GOVERNMENT OF WESTERN AUSTRALIA
Department of **Fisheries**
Department of **Parks and Wildlife**
Department of **Regional Development**
ROYALTIES FOR REGIONS

Ngari Tales

News from the Ngari Capes Marine Park

No. 5: Summer 2015

Welcome to the fifth issue of *Ngari Tales*, a newsletter for everyone who wants to know more about the Ngari Capes Marine Park: one of Western Australia's most recently created State marine parks, located in the south-west of WA.

Bay Ok Day 2014 celebrates science and sustainability

Blue and humpback whale sightings and a flare demonstration from Busselton Volunteer Marine Rescue Group were all part of the fun when 750 Dunsborough Primary School students (from Kindy to Year 7) descended on Geographe Bay in Old Dunsborough to celebrate Bay Ok Day 2014 on 7 November.

The annual event is held as a celebration of science and sustainability, and to recognise the school's status as 'Bay Friendly School', part of Geographe Catchment Council's *Bay OK* program, which encourages the local community to take care of Geographe Bay.

A range of interactive marine and environmental education activities were held by staff and volunteers from Surf Life Saving WA, South West Catchment Council, Geographe Catchment Council, Tangaroa Blue, Dunsborough Coast and Land Care, Geographe Community Landcare Nursery and Western Whale Research.

Dunsborough Primary School students learning about their Ngari Capes Marine Park.

The Ngari Capes Marine Park's mascot, Westy the Weedy Sea Dragon, also appeared, to the students' delight. The Department of Fisheries led sustainable fishing and catch care activities to teach students about fishing for the future.

Dunsborough Primary School students learn about sustainable fishing with local fishing school owner Floyd Irvine.

"The day is a magnificent example of how a community can come together to achieve so much with our students, in a fun way," said Helena Nicholson, the Dunsborough Primary School Sustainability Leader and event coordinator. "The students, as they move up through the school, are exposed to the full gamut of marine, environmental science and sustainability experiences, ensuring that by the time they leave the school they have a broad education. The Southwest Catchment Council signature live show, 'Captain Coastcare and Dune Dude' sets the tone with the Kindy and Year One students. The School is extremely grateful to the providers and volunteers, and the students see the day as a highlight of their year."

The day ended with an Eco Paddle Board competition. Year 6 students worked together to construct two full-sized stand up paddle boards out of recycled 1.25 litre bottles and two students were chosen to race around a marker in the water.

The students' enthusiasm for their marine environment is very impressive. It's obvious that the Bay OK Day is helping to ensure that the next generation care about the future of our oceans.

Intertidal Rocky Reefs of the Ngari Capes Marine Park

The intertidal rocky reefs throughout the park provide homes for a multitude of invertebrates (animals without a backbone), such as sea stars, anemones, sea snails and limpets.

Limestone reefs can extent over 100 metres from the shoreline and the outer edge typically forms a distinctive submerged, undercut ledge. The varieties of algae on the inner reaches of these platforms can differ from those on the outer regions, and areas with high wave energy and exposure can host different invertebrate organisms from those found on more sheltered reefs. Likewise, the granite rocky shore line can consist of steeply sloping, large granite boulders or level fields of small cobble-like boulders, all of which are inhabited by invertebrates.

Photos: Cindy Bessey

Intertidal rocky reefs.

District staff of the Department of Parks and Wildlife and marine scientists from the Parks and Wildlife Marine Science Program have started a survey of intertidal reef invertebrate communities. Staff will be out sampling organisms in the various habitats of the intertidal zones in the marine park to quantify the species that inhabit the coastline from Geographe Bay south to Flinders Bay.

Field work began in November and will continue through until February 2015. The survey results will give the Department a baseline of intertidal habitats and organisms within the park, enable comparisons from earlier studies, and provide a means to evaluate any changes in the abundance and diversity of intertidal reef organisms in future.

If you see Department of Parks and Wildlife staff out on the reef during these surveys, please feel free to come by and talk to them. They will be happy to introduce you to the intertidal organisms and provide some interesting facts about the inhabitants of your Ngari Capes Marine Park.

Photos: Cindy Bessey

Staff survey reef communities.

