, as well as an island activity perspective" said DPIRD Supervising Fisheries and Marine Officer Mike Dunne.

"The islands are becoming increasingly popular to visitors, and we want to make sure those that do venture out there are doing so safely and responsibly, and have all the correct information before they go," said Parks and Wildlife Service Senior Marine Ranger Steve Moore.

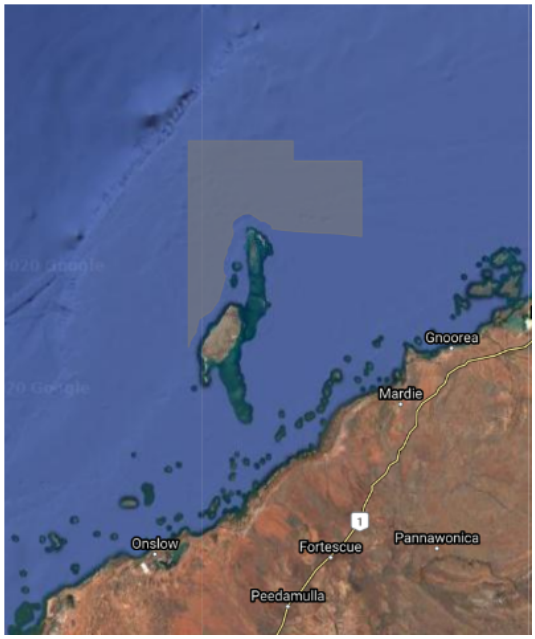
For more information about planning a trip to the Montebello Islands, you can download a brochure from the Explore Parks WA website, download the free Marine Parks WA smartphone app on the App Store or Google Play, or visit your local Parks and Wildlife Service or DPIRD office. If you're planning on dropping a line, the free Recfishwest app available on the App Store or Google Play provides marine park maps and will send you an alert if you enter a no-fishing zone.

Above: Parks and Wildlife Service vessel Sirenia III on patrol at the Montebello Islands. Photo - Steve Breedveld/DBCA

Extra protection for the Montes

By Australian Marine Parks, Parks Australia

Australian Marine Parks play an important role in protecting our offshore marine environment. Along Australia's north-west coast, there are 13 Australian marine parks that contain important marine habitats at Ashmore Reef, Mermaid Reef, Ningaloo, Shark Bay and Carnarvon Canyon.

