

MARINE & COASTAL CONNECTIONS

ISSUE #1 MARCH 2020

Produced by MESAC: Marine Education, Science and Community Centre. Melbourne, Victoria



Photograph: Peter Weinstock

Follow us...



In this issue

- Feature: Rakali
- Shark expert
- Bluebottles
- Great Southern Reef
- Longfin Pike
- Anchor Farm
- Seals in the Yarra
- Fossil finds
- Upcoming events

Rakali, our native otter

Along the Port Phillip Bay coastline lives a unique indigenous otter-like water mammal called a Rakali. They are easily identified in the water by their long bodies and the distinctive white tip to its tail.

The best time to see them is at dusk and dawn, although many have been seen during daylight hours. If you see a Rakali then please report your find to www.rakali.com.

More about Rakali on page 4.



Professor Shaun Collin, shark expert

MESAC has invited Professor Shaun Collin, world renowned shark sensory expert, to speak about his latest research at our National Science Week event in August.

[Professor Collin](#) uses innovative techniques in anatomy, electrophysiology, bioimaging, molecular biology and behaviour to understand the evolution and mechanisms of neural processing for a range of senses.

Look for updates on our website and Facebook page, and contact us to be added to our email database.

MESAC acknowledges the Bunurong people as the Traditional Custodians of the land and waters around Ricketts Point. We pay our respects to their Elders, past, present and emerging, and we pledge to care for and protect the delicate and diverse life inhabiting this sacred place. We also recognise the Traditional Custodians of lands and waters across the globe.



Bluebottles head south

Normally more common in NSW and Queensland, beachgoers across Victoria are reporting bluebottles sightings (and stings!), from Gunnamatta to Torquay and Port Phillip Bay.



Photograph: Ray Lewis

Bluebottles have a gas-filled bell that floats above the surface of the water, attached to bright blue, long, thin tentacles.

Technically, they are "siphonophores" and beneath the bell are several types of polyps with different functions, including eating, digesting, and reproduction.

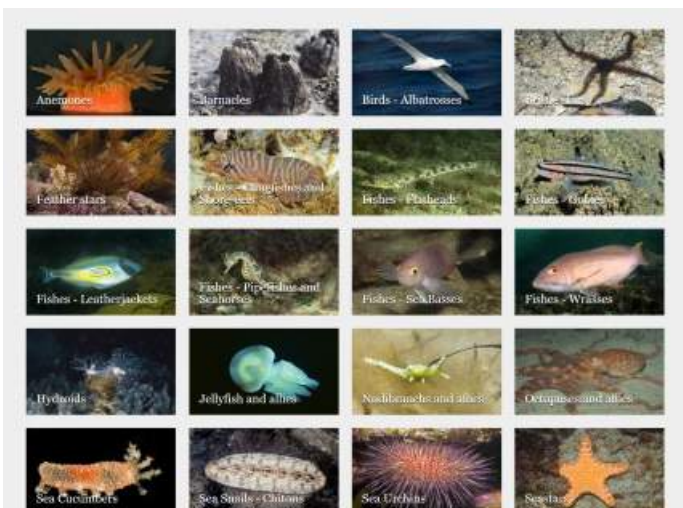


Bluebottle Watkins Bay. Photograph: Ray Lewis

What (and where) is the Great Southern Reef?

It's bigger than the Great Barrier Reef and home to many unique marine fishes, invertebrates and algae, but many of us have never even heard of it. In Park Watch magazine <https://bit.ly/33s6EUl> Reef Watch's Nicole takes us for a dive with a temperate twist (pages 35–37).

The Great Southern Reef is a massive series of reefs that extend around Australia's southern coastline, covering around 71,000 square kilometres from New South Wales to Kalbarri in Western Australia. The reef's main feature is its extensive kelp seaweed forests that are some of the most productive ecosystems on the planet. <https://www.science.org.au/curious/earth-environment/whos-heard-great-southern-reef>



Port Phillip Species look-up

Have you seen something in Port Phillip Bay that you can't identify?

The rich and diverse habitats of Port Phillip are home to a huge array of marine animals and plants. The Port Phillip Taxonomic Toolkit provides information, data, images and tools to help identify, document and monitor the rich marine life of this bay and nearby coastal waters.

portphillipmarinelife.net.au



Pike in the Sanctuary by Tim Forster

Pike like quiet waters. There are 3-4 individuals that sit inside the reef at Beaumaris Yacht Club at high tide. They seem to be perennials, there all year around. These are long-fin pike (or yellow-fin pike) and are seen in pairs or individually. These are different to the schooling short-fin pike or snook.

