



ow many Western Australians fully appreciate the fact that the marine ecosystems along our coast are both unique and pristine by world standards?

The offshore atolls in the Rowley Shoals Marine Park, for example, rise from tremendous depths to cradle colourful corals and fish in shallow lagoons, and are virtual 'aquariums' in the middle of the ocean! When you consider that most coral reefs throughout the world are being severely degraded by human activities, the Rowley Shoals—because of their isolation—provide one of the best chances to preserve a pristine coral reef system anywhere in the world.

Only in the Shoalwater Islands Marine Park can you find a chain of unique limestone islands within a stone's throw of a heavily populated urban centre (Rockingham) inhabited by an abundance of little penguins, Australian sealions, bottlenose dolphins and seagrass meadows, along with a fascinating temperate reef system.

Nowhere else in the world but in the Shark Bay Marine Park can you find two large shallow bays lying side by side that support the world's biggest meadows of seagrass, the most seagrass



species ever recorded in one place, a population of more than 10,000 dugongs, large marine mammals such as humpback whales and, of course, the famous bottlenose dolphins of Monkey Mia.

The Ningaloo Marine Park, Marmion Marine Park and Jurien Bay Marine Park are also unique. These amazing marine parks and the ecosystems that they protect are as different from each other—and as worthy of preservation—as the tingle forests of the Walpole-Nornalup National Park are from the gorges of Karijini National Park, or the limestone Pinnacles of Nambung National Park are from the beehive-like sandstone towers of Purnululu National Park.

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Main A green turtle.
Photo – Alex Steffe/Lochman
Transparencies
Inset Marine biodiversity on a temperate
reef, Marmion Marine Park.
Photo – Eva Boogaard/Lochman
Transparencies

**Left** A colourful sea slug in the proposed Dampier Archipelago Marine Park. *Photo – John Huisman* 

**Below** The proposed Walpole and Nornalup Inlets Marine Park. *Photo – Damon Annison* 

## Expanding WA's marine reserve system

The State Government has already significantly expanded the system of marine conservation reserves in Western Australia by establishing the Jurien Bay Marine Park, the Montebello Islands Marine Park, the Barrow Island Marine Park, the Barrow Island Marine Management Area and the Muiron Islands Marine Management Area. It also expanded Ningaloo Marine Park to include the entire 300-kilometre



**Right** A red firefish in the Rowley Shoals Marine Park. *Photo – Ann Storrie* 

length of Ningaloo Reef in the park and increased the area in the Rowley Shoals Marine Park to approximately 87,500 hectares—four times its original extent—in December 2004. You can find out more about these marine parks and reserves and their special values by looking in the Park Finder section of www.naturebase.net.

In addition to the world-class marine parks and reserves in WA already mentioned, many more of the State's beautiful and diverse marine ecosystems warrant protection. As a result, the State Government recently released indicative management plans for four newly proposed marine conservation reserves. This should result in the establishment of three major new marine parks and a marine management area over the next six to eight months.

They will be the Walpole and Nornalup Inlets Marine Park (due to be established in the very near future), the proposed Dampier Archipelago Marine Park and Regnard Marine Management Area (see 'Marvellous mangroves and mud: proposed Regnard Marine Management Area' on page 39) and the proposed South-West Capes Marine Park (encompassing the waters from Busselton, around the Naturaliste and Leeuwin capes to Augusta).

At the Walpole and Nornalup inlets, about 450 kilometres south of Perth on the south coast, tall forest meets the sea. The two estuaries are joined by a natural one-kilometre-long and twometre-deep channel, bordered by steep granite hills and rocky shores. These are known locally as 'The Knolls' and are covered with dense karri forest. The Walpole and Nornalup inlets form the only permanently open estuarine system in the south-west, so they experience marine-like conditions for most of the year and are more biologically diverse than most estuarine systems in south-western Australia.



The Dampier Archipelago Marine Park boasts the richest area of marine biodiversity known in WA, with a biodiversity comparable with that of northern Queensland (but with its own special suite of marine plants and animals). The Dampier Archipelago consists of 42 islands and islets, all within a 45-kilometre radius of the town of Dampier. Popular activities in the new marine park include boating, fishing, snorkelling and diving.

The soon-to-be declared Regnard Marine Management Area straddles the mainland coast west of Dampier and covers an area of about 62,000 hectares. It extends from Eaglehawk and West Intercourse islands eastwards to South

West Regnard Island, and seaward to about 20 kilometres from the coast.

