Issue 9 - Autumn 2021

Welcome to the ninth issue of *Ngari Capes Marine Park News*

In this issue:

Above: Torpedo Rocks, Yallingup

Introducing District Manager Wayne Elliott

I grew up in Cape Town, South Africa close enough to the Atlantic Ocean that on most mornings, I awoke to the sound of the waves in Table Bay. My earliest childhood memories were been stung by jellyfish everytime I swam in the ocean and just how cold the Atlantic Ocean was.

Whilst at the University of Cape Town, I worked as a ranger at the Cape of Good Hope Nature Reserve. The reserve, now part of a larger national park was bounded by the Atlantic Ocean to the west and the Indian Ocean to the east which resulted in a very diverse marine environment. I had the privilege of monitoring the Black Oystercatcher population within a 7 km sanctuary zone and have fond memories of been the only person, apart from the baboons on the beach every day.

In later years, I worked for a provincial conservation organisation in KwaZulu-Natal, much like DBCA and was responsible, amongst other duties, for the overall management of the many marine reserves. My family and I moved to Western Australia in 2007 and I worked in the Wheatbelt until January 2015, when I moved to the Blackwood District.

I have a deep interest in the natural world and find the marine environment fascinating. We are very fortunate to have the Ngari Capes Marine Park to manage and despite the many challenges, it is an unique environment that we are very privileged to be part of.

No baboons but plenty of Oystercatchers!!

African Black Oystercatcher - Bird & Wildlife photography by Richard and Eileen Flack

The wreck of SS Pericles

The photo above was taken by Huw Porter of the SS Pericles.

Construction of the SS Pericles was completed in early June 1908. She was built by the same company as the RMS Titanic, by Harland and Wolffe in Belfast, United Kingdom.

At the time she was the largest ship in the Aberdeen Line fleet at a length of over 152m and a beam of 19m. She ran regular trips between the United Kingdom and Australia via Cape Town.

On the 31st of March 1910 travelling from East coast Australia to Fremantle in Western Australia she hit a then uncharted rock 6.5km Southeast of Cape Leeuwin. This was to be her final voyage. Heavily laden with a cargo of butter, wool, mutton and lead ingots only 25 minutes after the inpact the order was given to abandon ship. Miraculously there was no loss of human life. With the aid of bonfires lit along the beaches all the crew and passengers made it to shore. The only loss was that of the ships cat.

The wreck now lies over a large area approximately 180m long by 70m wide and in a depth of 35m at the Southern end of the Ngari Capes Marine Park. Due to its rugged location where the Indian and Southern oceans meet it is rarely dived.

On the 17th of April 2021 I was lucky to be one of ten keen divers that managed to carry out a dive on the wreck. It was a relatively calm day by cape Leeuwin standards. There was a great deal of excitement knowing we were dropping in right at the mixing point of two oceans. Very strong surface current made the entry a real challenge. We carried out live drops in small groups. Some of the team were initially swept away! It was that strong they had to be picked up then re-dropped. Once successfully down the decent line an extensive search of the wreck site was carried out. Despite how long the Pericles has been on the bottom there still remains a large amount of structure. The dominating feature being an engine block almost the height of a single storey house sat in the middle of the site. Adjacent to this are several of the large boilers still intact, along with the two prop shafts and large amounts of superstructure laid out across the low lying reef. Several sections have steel ribs rising up from the bottom. The site now supports an extensive array of marine life with large groups of Port Jackson sharks taking up residence in amongst the wreckage. There is a huge selection of reef fish typical of the area and a number of large wobbegong sharks.

The photo's above were taken by Aaron Goodhew of the SS Pericles.

The photo's above were taken by Huw Porter of the SS Pericles.

The SS Pericles is an amazing dive site not only rich in history but rich in life. The fact that conditions are rarely good enough for access and very few people have dived there makes it all the more appealing. This is one dive we won't forget. One day we will hopefully dive her again.

Article by: Aaron Goodhew, SouthWest WA Divers.

The photo above was taken by Huw Porter of the SS Pericles.