On my snorkels from Quiet Corner down to the Yacht Club I have come across a sparse school of about 30 pike, sparse because they are spread out. Individuals can up to 1 meter! These also seem to be perennials as I last saw them late May when a lot of fish have moved off elsewhere (but who knows where?).

It is a long swim from Quiet Corner to the Yacht Club. I wear a 7mm wetsuit, hood, gloves, boots and a shoulder style weight belt. I avoid weekends because of boat traffic and make it early in the day as the pike are just sitting around at this time. You need to be quiet, drifting without much fin action and have sharp eyesight. Location is loose, I'll share

this, but if they get disturbed too often they will move off. I think they like the marine reserve waters because there are no boats and spear fishermen. Swim out to the end of McGregors Rock, turn left to the Yacht Club, and about one third to half way down you'll come across them, between McGregor and Surf Avenues. I don't have any photos, as they're hard to get close to.



Photograph: Richard Ling, inaturalist.org

Seals in the Yarra

Seals have been seen near Princes Bridge during spring for the second year running!



Photograph: Megan Hollole



Photograph: Tim Forster

Anchor Farm at Pope's Eye

There are 13 anchors near Popes Eye in an area is known as the "Anchor Farm".

Two plaques provide information on the anchors. Most were discovered in shipping channels, or near piers as a result of the Channel Deepening Project undertaken by the Port of Melbourne. As they posed a potential hazard to navigation, they were relocated to create the Pope's Eye Anchor Farm.

Rakali, our 'native otter'

by Bob Tammick

The Rakali is known as the Australian water-rat, but we like to think of them as our native otter! The name rakali, from the Woiwurrung language, was adopted in 1995 by the Australian Nature Conservation Agency. Other Aboriginal names include Ngurju, Ngoor-joo and Murit-ya.

The scientific name for the akali is *Hydromys chrysogaster*, meaning "water-mouse with golden belly". It's a lovely description though not always accurate as there can be considerable variation in coat colour, and some don't have a golden belly. Their colour ranges from black/dark brown with a golden or orange underside to grey/brown with a creamy white underside. They are also considerably bigger than a mouse - in May 2006, during the Bayside Rakali Survey, one male tipped the scales at over a kilo, or 1120 grams to be exact!



Photograph: Peter Weinstock

Rakali, like the platypus, are highly adapted for aquatic life, and together these two species are the most specialised amphibious Australian mammals. Rakali have partially webbed hind feet, small retractable ears, and fur with a dense water-repellent underlayer. Their tail is often as long as the body and is thick and well covered by dark hair, usually with a prominent white tip. The rakali's tail acts like a rudder when they are swimming or diving for food.

Rakali are extremely versatile hunters, taking most of their food from the water. Their diet consists of large aquatic insects, small fish, yabbies and even birds in an aquatic habitat, and crabs, worms, mussels and fish from a marine habitat. Sometimes they can be seen scavenging fresh fish remains from fishermen's catches. Food is often carried to platforms near the waters edge where it is eaten.

Remains of a meal consisting of inedible items such as shells and crustacean carapaces are left as 'middens' on these feeding platforms.

Rakali can be found throughout much of Australia and Papua New Guinea. They inhabit streams, rivers, wetlands, estuaries, bays and offshore islands in both fresh and salt water. In the City of Port Phillip, rakali can be found in St Kilda Harbour, Elwood Canal, Albert Park Lake and Port Melbourne foreshore. They don't stray too far from water but have been observed on the top of the St Kilda Breakwater, St Kilda Pier and on Elwood Canal foot path.



Photograph: Peter Weinstock

The best time to observe Rakali is just a little before sunset - though some observers have seen them foraging during the daytime.

Rakali reporting

When you see one of these enchanting native animals please quickly go online to the website below and let this great group know about your sighting. www.rakali.com/ It is important to know where they occur and to monitor their numbers as accurately as we can.



Photograph: Peter Weinstock



Beach Clean Up - Thank you!

Thank you to everyone who joined the October and November Beach Clean events. In October, the beautiful weather helped draw nearly 40 adults, teens and children out to Ricketts Point for a great cleanup. We welcomed new members and even had two new-born twins strapped to mum and dad. Lots of small plastics were collected, and even though not all buckets were full to the top, every small piece of rubbish collected means one more marine animal is potentially saved from ingesting it. So, a great job by all!

Shockingly, we all collected more than 600 cigarette butts and four empty packets. We are seeing some wonderful efforts from businesses to make straws an option only for people in the community who need them. But we are still seeing many turn up on our beach. We collected 26 straws.

On top of the confectionary wrappers, which made up the majority of rubbish, we also collected 14 bottles (plastic and glass), a few coffee cups and lids, fishing wire, four socks, thongs and old beach toys.

Please look out for the next event & invite your family and friends to join us. We look forward to seeing you all!