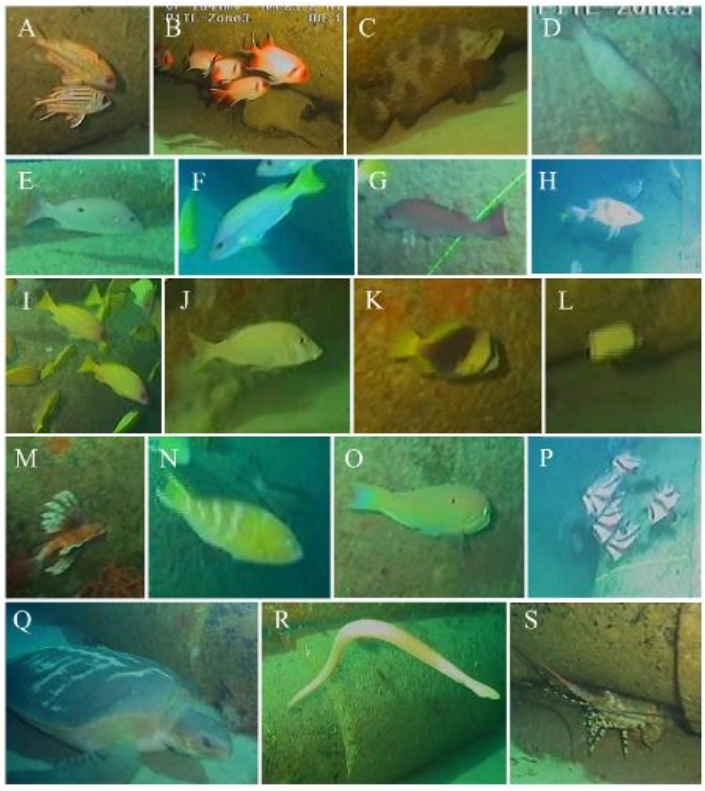


Around the Montebello and Barrow Islands, the Montebello Marine Park (see grey-shaded area on map) abuts two State marine parks, protecting a further 3,400 square kilometres of oceanic and seafloor habitats. A notable feature of the park is the ancient coastline that runs along the 125-metre depth contour.

This hard, rocky escarpment supports diverse communities of deep-water corals and sponges, providing shelter and nursery habitats for a wide range of species, while the water column above offers rich foraging grounds for seabirds, turtles and whale sharks.

Despite being a long way offshore, the marine park is quite shallow in some places and includes two coral reefs that are exposed at low tide.

In 1622, the reefs claimed the first known shipwreck in Australian waters, the English-flagged *Tryall* that was en route to Indonesia. The reefs became infamous over the centuries and despite many searches, their exact location wasn't confirmed until 1969.



The park is zoned for multiple use, allowing a range of activities to continue within its boundaries, including important oil and gas operations in the region.

Montebello Marine Park supports a range of fish species. These images, captured along the gas pipeline that runs through the park, are examples of some of the more commonly observed species:

(A) red squirrelfish
(B) blacktip soldierfish
(C) barramundi cod
(D) areolate grouper
(E) Moses' snapper
(F) brownstripe snapper
(G) darktail snapper
(H) red emperor
(I) five-lined snapper
(J) bluespotted emperor
(K) barred soapfish
(L) Western Australian butterflyfish
(M) lionfish
(N) Hutchins' parrotfish
(O) bluespotted tuskfish
(P) red emperor
(Q) flatback turtle
(R) seasnake'
(S) tropical rock lobster

Montebello Marine Park is managed by Parks Australia, in accordance with the North-west Marine Parks Network Management Plan. We work closely with DBCA and DPIRD to manage the marine environment around the Montes collaboratively.

Get in contact with Australian Marine Parks via marineparks@awe.gov.au or 1800 069 352

Map: Google
Fish diagram: McLean et al. (2020) Fish-habitat associations on a subsea pipeline within an Australian Marine Park. Marine Environmental Research, [104813] https://doi.org/10.1016/j.marenvres.2019.104813

Monitoring the Montebello and Barrow Islands marine life

By Claire Ross, Research Scientist, Marine Science Program, DBCA

Researchers from the DBCA Marine Science Program and regional staff conducted a trip to the Montebello/Barrow Islands marine conservation reserves in May 2019 as part of a long-term monitoring program to assess the condition of key marine values in the reserve.

They visited 12 sites to survey fish, seagrass, coral and macro-invertebrates using photographic, video and underwater visual survey techniques while scuba diving.

Tiles used to measure the number of new 'juvenile' corals were also collected after being in the water for almost four months.

Seawater temperature loggers were successfully retrieved after being deployed at the sites for two years. The long-term measurements of seawater temperature are important for understanding changes in the condition of the coral reefs.

In previous years, repeated exposure to high water temperatures in the region has caused 'bleaching' of corals which can lead to coral death. As a result, coral cover has declined by as much as 95% in some localised areas, which has flow-on effects for many of the animals that live on the reef.

The Montebello/Barrow Islands Marine Conservation Reserves incorporate a large range of habitats, which together support a high diversity of marine life. The reserves are home to an estimated 457 species of fish, 150 species of coral, 11 species of seagrass and 850 species of invertebrates.

Surveys for fish, coral, seagrass and invertebrates will be conducted again in 1 to 2 years as part of the long-term monitoring program to document changes in ecosystem health and understand drivers of change.