Eight new angel rings installed within Ngari Capes

New angel ring installed at Mitchell Rocks

In late February, marine park rangers installed eight new angel rings (lifebuoy) at various sites adjacent to the Ngari Capes Marine Park. These angel rings join an existing sixteen angel rings that were installed along the coast in 2017. It's hoped that these new angel rings will increase the safety of residents and visitors while fishing at popular rock fishing locations within the Marine Park.

The Department would like to thank the team at Recfishwest for their assistance with this project.

recfishwest

"Mutant" kelp found within the Ngari Capes Marine Park

Kelp forests are a defining feature of the Ngari Capes Marine Park and fuel productivity and life in the region. They provide shelter and food for numerous animals, and they actively remove carbon from the ocean and store it in their biomass. But some kelp forests in the Capes are a little bit different – and

scientists from the University of Western Australia and DBCA have just begun to explore why.

Image: A forest of mutant kelp observed during DBCA fish surveys in 2019. Red circles show the root-like growth at the end of the kelp leaves. Image: Sahira Bell, Ngari Capes Marine Park Technical Officer.

Golden kelp, *Ecklonia radiata*, is what we find along the Capes, and typically reproduces sexually: they produce male and female spores in their biomass, which get released into the water column where they float around and then settle onto empty patches of rocky reef. If a male and female spore settle close enough to each other, then a baby kelp begins to grow. But researchers have recently found kelp individuals who also reproduce asexually: which basically means they've started to clone themselves. Here, instead of releasing spores, a 'leaf' (technically called a lateral) of the kelp detaches itself from the stem and secures itself to the reef, where it then proceeds to grow into another kelp individual.

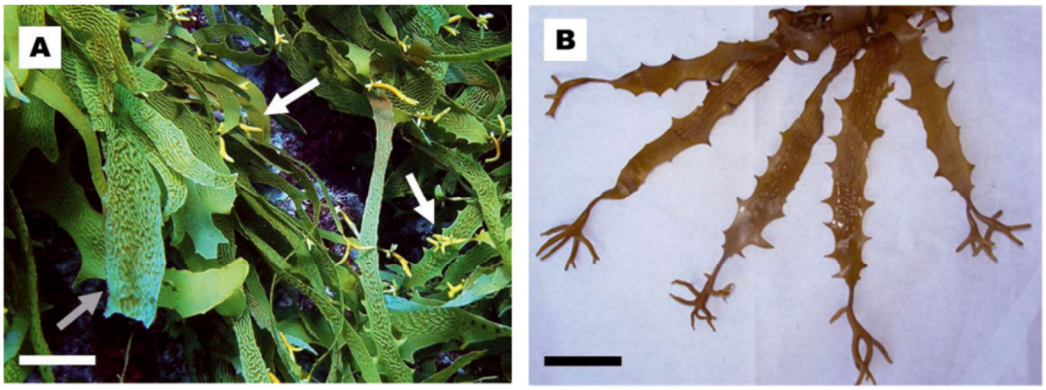
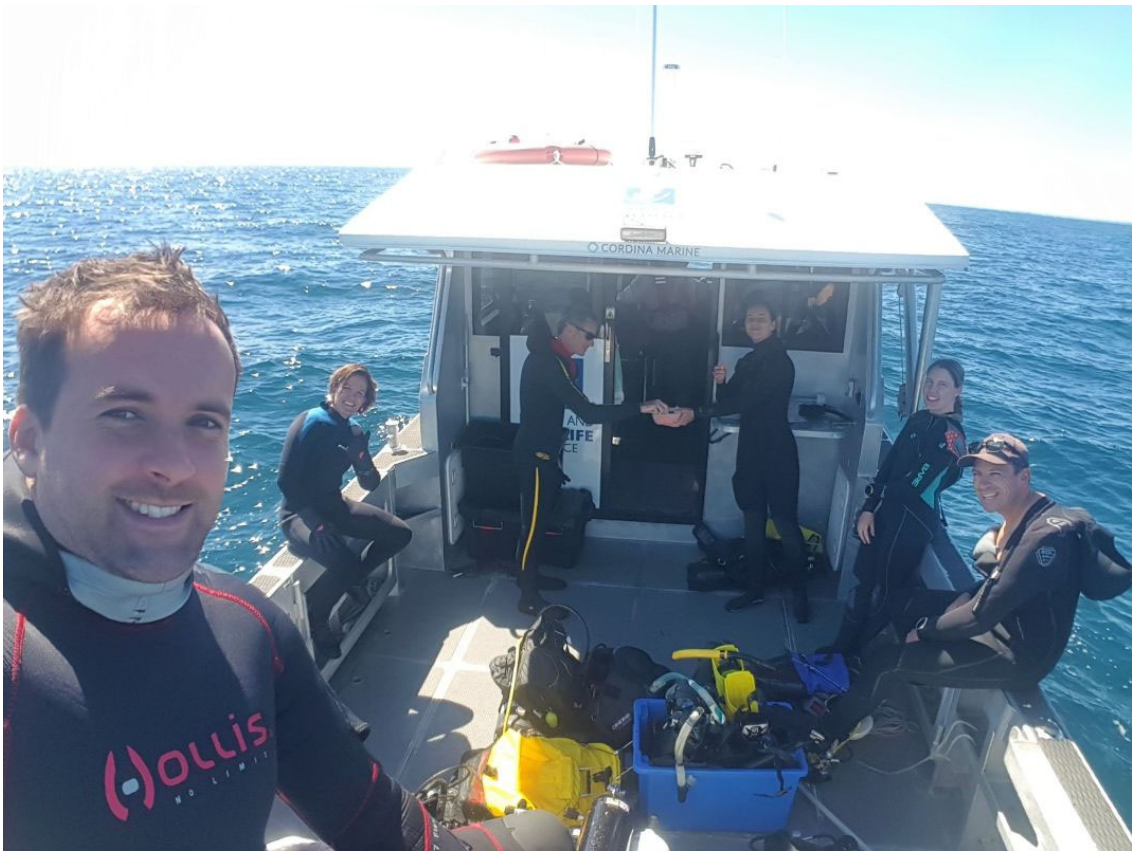


