

MARINE & COASTAL CONNECTIONS

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



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Tree roots or lobster burrows?

Curious branching fossils feature in the rock formations in Beaumaris, Bayside. Bayside Council signage identifies them as fossilised Banksia roots, but they are in fact *Ophiomorpha beaumarisensis*. Professor John Buckeridge explains their true origins.

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Happy 2021

We are all glad to exit 2020 and begin a new year!

On behalf of our MESAC Committee, we wish every reader all that you might hope for in 2021. Here's a very pretty and colourful Moon Snail to celebrate the new year.

Ray Lewis, President
MESAC Committee



MESAC acknowledges the Boon Wurrung and Bunurong people of the Kulin Nation as the Traditional Custodians of the land and waters around Rickett's 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 special place.

We also recognise the Traditional Custodians of lands and waters across the globe.



Season predictor

Our local saltbush (*Atriplex*) is said to be a future season predictor.

When our saltbush male flowers are mostly all red, they indicate normal seasons, meaning our sharply delineated Melbourne seasons of hot summers and very cold winters.

When the flowers are yellow, they forecast that we are in for longer and milder seasons

This observation comes from Aboriginal lore supported by local experience.

Over about 5 years of yellow flowers up till 2019, we had extended snorkeling seasons over Spring, Summer and Autumn.

This year the flowers have turned red again, and so far it seems they are on the mark...



Photo Ray Lewis



Photo Ray Lewis

Boring Beetles

Longicorn Beetles lay eggs in or under the bark of trees. The larvae of longicorn beetles bore into and eat the wood of trees including Banksia, Wattles and Gums. They usually infest severely on weakened trees, dying or felled logs. Where this occurs in dead trees it assists in breaking down the wood. The beetle life cycles are from few months to more than a year.



Photo John Eichler



Photo Ray Lewis

Sand sculptures

Next time you are walking along the beach enjoying the view, remember to look down at your feet as well as out to sea. With repeated observation you will recognise the tracks along the shoreline made by various worms, snails and crabs.



Acorn Worm

Many species exist.



Soldier Crab

Common around sandy beaches.

Seasonal.



Mud Whelk

Vast numbers in the shallows at low tide.

Common throughout the year.



Moon Snail

Around most of the year at low tide.

Track usually has a muddy bump at the sea edge end.

Dig down 3-4 cms to find them.



Photos by Ray Lewis



Lobster burrows or tree roots?

- identifying the branching trace fossils of Beaumaris -

By Professor John Buckeridge

Tube-shaped fossils, up to four metres long and 50 mm wide, occur abundantly in rocks exposed along the foreshore from Rickett's Point to Black Rock, in Port Phillip Bay. These curious forms have fascinated naturalists for many decades, and until recently, there was no clear idea published explaining how they were formed.

Some years ago, an interpretation of the origin of these was published by Bayside City Council, and the council erected signage at Black Rock to explain these remains. The council's signs concluded that these were "fossils of Banksia". One of these signs remains for public viewing at the carpark immediately to the south of the Black Rock Tower.



Photo by John Buckeridge



Photo by Toni Roberts

With a superficial glance, one could perhaps interpret them as tree fossils, and as *Banksia integrifolia* is a common coastal plant, the council's conclusions seemed reasonable. However they were wrong; the Beaumaris Sandstone (the rock strata in which they are found), is marine, and although some remains of water-logged tree trunks are preserved in the Beaumaris Sandstone, most of the associated fossils are of animals that lived in the sea. In addition, the burrows are tubes, some of which are hollow, although most are infilled with mud. This is not what is expected with plant fossils.