If you take the plunge off the coast between the Leeuwin and Naturaliste capes, the underwater scenery is often one of grandeur. In this underwater wilderness, you may see kelp-covered reefs and drop-offs populated with fish species such as huge blue groper that are no longer commonly seen in the metropolitan area. The proposed South-West Capes Marine Park will also include the protected, northfacing Geographe Bay, the waters of which are regularly visited by the largest animals on earth, blue whales; the exposed open ocean shores of Flinders Bay with its typical Southern

Ocean suite of marine animals; and the productive Hardy Inlet at the mouth of the Blackwood River. The local community has been actively involved in the planning process for this proposed marine park, which will hopefully be established by early 2008.

#### Marine parks campaign

But it is not enough to simply establish new marine parks and reserves. They must be managed to ensure they remain in pristine condition and—because a handful of rangers in a boat can't possibly hope to monitor even a tiny fraction of the activities going on within a marine park on any given day—one of the most effective ways to do this is through community education and public awareness programs.

The centrepiece of the State Government's public awareness campaign on marine parks is a 30-second television commercial that is airing throughout WA. The aim of the television commercial is to inspire wonder about our amazing marine environment so that people care about setting it aside in marine parks and reserves and want to do the right thing when using these protected areas—

whether they enjoy diving, swimming, fishing, sightseeing, whale watching or other marine-based activities.

Because the concept of setting aside important natural areas in national parks is well accepted and understood, the campaign makes the link between national parks and marine parks. The advertisements look at some of our amazing national parks through the eyes of a marine turtle, who plunges into the ocean with its whale sharks, corals, tiny but endearing shrimps, huge whales, sealions and other marine wonders.

This high-profile advertising campaign has an important overarching role in tuning people in to the importance of WA's marine parks and reserves. However, if the State-wide public awareness campaign is to reach out to people in a way that cements these positive attitudes into sustainable behaviours in marine parks and reserves, it will need to be supported by effective community education programs on the ground. Managers of various marine parks and reserves understand this need and are introducing some excellent programs that help marine park users and local communities understand the importance of their local parks for marine conservation.

#### CoralWatch

One of the best ways to raise public awareness about marine parks is to get people involved in monitoring and management programs. Hence, in 2006 charter operators in the Rowley Shoals Marine Park were given the opportunity to trial a coral health monitoring program with their guests. CoralWatch is an organisation built on a research project at the University of Queensland that has developed a cheap, simple, non-invasive method of monitoring coral bleaching and assessing coral health. They have produced a coral health chart that displays a series of sample colours, with variations in brightness representing different stages of bleaching/recovery, based on controlled experiments. In the field, users simply compare colours of corals they see with colours on the chart and record matching codes. The colour coded coral health charts are simple and fun to use and are a great way for guests to contribute valuable data to the conservation of a pristine coral reef system. Several operators in the Rowley Shoals Marine Park have embraced the program and adopted a site.

The data is returned to Fiona Galloway, the Department of Environment and Conservation's (DEC's) Marine and Coastal Reserves



**Left and below** Guests on a Kimberley charter monitor the health of corals in the Rowley Shoals Marine Park using CoralWatch charts (below).

Photo – Fiona Galloway/DEC





Officer for the West Kimberley, who inputs it into the global database (www.coralwatch.org) under the location and company's name. Crew and guests can check the website and see their data and changes over time. It is hoped that participation will continue to increase in 2007.

#### **Blessed Jurien**

One marine park that enjoys excellent local support and awareness is the Jurien Bay Marine Park. Here, local managers place strong emphasis on educating the local community about the importance of the marine park, the need to observe sanctuary (no take) zones and how to behave appropriately in the park (such as properly disposing of plastic bags that could kill marine animals).

The whole Jurien Bay local community celebrates the local Blessing of the Fleet in November each year. In addition to setting up a big information tent, the local DEC office takes this opportunity to distribute showbags containing educational material on the magnificent Jurien Bay Marine Park. As well as including some fun things for kids-such as balloons, rulers and even yoyos with marine park messages on them-the showbags unashamedly target boaters and fishers, with key-ring bottle openers and tubes of sunscreen with the message 'Know your zone' emblazoned on them.

