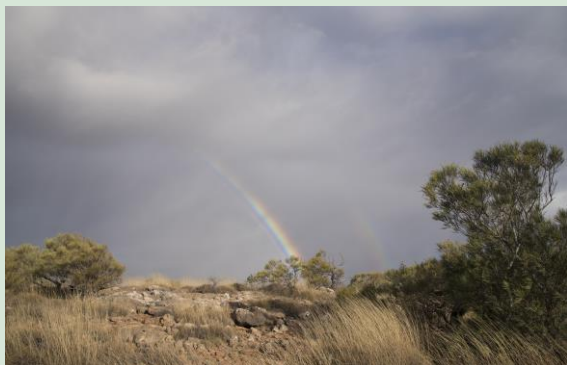


Bulhuwanguli (cold time) News | 2023

Nyinggulu seasons - Thanardinyunggujarri



Above: Rainbow over Cape Range. Photo – Amy Beck

It's **bulhuwanguli** (cold time) along the Nyinggulu (Ningaloo) Coast.

The easterly winds are blowing. It's very cold, the air is dry, now we turn to the land for food. **Warnan** (the winter rain) is a good source of nutrients for the **thanardi** (sea).

Hazel Walgar – Baiyungu Traditional Owner sharing knowledge on country

Environmental DNA (eDNA) sampling

Traditional Owners of the Nyinggulu (Ningaloo) Coast and DBCA have joined forces with UNESCO to better understand the biodiversity of Nyinggulu's thanardi (sea) Country. Nyinggulu is part of a global program of 22 World Heritage marine sites catching a snapshot of the biodiversity of fish and megafauna using eDNA.

Environmental DNA (eDNA) includes the genetic material naturally shed by marine creatures in waste, mucus or cells. Just one litre of seawater can determine the species in a given area without taking organisms from their environment.

In May 2023, seawater was collected from five sites at Nyinggulu between Bundegi beach and Osprey Bay. The samples were sent to a specialised UNESCO laboratory for analysis. Combined with ocean warming scenarios, a global analysis will be made of how climate change is affecting the world's most exceptional marine biodiversity.

Over 200 students, volunteers and Traditional Owners from 15 countries participated in the UNESCO eDNA initiative, including Australia (Ningaloo Coast, Shark Bay and Lord Howe Island), the Philippines, South Africa, Brazil, Belize, Germany, France and Bangladesh. Once the eDNA species lists are validated with marine World Heritage sites, the data will be openly available in the world's largest open science marine species database, the [Ocean Biodiversity Information System \(obis.org\)](https://obis.org) hosted by UNESCO.

Right: Baiyungu Rangers carrying out eDNA sampling on Nyinggulu thanardi (sea) Country.
Photo – Jackie Brown/DBCA



Black-flanked rock-wallabies thriving in Cape Range

Cape Range hosts one of the largest populations of the endangered black-flanked rock-wallaby (*Petrogale lateralis lateralis*) in Western Australia. Ongoing monitoring of the Cape Range population provides insight into habitat distribution, population numbers and health of these animals. The population in Cape Range is increasing in numbers and population due to successful predator control work (targeted at feral cats and foxes) by the Department.

Parks and Wildlife Service re-surveyed a site last year which was previously monitored in 2018. Over four nights, 26 individuals were captured, measured and had their health condition assessed. Of these 26 individuals, nearly 70% were new captures some of which were young wallabies in 2018 and are now strutting their stuff as adults and contributing to the population. To identify individuals and

build a profile on each over time, adult animals captured for the first time are marked with an ear tag.

Although the Cape Range black-flanked rock-wallaby population is doing well, they are still under pressure from feral animals and human disturbance. When visiting gorge areas of Cape Range, ensure you keep a lookout, stick to the paths, do not feed or approach wildlife and keep noise to a minimum. It takes everyone to look after these animals so future generations can also witness their beauty in the natural environment.



Above: Black-flanked rock-wallaby with ear tag. Photo – Scott Thomson

Understanding early human occupation of the Nyinggulu Coast

In May 2023, the Nyinggulu Joint Management team and Nyinggulu Coast Traditional Owners partnered with the University of Western Australia (UWA) for the Desert People project. The project brings together science and Indigenous knowledge to develop a better understanding of the long-term occupation by the Traditional Owners of Warnangura (Cape Range) spanning 50,000 – 60,000 years. The Nyinggulu (Ningaloo) Coast offers a unique insight into early human occupation and marine resource use throughout major climatic fluctuations, including sea level rise and fall.

The Desert People project led by UWA extends into the Pilbara and Western Desert regions and will build a clearer understanding of the 60,000-plus years of continual connection Aboriginal people have with Australian deserts.



Above: Baiyungu Traditional Owners and the University of Western Australia staff and volunteers out on Country for the Desert People project. Photo – Jenni Andrews/DBCA

Yardiyarra (dugong) distribution, population size and health at Nyngulu

In June 2023, DBCA's Marine Science staff teamed up with district staff and Traditional Owners to carry out aerial yardiyarra (dugong) surveys of the Nyngulu (Ningaloo) Coast including Exmouth Gulf and Ningaloo Marine Park (NMP) and Gathaagudu (Shark Bay). Since the late 1980s, aerial dugong surveys have occurred approximately every five years in Shark Bay to understand dugong abundance and distribution. Due to the possibility that dugongs move between Shark Bay and the Ningaloo Coast and Exmouth Gulf, these surveys were extended to capture these areas, with the last survey occurring in 2018.