Image from Coleman and Wernberg (2018), https://doi.org/10.3354/ab00698. (A) normal and 'mutant' kelps found growing next to each other (white arrows indicate root-like growth structures, and grey arrow shows normal kelp 'leaves'). (B) a close up image of the unique kelp and the growth structures.

These 'mutant' kelps are so unique they've not been documented anywhere else in Australia, and so you can imagine the researchers are getting pretty excited about it. In order for them to start exploring why these unique kelps exist, they need to know which areas of the Marine Park they're found in. And this is where you can help! The unique kelps look a little different – they have small root-like growth (technically called holdfasts) at the end of their leaves. So, if you're spending time in the marine park and spot what you think is a mutant kelp, be sure to let us know! Our marine park covers huge expanses of kelp forests, and the scientists would value any help they could get with trying to put this puzzle together.

Article by: Sahira Bell - UWA Oceans Institute & School of Biological Sciences | Indian Ocean Research Centre M470 | University of Western Australia | Ngari Capes Marine Park Technical Officer.

2021 Ngari Capes Seagrass Monitoring



Surface interval snack during the deep seagrass surveys

The Ngari Capes team; Research Scientist Ben French, Associate Professor Kath McMahon, marine rangers Dave, Eden, Ian, terrestrial ranger Laurent and Volunteers Sahira, Caprice, and Anna Maria have been busy completing the 2021 seagrass monitoring in Geographe Bay. DBCA ran two concurrent monitoring programs, the first, in conjunction with ECU examines seagrass shoot density and canopy height at seven different sites in the shallow areas of the bay (3-5m) and the second examines 10 sites at deeper (10m) and deep (15-20m) sites and also records seagrass shoot density and canopy height. The dataset was established in 2012 which gives the department a good long-term dataset from which long-term change can be established. Research Scientist Ben French and GIS scientist Kath Murray at DBCA are currently developing a research collaboration with the Department of Water Environmental Regulation (DWER) which will enable the two departments to combine funds to complete a satellite mapping exercise of seagrass in the bay. Although the shoot density and canopy height provides a sensitive indicator of the seagrass condition, it is unable to pick up changes in total area of seagrass or estimate the current seagrass biomass and carbon sequestration capacity. By completing an accurate map of seagrass in the bay, and ground truthing the satellite imagery we will be able to combine this information with seagrass shoot

density and canopy height to determine total area, biomass and the amount of carbon currently locked into the seagrass habitat.