Jurien Bay Marine Park staff also run a program over the summer school

**Above** Giant inflatable whale shark in DEC's marquee at the Whale Shark Festival in Exmouth.

Photo – Jamie Campell

**Right** A ranger shows some of the marine animals of the Jurien Bay Marine Park to members of the public. Photo – DEC

holidays with fun and exciting activities for the kids (and big kids too) that promote the natural attractions and biodiversity of the region. Participants can get up close to a variety of marine life such as sea stars and sea urchins through touch pools that are set up by local staff.

DEC Marine Park Coordinator Kevin Crane said the park has a number of unique habitats and attractions, as well as some rare and endangered plants and animals.

"Teaching people about these species and habitats and what is being done to ensure they are conserved for future generations is an important part of the department's role."

#### Ningaloo

Ningaloo Marine Park also runs a hugely successful school holiday program in Coral Bay and elsewhere, with touch pools, presentations on whale sharks and manta rays and fun marine-based activities. The marine park has a full-time education officer, Jamie Campbell.



As whale sharks are among Ningaloo's biggest attractions, the Whale Shark Festival, held in Exmouth in May each year, is another vehicle to spread the message that our marine parks are important and need protection. More than 1000 people enjoyed the displays in DEC's huge marquee, which included a 10-metre inflatable whale shark on loan from researcher Brad Norman, information about satellite tracking, and microscopes looking at the whale shark's main food source, plankton. There were also presentations on the biology of the whale shark and why there are codes of conduct for swimming with these massive creatures.

Other important public awareness initiatives at Ningaloo include information at boat ramps promoting sanctuary zones, a fledgling Marine Community Monitoring program that helps to promote caring for the marine park by involving members of the public in ongoing monitoring, and the



**Left** A volunteer measures a nesting loggerhead turtle on the shores of Shark Bay Marine Park during the 2007 *LANDSCOPE* Expedition. *Photo – DEC* 

**Below left and below** A touch pool alongside Marmion Marine Park (Trigg Beach) during one of *Nearer to Nature's* marine education activities. *Photos – Marie Milagro/DEC* 



annual turtle monitoring in the park, in which 118 volunteers participated this year.

#### **Shark Bay**

Internationally renowned for its bottlenose dolphin population, and positioned within the Shark Bay Marine Park, Monkey Mia is an ideal location to educate the 80,000 visitors who flock to the area each year about the importance of marine parks. Regular school holiday programs are conducted at Monkey Mia and include beachcombing, touch pools, creating a marine creature and other fun activities. The Monkey Mia Visitor Centre has interesting marine-based displays and high visitation.

Each year, DEC's Shark Bay District Office also leads two *LANDSCOPE* Expeditions, giving paying volunteers the chance to help monitor Australia's largest loggerhead turtle rookery on the northern tip of Dirk Hartog Island.

#### Nearer to (Marine) Nature

In the Perth metropolitan area, on the shores of Marmion Marine Park (which extends from Trigg Island to Burns Beach) and Shoalwater Islands Marine Park (offshore from Rockingham), people can learn about the wonders of the surprisingly diverse marine environment in our metropolitan waters.

DEC's Nearer to Nature's fun, interactive, marine activities look at rock pools and rock crabs, sea stars and sea squirts and also involve beachcombing and beach games.

Nearer to Nature's knowledgeable guides are also able to go to schools and other group venues for activities such as 'Flotsam and Jetsam', 'Legends in Limestone' and 'Swell Shells'. All of the programs are interactive, fun and a great way to explain the need for marine parks and reserves while also helping people understand the need to have fun in these areas in a sustainable way.

These are just a few examples of the kinds of initiatives that are being undertaken, both in our lounge rooms and in or adjacent to marine parks and reserves throughout the State.

While the marine environment is fascinating, many people do not think much about it or see it as something that we must all collectively take care of. The public awareness campaign on marine parks will help us all understand that, so we can enjoy unspoilt marine environments for all time, we need to act now, for the future.



Carolyn Thomson-Dans is Marine Communications Officer for DEC and a longtime contributor to *LANDSCOPE* magazine. She can be contacted on (08) 9336 0121 or by email (carolyn.thomson-dans@dec.wa.gov.au).

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For further details about the Nearer to Nature program phone (08) 9295 2244 or send an email to n2n@dec.wa.gov.au. For more information about LANDSCOPE Expeditions phone (08) 9334 0561.

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