This knowledge will inform future management and conservation. Regional staff returned to the monitoring sites to redeploy coral tiles for the fifth consecutive year this February, which will provide important information about the potential for coral reef recovery.

Photos - Claire Ross/DBCA

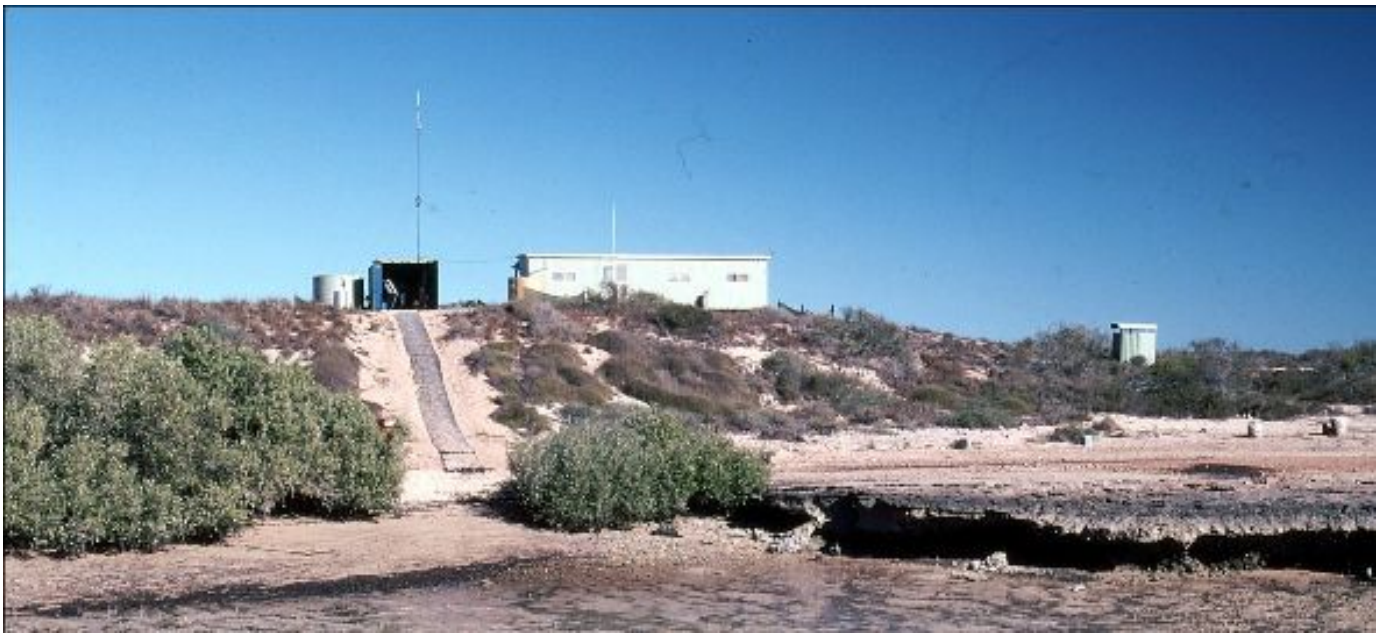
Decommissioning of the Hermite Island Field Station

By Parks and Wildlife Service, Karratha

The Montebello Islands were under Commonwealth control until 1992, when they were returned to the State of Western Australia and were declared a conservation park. In 1993 the ‘Montebello Renewal’ project was established under the department's *Western Shield* wildlife recovery program, with the aim to rid the Montebello Islands Conservation Park of exotic mammals (black rats and feral cats) and reintroduce and introduce native mammal species.

‘Montebello Renewal’ was a joint project between the then Department of Conservation and Land Management’s (CALM) Threatened Species and Communities Unit and the Pilbara Region. To facilitate this project, the Hermite Island Field Station was established, which included a transportable donga, two sea containers, water tanks, toilet/shower and desalination, and became a home away from home for teams involved in the project.