Photo of Associate Professor Kath McMahon at one of the shallow seagrass sites.

Woman in Science day was celebrated while completing seagrass surveys. Left to right: Eden Baxter, Anna Maria Frouws, Caprice Hyde and Associate Professor Kathryn McMahon.

Best science minds in underwater think tank

SCIENCE academics and practitioners from around Western Australia delved 8m underwater last Friday Night (19 Feb) to brainstorm marine research projects at the Busselton Jetty.

The Underwater Think Tank was a shark tank of activity as 25 professors, scientists and philanthropists gathered to discuss solutions to some of the world's current issues and how marine biology could be at the forefront of these.

WA Chief Scientist Professor Peter Klinken believes there could be a future in marine medicine, living under the iconic Busselton Jetty.

Photo from Busselton Jetty of Underwater Think Tank event

“I am very passionate about bioprospecting WA’s unique biodiversity to find new compounds that may act as antibiotics or anti-cancer drugs. How incredible would it be if one of WA’s major tourist attractions, the Busselton Jetty, was also able to be major research centre for drug discovery.”

“Research by UWA’s Dr Gavin Flematti has shown that some sponges from WA waters contain a compound which can inhibit the growth of breast cancer cells when tested in the laboratory. Who knows what new compounds could be found by examining other marine organisms?”

Professor Klinken’s sentiments were echoed by Jetty Marine Scientist Sophie Teede who has been looking at the potential of anti-cancer drugs being created from marine flora.

“There is a lot of evidence in Queensland, India and Singapore that shows the anti-tumour potential of marine algae-based compounds,” she said.

“Busselton Jetty hosts over 300 different species of marine life, some with unique properties due to the shade, shelter and Leeuwin Current. Even nudibranchs, contain bioactive metabolites at the microbial and molecular level that can treat human cancer cell lines.”

“There are also opportunities for aquaculture in sponge farming that could be sustainably grown for marine or medical products.”

Photo from Busselton Jetty of Underwater Think Tank event

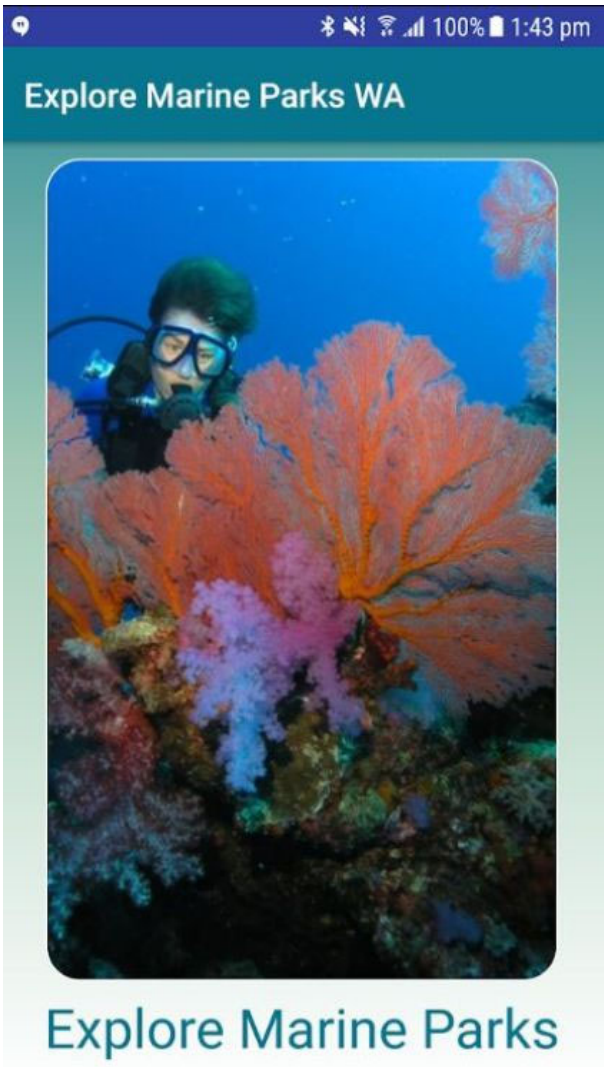
Busselton Jetty Patron and former WA Chief Scientist Lyn Beazley was excited about the new projects that could develop at the Jetty including the old Underwater Observatory being repurposed as a marine research centre once the new Australian Underwater Discovery Centre is built.