Creature feature: Sponges

Sponge garden.

Sponges belong to the Phylum Porifera meaning ‘pore bearer’. Often mistaken for plants, sponges are very simple animals commonly found by beachcombers because their skeletons are strong enough to survive the waves that wash them ashore.

Sponges are the simplest form of multicellular animal and have no mouth, internal organs or nerves. Instead, they have a body that is punctuated with microscopic holes or pores. These holes allow them to feed by filtering floating organic particles and plankton from seawater. Even small sponges can filter hundreds of litres of water a day.

Embedded in the bodies of some sponges are microscopic structures called ‘spicules’ that provide a support or a ‘skeleton’ for the animal. These hard spicules are made of either calcium carbonate (limestone) or glassy silica, and vary in size and shape. Many are needle-like rods with pointed ends that can severely irritate the tissues of other animals, helping to deter predators.

Worldwide there are about 7,000 described species of sponges, although at least twice that number are thought to exist. In Australia there are around 1,500 described species.

All sponges are aquatic, with the vast majority being marine species. Sponges have adapted to all marine environments, from near shore to the ocean depths. They form an important part of the marine ecosystem, providing food and shelter to many animals such as fish, crustaceans, echinoderms, marine worms and molluscs. Sponges also play a vital role in filtering bacteria and organic particles from the water.

Encrusting sponge on reef.

Near the shore, sponges tend to encrust rocks and other structures. In shallow and deep seas, the forms vary from spherical, finger-shaped, bushy or tree-like, tubular, cup-shaped or funnel-shaped. Their texture varies from soft and readily compressible to as hard as stone.

Encrusting sponge on reef.

Sponges can be male, female or hermaphroditic (producing both sperm and eggs – usually at different times to avoid self-fertilisation). Sperm are shed into the water to fertilise the eggs of another sponge. Fertilised eggs develop into tiny larvae, which may survive for several days. When they reach a suitable place the larvae settle and grow into adult sponges. Occasionally a small 'bud' can break off a sponge and grow into a new sponge, demonstrating an ability to reproduce asexually.

Nyoongar names for newly classified sponges

Article originally published in Science Network WA
Written by Teresa Belcher

Two new species of marine sponges, found only in the south-west of Western Australia, have been identified and named in recognition of the Aboriginal peoples who are the traditional owners of the region.

The sponges, identified by scientists at the Western Australian Museum and the WA Department of Fisheries, were found to be unique to the south-west of Australia and different to any other sponge species in the world.

After consultation with the local Nyoongar people via the WA Museum Aboriginal Advisory Committee, the sponges were named *Haliclona durdong*—durdong meaning green and *Haliclona djeedara*, the latter meaning brown.

Photo: Dave Abdo

***Haliclona durdong*, named for its green living colour, photographed at Hamelin Bay.**

WA Museum's senior curator of marine invertebrates, Dr Jane Fromont, says both species belong to the Chalinidae group of sponges and have been described in a paper published in the international journal Zootaxa.

Photo: Dave Abdo

***Haliclona djeedara*, located at Rottnest Island, named for its brown living colour.**

Department of Fisheries research scientist Dr Dave Abdo undertook his PhD research on the ecology of both species, and it was during this work that classification of the sponges was necessary.

"They use silicon dioxide absorbed from seawater, to construct simple, needle-like components called spicules to build the skeletons that look like ladders," Dr Fromont says.

These spicules are key to identifying sponges as well as the physical morphology.

"We examined type descriptions and type material to compare the sponges and found that they were definitely new species.

"Not only did they have different sized spicules, they have different morphological characters, different chemistry and they reproduce differently," Dr Fromont says.

When a new species is described, a single 'holotype' specimen that has all the characteristics encapsulating the unique species is designated and lodged in a collecting institution, usually a museum for animals or a herbarium for plant specimens.

Both species are known to occur along the WA coast between Jurien Bay and Bremer Bay, with *Haliclona durdong* initially collected in the 1980s receiving immense interest by chemists due to a natural product known as salicylihalamide A.

