

VIC. BR. BULL. NO. 301

APRIL/MAY 2020

Due to COVID-19 restrictions the April meeting was cancelled. The next meeting will be held on the 18th of August at the Melbourne Camera Club Building, cnr. Dorcas & Ferrars Sts South Melbourne at 8pm.

If there are no restrictions to holding the meeting this will be a members night. Lets hope you can all attend and contribute.

All issues to bulletin 300 have now been digitized together with an updated index and stored on disc, are available to any institution and those of genuine interest.

All VVB issues from No 1 are stored in the sectional library of the Natural History Museum ; London (NHMUK) and continually added to.

Currently Branch Bulletin issues from VBB169- 288 can be accessed via the Society's website which includes an index 1-276 . <u>http://www.malsocaus.org/?page_id=91</u>

PROPOSED MEETING DATES FOR THE REMAINDER OF 2020

Tuesday 18th August - member's night

Tuesday 15th September – no meeting

Tuesday 20th October - member's night

Tuesday 17th November – annual general meeting

Secretary / Treasurer Michael Lyons Tel. No. 0428 600 615

An interesting shell of *Ranella australasia* (Perry, 1811) (Gastropoda: Ranellidae) from Waratah Bay, Victoria, and general notes on this species.

During a beach walk in July 2018 at Waratah Bay, Victoria, a somewhat unusual gastropod (length about 77 mm) was found in shell litter washed up in the upper littoral zone. This is shown in Plate 1 below, demonstrating quite prominent nodules on the whorls. I initially wondered whether it was a ranellid or whether it could be a bursid, although the latter are a tropical group that should not occur in Victoria.

Alan Monger, of the Malacological Society of Australasia (Victorian Branch), kindly examined this shell in July, 2018 and felt it was *Ranella australasia* Perry, 1811), with its tallish spire making it *Ranella australasia benthicola* (Iredale, 1929), of which Monger (2017: 187) provides a holotype image – this is the deep-water, elongate form of *R. australasia*. This interesting form, however, is not recognised by the World Register of Marine Species as a valid subspecies (Mollusca Base, 2020) and therefore it officially remains merely a noteworthy variant of *R. australasia*.



Plate 1: *Ranella australasia* (Perry, 1811), form *benthicola* Iredale, 1929, found beached at Waratah Bay, Victoria, Thursday 12 July, 2018. (Photos: P. Vafiadis).

Wilson (1993: 242) notes that *Ranella australasia* occurs in southern Australia from New South Wales to the Abrolhos Islands in Western Australia (as well as New Zealand), being common and found from the intertidal zone down to the edge of the continental shelf. However, in central Victoria at least, I have personally never seen it, either dead or alive. The few beach-collected examples in my own collection come from New South Wales between Bermagui and Boydtown, with this particular example being the furthest west in Victoria that I have encountered it. Macpherson and Gabriel (1962: 159) give Portland and the "Gippsland coast" as key Victorian localities. Grove (2020) and Richmond (1992: 38-39) indicate that in Tasmania it is mainly found along the warmer eastern coastline.

Thus, it may be that the cooler Bass Strait area represents a region that is considerably less favourable to it. Its stated depth range by Wilson (1993), however, must mean that it can comfortably tolerate quite cold water, which adds to the curiosity of the above observations.

The Marine Research Group have recorded *Ranella australasia* alive intertidally at both Mallacoota and at Cape Conran, providing opportunity to examine the living animal (see Plate 2 below). It is mottled brown with a uniformly creamy-white sole, a large corneous operculum, a head lacking a snout, and with an eye on the end of a lateral swelling of the basal third of each cephalic tentacle.



Plate 2: *Ranella australasia* from the intertidal zone. At left: from East Cape, Cape Conran, Victoria, Sunday 26 February, 2006. At right: Joiners Channel, West Cape, Cape Conran, Victoria, Tuesday 28 February, 2006. Shell sizes not recorded, but in the order of 50 mm. (Photos: P. Vafiadis).