The team completed four flights over NMP and three over Exmouth Gulf, observing many dugongs in smaller group sizes compared to the large herd (approx. 100 individuals) from the 2018 surveys.

Further to the aerial surveys, an on thanardi (sea) Country trip brought together Baiyungu Traditional Owners Hazel Walgar, Ethan Cooyou and Traezehl Kelly with Research Scientists Holly Raudino (DBCA Marine science) and Chris Cleguer (James Cook University). The trip provided an opportunity for traditional ecological knowledge and Western science exchange to better understand dugong distribution, movement and health in NMP and Exmouth Gulf.

This project is funded by the Australian Government's National Environmental Science Program (NESP).

Top right: Chris Cleguer (UWA) and Hazel Walgar, Baiyungu Traditional Owner sharing knowledge *Photo* – Miranda Edmonds. **Bottom right:** Yardiyarra (dugong) *Photo* - Holly Raudino/DBCA



School holiday fun along the coast

Over 300 kids and adults joined Parks and Wildlife Service these July school holidays for fun free activities along the coast. Visitors and locals participated in a range of activities, from taking a walk with Baiyungu Rangers, learning how Parks and Wildlife Service respond to whale disentanglements, searching for black-flanked rock wallabies in the gorges, making crafts, planting trees along the coast and much more.

The school holiday program aims to get locals and visitors of all ages involved to learn about the natural and cultural values of the Ningaloo Coast. To find out what is happening each holiday, please email exmouth@dbca.wa.gov.au



Above: Lauren, Kade and Spencer with Ranger Lyle taking part in the Seeds and Weeds School holiday activity at Coral Bay. *Photo* - Cait Taylor/DBCA

New species record for Cape Range

Introduced predators such as feral cats and foxes pose a serious threat to native fauna which inhabit the Ningaloo Coast World Heritage Area. Since 2014, Parks and Wildlife Service have been deploying Eradicat baits in the Cape Range area to reduce the number of feral predators across the landscape. The baits were deployed following extensive trials to measure bait impacts on non-target species, uptake by cats, and effectiveness at landscape control of cats. In addition to the baiting program, camera and track monitoring projects were developed to measure the program's effectiveness in Cape Range National Park. The resulting trends in detections show fox activity has been reduced to very low numbers on the Cape for the past 7 years. However, feral cat declines are difficult to maintain with rainfall and alternate prey.

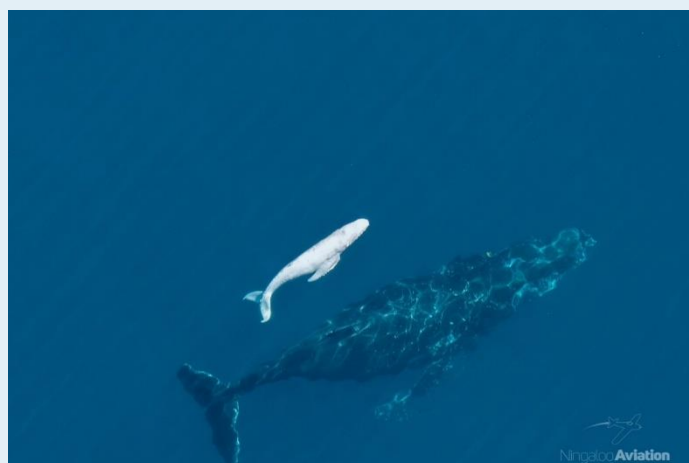
Surveys to monitor threatened species, including the black-flanked rock-wallaby and other small vertebrates, have also been implemented to monitor the recovery of native animals due to the reduction in introduced predators. Black-flanked rock-wallabies are now recorded across a much larger area and in higher numbers along the Cape. Small vertebrate surveys have recently detected species not previously recorded for Cape Range, such as the desert skink (*Liopholis inornata*) and the brush-tailed mulgara (*Dasycercus blythi*). Both survey results indicate that the vast reduction in fox and ongoing declines in feral cat predation have a positive impact on native animals, some of which have expanded in range on the Cape.



Above: The desert skink (*Liopholis inornata*). Photo - Lucy Clausen/DBCA

White whale spotted in Ningaloo Marine Park

A unique sighting of a rare albino humpback whale calf in Ningaloo Marine Park was captured this July. Whilst humpbacks typically have a white underside and a dark topside, this little guy/girl is entirely white! Humpback whales are a common sight along the Western Australian coast each winter as they do their annual migration from Antarctic summer feeding grounds to winter breeding and calving grounds of Ningaloo, the Pilbara Coast and as far north as the Kimberley. Please remember to follow the whale watching rules and that people are not permitted to swim with whales unless on a licensed tour. If you see a sick, injured or entangled whale, please contact the Wildcare Helpline on (08) 9474 9055.



Above: Albino humpback whale calf swimming in Ningaloo Marine Park. Photo - Ningaloo Aviation

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