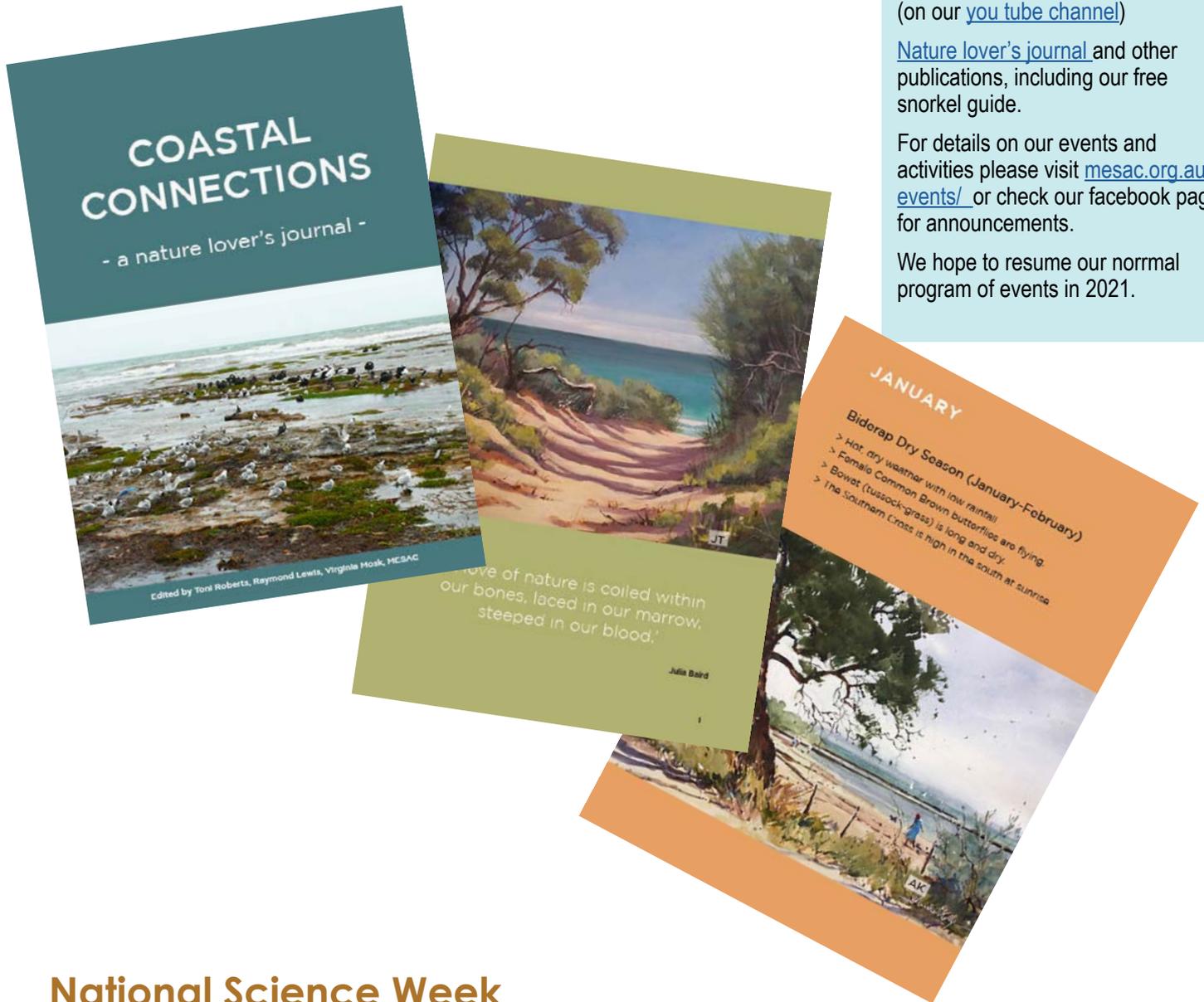
In 2012, a paper published by the Royal Society of Victoria, written by RMIT post-graduate student Paul Ter and long-time local resident Professor John Buckeridge demonstrated that these were not plant remains at all: rather they were the burrows of a mud lobster. Their paper classified the remains as a new form of trace fossil, *Ophiomorpha beaumarisensis*.



Nature Journal available now!

We have developed a beautiful new publication with our MESAC community: *Coastal Connections, a nature lover's journal*. Featuring stunning paintings, drawings and photographs by our talented local artists and photographers, it provides inspiration for your observations of the natural world.

Combining information about coastal and marine life, poetry, quotations and observational notes, this is an essential companion to foreshore walks and a lovely gift for anyone who enjoys the coast. We have even included some quality artist paper for watercolours or sketches. Visit the MESAC website to purchase, but be quick! mesac.org.au



Upcoming activities

Due to recent restrictions on gatherings, some of our events have been postponed. We are still active in promoting connection with marine and coastal environments, and invite you to enjoy our recent videos and online events on the [MESAC YouTube channel](https://www.youtube.com/channel/UC...)

Cabin Fever interviews (on our [you tube channel](https://www.youtube.com/channel/UC...))

[Nature lover's journal](#) and other publications, including our free snorkel guide.

For details on our events and activities please visit mesac.org.au/events/ or check our facebook page for announcements.

We hope to resume our normal program of events in 2021.

National Science Week

MESAC had two great talks by local heroes. We recorded them and have placed them on [MESAC's YouTube channel](https://www.youtube.com/channel/UC...). Feel free to listen, pick up, put down, come back to. Please subscribe to the channel and give a thumbs up and even comment if you wish.

Shannon Hurley BSc Presents: [A digital shark immersion - a journey from fear to 'giving a fish'!](#)

Dr Kate Robb, Marine Mammal Foundation presents: [Port Phillip's endangered Burrunan dolphins](#)

Please forgive the imperfect recordings - they were our first recorded online forums and so the beginnings were cut off a little. We are learning new skills every day!



From the Editors

Welcome to issue three of MESAC Marine and Coastal Connections. 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](http://mesac.org.au)

About the editorial team

Dr Toni Roberts is a designer, local snorkeler and marine enthusiast.

Raymond Lewis OAM, is a Bayside marine author, film maker, and environmentalist.

Virginia Mosk MSc is a marine scientist and the Education Officer of MESAC.

Nature Bounces Back

Despite the tragedy of the COVID-19 worldwide pandemic, the resulting restrictions on human activities had some real benefits for the environment. Some of the world's oceans, bays, inlets and rivers have had the opportunity to bounce back and regenerate.

Dr Kate Robb from the Marine Mammal Foundation says that for the first time ever, her researchers have been able to take baseline recordings and data of Port Phillip Bay's Burrunan dolphin populations without the background noise of ships, boats, jet skis and human intervention. To hear more, go to: [Secret language of Burrunan dolphins discovered during COVID-19 quiet](#)

Here are some more heartening stories:

[Silence is golden for whales as lockdown reduces ocean noise](#)

[Coronavirus lockdown giving world's oceans much-needed breathing space](#)

[Which animals are benefitting from coronavirus lockdowns?](#)

[Six places where oceans, rivers and marine life have rebounded during the Coronavirus pandemic](#)

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.



A long-term 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 would benefit a wide range of interest groups and promote understanding and appreciation of the marine environment.

Useful links

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

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 bunuronglc.org

Coast Care Victoria coastsandmarine.vic.gov.au

Disabled Divers Association (via facebook)

Gould League gould.org.au

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 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