Acknowledgement:

I thank Alan Monger for examining and identifying the Waratah Bay specimen.

Platon Vafiadis

References and further reading:

Grove, SJ (2020). A guide to the seashells and other marine molluscs of Tasmania web-site. (accessed 13 April, 2020) at: https://molluscsoftasmania.org.au/project/ranella-australasia/

Macpherson JH, Gabriel CJ (1962). *Marine molluscs of Victoria*. Melbourne University Press, Parkville (pp. i-xv, 1-475).

MolluscaBase (eds). (2020). MolluscaBase. *Mayena australasia benthicola* Iredale, 1929. Accessed through World Register of Marine Species at: http://www.marinespecies.org/aphia.php?p=taxdetails&id=477074 on 2020-04-13

Monger, A (2017). *Gorgeous gastropods. The shelled marine prosobranch gastropod molluscs of southeastern Australia. Volume 1: Superfamilies Patelloidea to Tonnoidea.* Privately published September 2013 and revised May 2017 (pp 1-205, also accounting un-numbered index pages).

Richmond MH (1992). *Tasmanian seashells*. *Volume 2*. Richmond Printers, Devonport, Tasmania (pp. 1-111).

Notes from the Port Campbell coastline

Recent fieldwork of the Marine Research Group (FNCV) included the very difficult intertidal coastline of the Port Campbell area. At Gibsons Steps, the point at the western end of the beach has several large rock stacks upon which five species of *Siphonaria* were noted. *S.diemenensis* was common but not large, together with a number of their semicircular orange egg ribbons. *S.funicula* was less common, large and very clean. *S.tasmanica* was abundant, smaller than the first and somewhat eroded or discoloured about the apical area. One specimen of *S.zelandica* was seen, a nicely rounded specimen with sparse brownish pigment between the very low radial ribs.

Lastly it was a delight to recognize *S.jeanae*, a specimen described from South and south Western Australia by Bruce Jenkins in 1984. *S.jeanae* has an almost smooth shell with prominent brown protoconch and more or less evenly sized and spaced blue and black radials. A double-sized blue radial on the right side indicates the position of the pulmonary aperture of the animal. Small specimens of *S.jeanae* and *S. tasmanica*, both of which were present in numbers, are difficult to separate, but the distinctive brown protoconch of the former is a useful character.

S. jeanae is known to occur in Victorian waters but has yet to be formally recorded. Bruce Jenkins himself collected the species at Point Lonsdale on 21 January 2018, and donated specimens to the Inverloch Shell Museum (Joan Hales, pers.com. 25 March 2020).

Point Ronald at the eastern end of the Gibsons Steps beach has an extensive intertidal reef area. From algal sievings taken in a shallow rockpool, three dull whitish specimens of a very small bivalve proved to belong to the family Philobryida, genus *Cosa* Finlay, 1927. Live-taken specimens of *Cosa* have a thick periostracum that rather effectively hides the shell sculpture as well as projecting beyond the margin of shell. Dead specimens, from which all our local species were described, soon lose the periostracum, revealing the shape and sculptural details that delimit species. It may well turn out that these specimens are *C. tardiradiata* (Cotton, 1931), previously reported to live attached to red alga at Port Campbell (Burn, 2015).

At Loch Ard Gorge, algal sorting and sieving delivered two very juvenile *Conus clarus*, easily recognized by the spirally striate shell with bulbous protoconch, as well as innumerable specimens in all sizes of the bivalved gastropod *Edenttellina typica*.

References

Burn, R. 2015. Philobryidae. Victorian Branch Bulletin 279: 2
Jenkins, B.W. 1984. A new siphonariid (Mollusca: Pulmonata) from southwestern Australia. Journal of the Malacological Society of Australia 6 (3-4): 113-123

Robert Burn



Siphonaria jeanae, Gibsons Steps, 19 March 2020. Photo Platon Vafiadis



Costa tardiradiata (Cotton, 1931) Cotton's 1931 image taken from Lamprell & Healy's *Bivalves of Australia* Vol.2, Fig 140

The Naticids of Portsea.