In the early days of the project, the station became known as ‘HHH’ or ‘Hurricane Hill Hut’. 'Hurricane' referenced the name of the first nuclear weapons test in 1952, and being located on top of a dune meant it got every wind that blew. In 1996 Cyclone Olivia bore down on Barrow Island, recording wind usts of up to 408 km/h (235 mph), which are to this this day still the highest recorded anywhere in the world. The camp on Barrow was apparently destroyed, neighbouring Varanus Island was evacuated, and the HHH had both end walls ripped off, part of the roof ripped off, and furniture scattered all around the place. The HHH essentially had to be rebuilt before the major part of the cat and rat eradication program got underway in 1996.



Above: HHH (aka the Hermite Island Field Station in 1995. Photo - Andrew Burbidge/DBCA

From 1996 to the early 2000s the eradication program was in full swing, with teams of up to 10 people using the field station for months at a time. During the 2000s eradication follow-up and mammal translocations continued, and the surrounding Montebello Islands Marine Park was gazetted (2004).

In 2008 some refurbishment works to the field station were undertaken, and in 2009 the major translocation program associated with the Chevron Gorgon Gas Project on Barrow Island commenced.

The field station continued to be used by the department’s marine park staff, and animal science staff, but in 2017 the decision was made for it to be decommissioned due to its age and deteriorated condition.

In July 2018 a team of eight Parks and Wildlife Service staff dismantled and removed the field station, worked with contractors and loaded it all on to a barge to be disposed of on the mainland. The HHH certainly has some history, and served the department well over the 23-year period.

The last feral cat on the Montebello Islands was eradicated in 1999, and the small hand-made plaque commemorating this still remains at the site today.

Above: HHH in 2018 before (top) and after (bottom) decommissioning. Photos - DBCA

Montebello's magic mammals

By Colleen Sims, Senior Project Officer, Biodiversity and Conservation Science

2019 saw staff from DBCA's Biodiversity and Conservation Science division join enthusiastic volunteers, monitoring the threatened mammals on the Montebello Islands.

Over 10 days in October the team trapped golden bandicoots and spectacled hare-wallabies on Hermite Island, boodies (burrowing bettongs) on Alpha Island and Shark Bay mice (djoongari) on North West Island.

The Shark Bay mice population was established (with rufous hare-wallabies [mala] on Trimouille Island) in the late 1990s as part of the 'Montebello Renewal' project. It provides a valuable conservation resource for this rare species and will help establish new populations on Dirk Hartog Island and elsewhere in the next few years.

The other three species were driven extinct on the Montebello's during the 19th and 20th centuries due to the presence of rats and feral cats, but were reintroduced from Barrow Island in 2010-11 (Gorgon Project offset) after eradication of these feral animals.

Nearly 10-20 years on, these populations are doing well, and numbers were high in 2019. However variable rainfall can lead to 'boom and bust' cycles, and continuation of the recent low rainfall may cause a crash in their populations soon.

They are also vulnerable to the risk of disease, or feral rats, mice or cats being introduced back onto the Islands, and new weeds or insects that might degrade their habitat.

When you are visiting the islands, enjoy the experience of looking for tracks of these unique species and please take care what you bring with you that may threaten their survival.

Previous page: Measuring a new baby golden bandicoot still attached to mum.
Photo - Jessica McNamara/DBCA

Right: Golden bandicoot tracks on tidal spit between Buttercup and Hermite islands.
Photo - Colleen Sims/DBCA

Fishing at the Montebello / Barrow Islands

If you are going fishing at the Montebello/Barrow Islands, it's important that you know the rules.

Filleting fish at sea

Fish with a minimum size limit can be carried at sea and landed as either:

- Fillets, skin and scales on but must be a minimum of 30cm in length
- Trunked, skin and scales on but must be a minimum of 30cm in length
- Whole (can be gutted and gilled).