Kate McPherson. 3193@beachpatrol.com.au

Upcoming events

<http://mesac.org.au/events/>

May 9-10th: 5th annual Marine Art Show

May: Ricketts Point National Heritage event [Aboriginal heritage, geography, fossils]

June: 5th Winter Solstice Walk [geomorphology, fossils, history]

June: MESAC hosting North Carolina Teachers Bayside visit

July: Seaweed identification, pressing and art workshop

August 15-23: National Science Week event

August: 2nd BESS annual Fossils Expo

November: MESAC 3rd annual Marine Photography course

Beaumaris Bay keeps giving to science

Specimens new to science are regularly found by members of Bayside Earth Sciences Society Inc. and donated to Museums Victoria. A major recent find by one of our younger members was of a Delphinoid periotic (Dolphin earbone). This earbone is less than the size of a 10 cent piece and was washed up in the gravel on the beach. Earbones are a good method of identification. This earbone has similarities to the modern day La Plata River Dolphins inhabiting the coastal waters of Brazil, Argentina and Uruguay.

Today Port Phillip Bay has its own unique variety of Dolphin (*Tursiops cf australis*) which was only recognised in 2011. For further information on Beaumaris Bay fossils visit our website <http://www.beaumarisfossils.org>.

Murray Orr, President, Bayside Earth Sciences Society Inc (BESSI).



Photograph: Museums Victoria

A glimpse of the past: Beaumaris Beach 5 million years ago

Based on fossil finds in the area, Beaumaris was once home to 15-metre sharks, dugongs, killer sperm whales, pelagornis (giant, bony-toothed sea birds) and giant marsupials.



Beaumaris Beach 5 million years ago. Image by Peter Trusler/ Museum Victoria



Spider Crabs... update

Following recent reports of people taking large numbers of spider crabs during their mass migration, Sophie Paterson from the office of Clifford Hayes MLC has asked the Minister:

“Will the Minister undertake or fund research into the Giant Spider Crab migration in Port Phillip Bay over the winter months, and review the effectiveness of current legislation and regulations in protecting these crabs from overfishing? Will the Minister reduce the bag limits on the crabs from 30 per fishing license per day, to provide interim protection for the crabs until the research and review has been completed?”

We will keep you posted about the response.



Photograph: Megan Hollole

Cone Shell behaviour

This is an exceptionally good demonstration of cone shell behaviour (by DeepLook): <https://youtu.be/jYMjLgPFSso>



Image: <https://www.ecomagazine.com/>

About MESAC

MESAC conducts a range of marine-oriented events including marine science presentations, guided walks, photography courses, school activities, publications, videos, and marine art events.

The goal of MESAC is to create a world-class venue in Bayside, with facilities for marine science, citizen science, school activities, a centre for disabled diving and a home for local marine environmental groups. The centre will be a joint redevelopment by the Beaumaris Yacht Club and MESAC.



From the Editors

Welcome to our first MESAC Marine and Coastal mailer, edited by Ray Lewis OAM and Dr Toni Roberts. We aim to focus on citizen science matters of local, national and international interest.

We hope you enjoy this issue. Suggestions, comments and article proposals are most welcome. Email us at: ray@lewisfamily.com.au or tonihatchling@gmail.com

MESAC website: mesac.org.au

Some of our collaborators and contacts

AIMS – Australian Institute of Marine Science aims.gov.au

Parks Victoria parkweb.vic.gov.au

Beaumaris Yacht Club revolutionise.com.au/beaumarisyc

Bayside Earth Sciences Society beaumarisfossils.org

Beaumaris Conservation Society bcs.asn.au

Bayside Climate Change Action Group bccag.org.au

Bayside Environmental Friends Network (via facebook)

Bayside Friends of Native Wildlife bayfonw.org.au

Bunurong Land Council www.bunuronglc.org

Coast Care Victoria coastsandmarine.vic.gov.au

Disabled Divers Association (via facebook)

Gould League gould.org.au

IMAS – Institute for Marine and Antarctic Studies imas.utas.edu.au

Jawbone Marine Sanctuary Care Group jawbone.org.au

Marine Mammal Foundation marinemammal.org.au

Ocean Watch Australia oceanwatch.org.au

Marine Friends Network of Victoria (via facebook)

Port Phillip Conservation Council ppcc.org.au

Port Phillip EcoCentre St Kilda ecocentre.com

Sandringham Foreshore Association sandyforeshore.net.au

Marine Care Ricketts Point marinecare.org.au

The Nature Conservancy Australia natureaustralia.org.au/our-work/oceans

Victorian National Parks Association vnpa.org.au

WA Oceans Institute oceans.uwa.edu.au

WAMSI wamsi.org.au