Focussing on Clean Oceans and environmental education of the public, the current Underwater Observatory is a unique location for scientists from around

the world to be able to work from and share their work and findings with over 700,000 Jetty visitors per year.

Article by: Lisa Shreeve, CEO – Busselton Jetty

Do you know about marine park sanctuary zones?



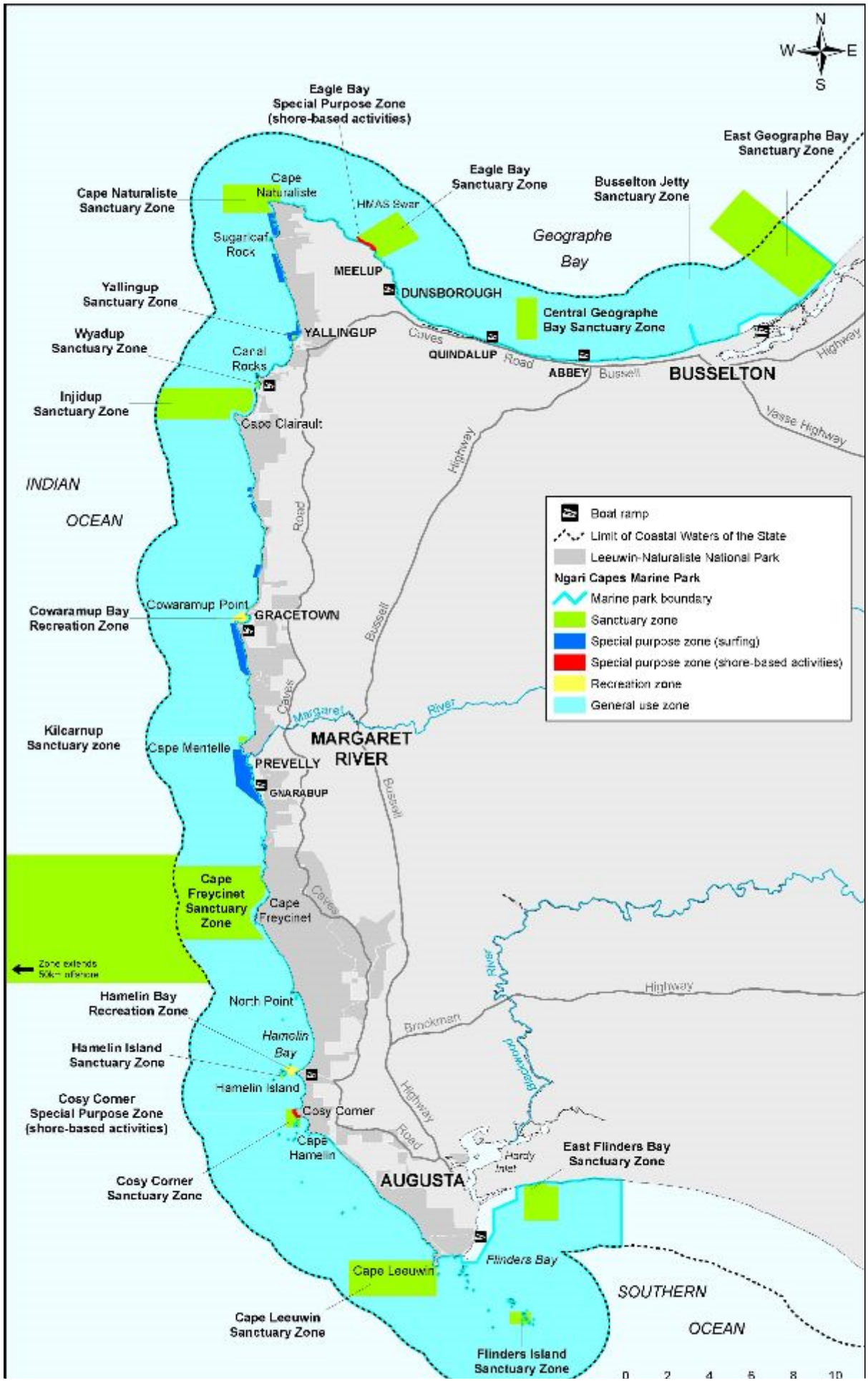
Before visiting any marine park, it's important to always 'know your zones' and find out what you can do in each zone. Since April 2020 the Ngari Capes Marine Park zones have been enforced.