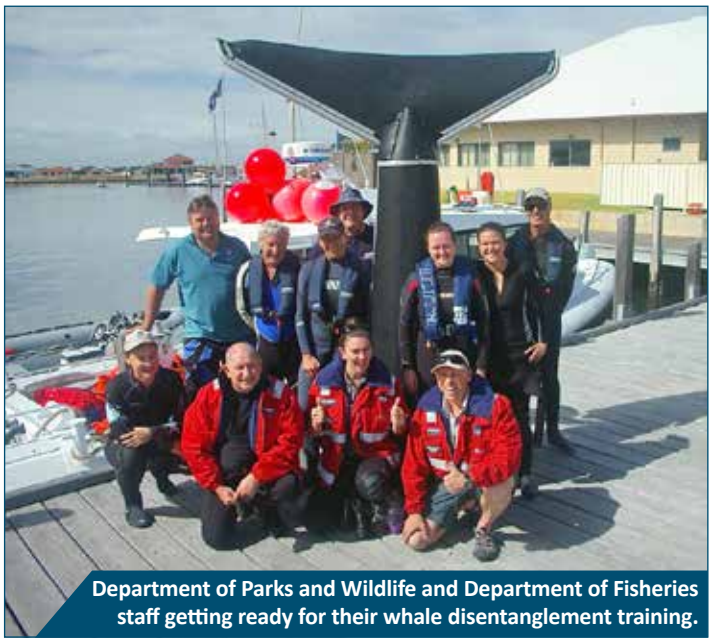
Since sponges are ancient and sessile animals, some use the chemical salicylihamide A to defend themselves. The compound could also have other potential uses.

"Scientific research using this compound is ongoing, in particular investigations into its uses relating to health issues such as osteoporosis, renal disease, HIV infection, and tumour metastasis," Dr Abdo says.

The description of these two new sponges brings the species of *Haliclona* in Australia to 25.

Whale disentanglement training in the Bay

Department of Parks and Wildlife and Department of Fisheries staff recently attended whale disentanglement training in Geographe Bay.



Department of Parks and Wildlife and Department of Fisheries staff getting ready for their whale disentanglement training.

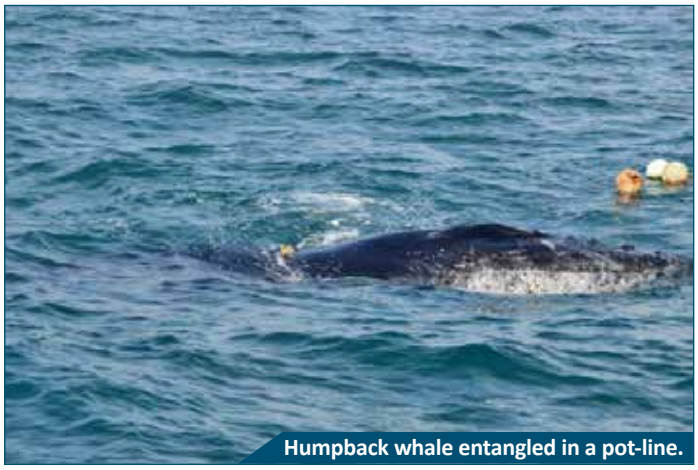
The trainer was Parks and Wildlife's Large Whale Disentanglement Response team leader Doug Coughran, who has over 30 years of experience rescuing whales in the southern and northern hemisphere.

Mr Coughran's nationally accredited training program aims to teach people how to rescue whales in a safe way.

Old ropes and floats and a large model whale tail, towed behind a boat, were used to simulate an actual entanglement.

A statewide approach by the Department of Parks and Wildlife to train staff in all WA marine parks in the safe disentanglement of large whales in now under way. For the first time, two Fisheries and Marine Officers also attended the training, with more officers expected to follow.

During the southern migration this year, two humpback whales were successfully disentangled on separate occasions by Parks and Wildlife and Fisheries staff in Geographe Bay.



Humpback whale entangled in a pot-line.

The whale raises its tail fluke after being freed.

People who see an entangled or stranded whale should keep a safe distance from the animal and contact Parks and Wildlife's Wildcare Helpline on 9474 9055.

Further information

For more information about the Ngari Capes Marine Park or to register to receive this newsletter electronically contact:

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