Natacids, commonly referred to as 'moon snails', are a family of sand-dwelling, carnivorous molluscs. They prey on bivalves by drilling a neat round hole in the bivalve's shell (typically near the umbo) to access the animal within. They can usually be found at the end of the meandering trails left behind as they plough their way through the sand.

Naticids are probably not the most popular family with collectors as they can be quite common, are uniform in shape and mostly lack patterning/ornamentation.

I recall as a child, being fascinated by the egg masses laid by these snails that could be found stranded on the beach by the falling tide. These took the form of either 'egg jellies' or 'Sand collars' – with the former being excellent missiles, with which to lob at annoying siblings! I also remember my mother collecting beached valves of the small bivalve, *Paphies angusta* at Mills Beach, Mornington that had a neat round hole drilled in them by these snails (she collected them to use to make necklaces - although, I don't recall ever seeing the finished product!).



Figure 1. Tectonatica shorehami (5mm)

My interest in this family was rekindled during a night dive on the underwater 'sand dunes' that occur offshore from Portsea Pier, back on a cold wintery night in August 2006, when I collected a minute moon snail that possessed a calcareous operculum.

I referred to my copy of Gabriel & MacPherson's Marine Molluscs of Victoria and found that, with the shells small size, slight radiating grooves close to the sutures and umbilicus covered with a pad almost filling the umbilical area, I had collected a specimen of *Proxiuber shorehami* (now *Tectonatica shorehami* (Pritchard & Gatliff, 1900)).

The next interesting species was *Tanea sagittata* (Menke, 1843). I collected my first example of this attractive species during a night dive in February 2007, it was crawling on top of the sand in 12 metres of water. These shells are found on sand, usually adjacent to areas of reef and rubble. They are larger than the previous species at around 10-12mm, orange, with a narrow white band overlaid with burgundy coloured sagittate markings just below the suture.

The last of the calcareous operculated species found at Portsea is *Friginatica beddomei* (R. M. Johnston, 1885). I have only found 2 specimens of this shell, both dead in possession of hermit crabs – interestingly both were collected on separate dives in October 2014 (not seen before or since). These shells are pure white and have a deeply excavated suture.

The larger, corneous operculated species are represented by 3 species at Portsea. None of them are common. The largest is *Neverita (Polinices) aulacoglossa* (Pilsbry & Vanatta, 1909). These shells are found at the end of sand trails in shallow water off Shelly Beach. They are quite rare at Portsea but are more common further into the bay at places such as Rosebud.



Figure 2. Tanea sagittata (10 mm)



Figure 3. Friginatica beddomei (8mm)

Cornuber conicum (Lamarck, 1822) is uncommon at Portsea but is the species most likely to be encountered in Port Phillip Bay. Easy to identify by their elongate shape, they usually have a polished exterior, but larger specimens can have a dull finish, especially higher up in the Bay.

This species is quite common at Brighton and Sandringham where they can be found amongst beds of *Eumarcia fumigata* and *Phaphies angusta*.

The last of the trio is *Eunaticina umbilicata* (Quoy & Gaimard, 1832). These shells are found in shallow water in areas with silty sand, usually amongst *Zostera* sea grass. These shells are lighter in weight and have a thin periostracum. Again, not a common shell at Portsea. I collected my first shell using a sieve in 1998 and have only recorded a handful of specimens since. One specimen was found enveloped in the foot of an *Amoria undulata*.

The last member of the family I have found at Portsea is *Sinum zonale* (Quoy & Gaimard, 1832). My sole record of this shell is from a night dive in 2008. This shell is ear shaped with a large aperture. In life the animal

Reference:

is much larger than its shell. For detailed descriptions and excellent images of the larger Naticids please refer to Marine Molluscs of Victoria.