These zones cater for a wide range of user groups from fishers, scuba divers and snorkellers to surfers and kayakers.
While allowing sustainable recreational and commercial activities, zoning also provides for conservation by establishing sanctuary zones for undisturbed nature study and passive enjoyment of the natural environment.

The map below is a great guide, however, if you require more information about the zones and what activities are permitted, for marine parks around the Capes or anywhere off the WA coast please download the Marine Parks WA App or call the Parks and Wildlife Service Busselton office on 9752 5555.

Get the app on iTunes

Get the app on Android


N
W
E
S
Eagle Bay
Special Purpose Zone
(shore-based activities)
East Geographe Bay
Sanctuary Zone
Eagle Bay
Sanctuary Zone
Busselton Jetty
Sanctuary Zone
Cape
Naturaliste
Cape Naturaliste
Sanctuary Zone
HMAS Swan
Sugarloaf
Rock
Geographe
Bay
MEELUP
DUNSBOROUGH
Yallingup
Sanctuary Zone
Central Geographe
Bay Sanctuary Zone
YALLINGUP
Caves
Wyadup
Sanctuary Zone
Canal
Rocks
QUINDALUP
Road
ABBEY
Busselt
BUSSELTON
Highway
Injidup
Sanctuary Zone
Cape Clairault
Vasse Highway
Highway
INDIAN
OCEAN
Road
Boat ramp
Limit of Coastal Waters of the State
Leeuwin-Naturaliste National Park
Ngari Capes Marine Park
Marine park boundary
Sanctuary zone
Special purpose zone (surfing)
Special purpose zone (shore-based activities)
Recreation zone
General use zone
Cowaramup Bay
Recreation Zone
Cowaramup Point
GRACETOWN
Busselt
Caves
Margaret
River
Kilcarnup
Sanctuary zone
Cape Mentelle
MARGARET
RIVER
PREVELLY
GNARABUP
Busselt
Cape
Freycinet
Sanctuary
Zone
Cape
Freycinet
Caves
Zone extends
50km offshore
River
Highway
Hamelin Bay
Recreation Zone
North Point
Brockman
Hamelin
Bay
Hamelin Island
Sanctuary Zone
Hamelin Island
Brockman
Cosy Corner
Special Purpose Zone
(shore-based activities)
Cosy Corner
Highway
Road
Cape
Hamelin
Hardy
Inlet
East Flinders Bay
Sanctuary Zone
Cosy Corner
Sanctuary Zone
AUGUSTA
Flinders Bay
Cape Leeuwin
SOUTHERN
OCEAN
Cape Leeuwin
Sanctuary Zone
Flinders Island
Sanctuary Zone
0 2 4 6 8 10

Above *Map of Ngari Capes Marine Park showing zones plus National Park Zones in adjacent Australian Marine Parks.*

Our mailing address is:
Department of Biodiversity, Conservation and Attractions
Locked Bag 104
Bentley Delivery Centre
Perth, WA 6983
Australia