Fish without a size limit, such as tuna, can be filleted at sea providing the skin and scales are left on. The reason fishers need to keep the skin and scales on is so that DPIRD Fisheries and Marine Officers are able to identify the species of fish.

Fish with a maximum size limit, such as barramundi, blackspotted rock cod (malabar cod) and goldspotted rockcod (estuary cod), must be carried whole at sea, on estuaries and on rivers and landed whole, with the exception of gilling and gutting.

Possession limits and transporting fish

The maximum quantity of finfish you may have in your possession - either whole or in pieces - is:

- 20kg of fish fillets; or
- 10kg of fish fillets and one day's bag limit of whole fish or fish trunks; or
- two days' bag limit of whole fish or fish trunks.

If the quantity of fish stored in a single container/freezer exceeds one person's possession limit, the fish must be clearly labelled with the name of the owner (s) so that it is visible for inspection. Labels of at least 75mm long and 25mm wide must be attached to each package of fish.

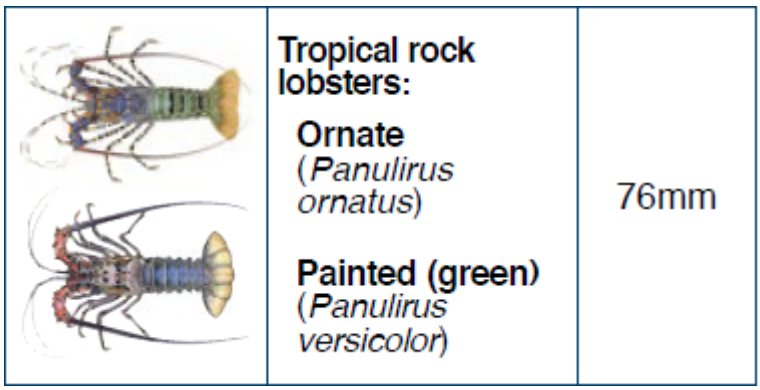
Recreationally caught fish cannot be transported unaccompanied or by commercial couriers. You must accompany your fish if transporting it by land, sea or air.

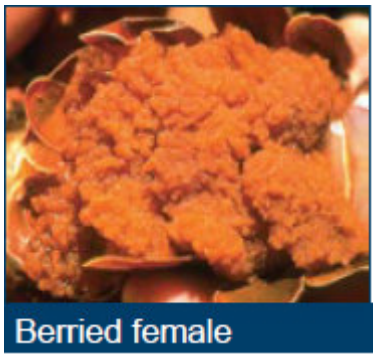
Previous page: Fish fillet over 30cm with skin and scales. Photo - DPIRD

Rock lobster reminder

Catching rock lobster is a popular Pilbara recreational pursuit. Remember that you require a separate licence to take rock lobster and divers can only catch rock lobster by hand, or by a hand-held snare or blunt crook.

The **minimum legal carapace length** for both western rock lobster and tropical rock lobster (ornate and painted) is **76mm**.




Berried female

Berried female rock lobster are totally protected and must be immediately returned to the water before you catch another lobster.

The boat limit for rock lobster is the maximum number of rock lobsters you may carry on a boat at any one time.

- If there is only **one licensed fisher** on board, the maximum is **one day's bag limit (8)**, including no more than **four** tropical rock lobsters.
- If there are **two licensed fishers** on board, it is **two days' bag limit (16)**, including no more than **eight tropical rock lobsters**.
- If **three or more licensed fishers** are on board, it is **three days' bag limit (24)**, including no more than **12 tropical rock lobsters**.

Rock lobsters must be kept and stored whole (with head and tail), unless they are at your principal place of residence (shell on), or are prepared for immediate consumption.

Within five minutes of a diver returning to the vessel the rock lobster must be tail clipped. Clip the central flap on its tail fan. This is done to identify the rock lobster as a recreationally caught lobster, which can't be sold.

For more information, contact the Department of Primary Industries and Regional Development Office in Karratha on (08) 9144 4337 or visit fish.wa.gov.au