Macpherson, J. H. & Gabriel, C. J. (1962). *Marine Molluscs of Victoria*. Melbourne University Press & National Museum of Victoria, Melbourne. 475pp.

Michael Lyons

The radulae of Buccinidae Fasciolariidae and Nassariidae

The families Fasciolariidae and Nassariidae, long regarded as distinct families, were downgraded to subfamilies of the Buccinidae in the revised classification of the Caenogastropoda by Ponder & Warén in 1988. As all these families are carnivorous, Michael Lyons article and image (VBB 300:2), on the fasciolariid *Australaria australasia* feeding on the buccinid *Penion mandarinis* is an important observation and record.

Although it has been found that these families have much in common biologically and some similarities in shell morphology, one feature that separates them are the clear and consistent differences in their radular form. As noted in Michael's article, *Australaria australasia* (formerly *Pleuroploca australasia*) has also been observed feeding on *Thias orbita*, a carnivorous muricid, an observation I had previously recorded in VBB 200:3 April 1999.

Fasciolariids are easily recognized by their characteristic radulae, consisting of a small tricuspid central tooth with broad multicuspid laterals resembling a comb.

Buccinids usually have three cusps on the central tooth that can vary in shape and tooth form, while the hook shaped laterals usually have two to three cusps depending on the genus.

Nassariids have a simple multicuspid central tooth also resembling a comb, with bicuspid hook shaped laterals.

The original intention of this article was to mount and feature the radula of a specimen I believed to be *Australaria australasia*, which I had preserved. This specimen was found to be a small *Penion mandarinis*, the species Michael had observed being consumed. Not having a specimen of *Australaria australasia*, featured here is the shell and radula of another common local fasciolariid *Fusinus australis* (Quoy & Gaimard, 1833), for comparison with the shell and radula of *Penion mandarinis*.





G-9 *Fusinus australis*, 114mm. Shell and radula, Collected 16/2/1990 at Port MacDonnell SA . This radula was mounted in Aquamount on 15/7/1997 and was stained with Hoffmans Violet (Dahlia). A clear example of how stains and surfaces react over time.

R/H upper, lower. G-63 *Penion mandarinis*, 87mm. Shell and radula collected 2/4/1998 at Somers Victoria. Radula recently mounted showing three cuspid central teeth and three cuspid laterals. Note broken cusps on two of the central teeth , which is very common on all radulae at the feeding end of the ribbon.



7.





Centre section of ribbon

G-27 *Penion oligostira* Tate, 1891), 64mm. Shell and radula, collected 1/4/72 at Port MacDonnell SA. Radula mounted unstained in Aquamount on 6/3/1999, is listed as a synonym of *Penion mandarinis* by Wilson 1994. Note that this radula has three cusps on the laterals on the R/H side of the ribbon and only two on the left side, a difference not noticed until the commencement of this article.



Top of radula



Nascent teeth.

Although this may be only an aberration, I wish I had kept the animals of the other two specimens in this lot.

G-11 *Nassarius dorsatus* (Röding, 1798) 26.8mm. Collected at Cullen Beach, Darwin, 19/7/1982. Radula stained with Hoffmans Violet and mounted in Aqumount on 1/7/1997.

All these are a good example of the radular differences between these three families.

These are also examples of how mounted radular ribbon images can alter over time. Rare specimens of deep water *Notocypraea* mounted unstained in Euparal by R.J.Griffiths in 1959, were misidentified because of the lack of basal

denticles, (Cram, 2007). Now, 60 years later these denticles are now obvious, as are the important features of many of my radular mounts done in the same manner between 1970 and 1980.

References

Cram, D.J. (2007). Notocypraea emblema Iredale, 1931 the forgotten cowry. American Conchologist 35 (2):12-17

Cram, D.J. (2007b). Buccinulum bednalli (Sowerby, 1895) in Victoria. Victorian Branch Bulletin 241:6

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Wilson, B.R. (1994). Australian Marine Shells, Part 2. Odyssey Publications, Kallaroo, WA.

Don Cram

