



Conus marmoreus Linne

THE MALACOLOGICAL SOCIETY OF AUSTRALASIA Inc. VICTORIAN BRANCH BULLETIN

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NOTICE OF MEETING

The next meeting of the Branch will be held on Monday the 18th of February at the Melbourne Camera Club Building, cnr. Dorcas & Ferrars Sts South Melbourne at 8pm. This will be a Member's night.

The March meeting on Tuesday 19th will be the start of our Tuesday meetings. You will notice the meeting nights have been changed due to it being more convenient for most members.

Each meeting will also be an opportunity to trade or sell any shells or books – so come along, you never know what you might find and the more people who attend the better!

Meeting dates for 2019

February Monday 18th

March Tuesday 19th

May Tuesday 21st

August Tuesday 20th

October Tuesday 22nd

November Tuesday 19th

Office Bearers for 2019

Sec. Treasurer Michael Lyons

MSA Council Representative Platon Vafiadis

Bulletin Editors Val & Don Cram

Meeting Reporter Michael Lyons

Branch Correspondence for ASN Geoff Macaulay

Librarian Simon Wilson

Committee

Michael Lyons

Don Cram

Val Cram

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

Bulletins mentioned in this issue prior to 169 can be obtained from the editors in PDF form on request.

Secretary / Treasurer Michael Lyons Tel. No. 9894 1526

Acting Chairman's Report for 2018

As 2018 draws to a close it is time to reflect on the year that was. Firstly, we celebrated the 50th year of our Victorian Branch Bulletin and secondly, we lamented the phenomenon of declining attendance at our meetings by reducing their frequency to bi-monthly.

On the subject of our Branch Bulletin, I'm sure I am not alone in appreciating the wonderful service Don and Val Cram have provided with their 'temporary' stewardship of our erstwhile publication; no less than 34 years, having taken over the role of editors in 1984!

In an effort to improve the group's relevance/visibility to the greater shelling community we have attempted to widen our appeal by introducing buy/swap/sell sessions in addition to the more scientific aspects of our meetings. The fruits of these efforts will hopefully manifest with higher attendances over the coming years. As well as our traditional member's nights, meetings in the latter half of the year have been 'themed' with members invited to bring in shells displaying 'variations within species' and '10 shells from a favourite family'. These themed meetings have proved popular with those who have attended.

Finally, thanks go to Don and Val Cram for their ongoing editing and production of our Branch Bulletin and for everyone who has provided content throughout the year. Thanks also go to Simon Wilson for being librarian, supplying refreshments and helping take minutes at our meetings. Platon Vafiadis has continued to represent our branch on the Malacological Society of Australasia's council and has done a fantastic job of editing the Society's MSA newsletter.

I would like to wish all members a happy and prosperous 2019 and a Merry Christmas and happy New Year.

Michael Lyons acting Chairman

HMS Challenger and a small correction

HMS Challenger on its famous round-the world expedition 1872-1876 visited many of the outposts of the Empire, there to entertain leading citizens and scientists, sometimes including a short trip to sea to demonstrate the remarkable dredging capabilities of the vessel. The expedition spent 16-31 March 1874 in Melbourne, greatly entertained by its citizens as well as enjoying some sightseeing (Spry, 1878). Upon leaving Melbourne, on 1 April Challenger established Expedition Station 161, off the entrance to Port Phillip, dredging in 38 fathoms on a sand bottom.

A few years later, in working up the gastropods of the expedition, the Rev. Robert Boog Watson (1881) described the beautiful little trochid *Trochus (Solariella) philippensis* that had been sorted from the dredging at Station 161 off Port Phillip Head. Years later, Iredale (1924) selected *Trochus philippensis* as the type species of his new genus *Spectamen*. Both *Solariella* and *Spectamen* are now in the trochoidean family Solariellidae Powell, 1951.



Spectamen philippense
Taken from the internet

In a revision of southern African species of Solariellidae, Herbert (1987) noted that the name *Spectamen* is neuter in gender. For our local species to agree in gender, the species name must be spelled *philippense*, hence *Spectamen philippense* (Watson, 1881). Iredale (1929) had already made this change, but few seemed to have noticed.

References

- Herbert, D.G., 1987. Revision of the Solariellinae in southern Africa *Annals of the Natal Museum*, 28 (2): 283-382.
- Iredale, T., 1924. Results from Roy Bell's molluscan collections. *Proceedings of the Linnean Society of NSW*, 49: 179-278.
- Iredale, T., 1929. Mollusca from the continental shelf of eastern Australia. No 2. *Records of the Australian Museum* 17 (4): 157-190.
- Spry, W.J.J., 1878. *The cruise of Her Majesty's Ship "Challenger"*. London: Sampson Low, Marston, Searle & Rivington. 7th edition: 317pp.
- Watson, R.B., 1881. Mollusca of H.M.S. "Challenger" Expedition.- Part V. *Zoological Journal of the Linnean Society*, 15: 87-126.

Robert Burn

Trinchesia catachroma

For the 50 years after description, the small aeolid nudibranch *Trinchesia catachroma* (Burn, 1963) was considered to be restricted in distribution to the central coastline of Victoria between Wilsons Promontory in the east and Cape Otway in the west. There is one known record east of Wilsons Promontory: a single 10mm long specimen from algae on the wharf piles at Port Welshpool, Corner Inlet, 25 February 2015. Otherwise, the east-most occurrence is Cape Paterson boat-ramp area, 14 March 2012, a single 8mm long specimen.

A big westward range extension occurred with the discovery of a single specimen at Barkers Rocks, Spencer Gulf, South Australia on 27 January 2013 and observation of another single specimen by divers at Rapid Bay, south of Adelaide the very next day. Now comes the reported observation of a specimen in the shallow subtidal at Port Peron, southern end of Cockburn Sound, south-western Western Australia (Nimbs, 2017). The published field image leaves no doubt as to the identification. The distribution thus is extended by some 2000 km westward from Spencer Gulf.

The species is reported as common along the central Victorian coastline (Burn, 2015). At Christmas 1975 at Marengo, Apollo Bay, I noted 32 specimens to 15mm length observed over three low tides. During fortnightly visits to Point Danger, Torquay during 1981-1982, 86 specimens to 12mm length were observed. Otherwise, one to three specimens have been regularly seen on field trips to localities along the open coastline and within lower Port Phillip Bay. *T. catachroma* is often seen crawling over brown algae growing in lower intertidal rock pools. I have never seen it feeding.

A new systematic classification based on molecular research published in December 2016 assigns *Trinchesia catachroma* to the genus *Tenellia* A. Costa, 1866 within the family Fionidae. Another newer classification published in October 2017 has *Trinchesia* restored and placed in its own family Trinchesiidae. More argument may resolve this problem in due course.

References

Burn, R., 2015 *Nudibranchs and Related Molluscs*. Museums Victoria, Melbourne.

Nimbs, M.J., 2017. A Victorian emigrant : first observation and range extension of the nudibranch *Tenellia catachroma* (Burn, 1963) in Western Australia (Mollusca: Gastropoda). *Proceedings of the Royal Society of Victoria* 129: 37-40.

Robert Burn



Trinchesia catachroma (Burn, 1963)

Port Welshpool (just west of long jetty), Victoria, Wednesday 25 February, 2015.

Extended length 9 mm. Crawled off a clump of 'knobbly' *Caulerpa* (looked like *Caulerpa geminata* but thicker) and sponge collected from the base of the channel light in the extreme lower littoral / shallow sublittoral zone.

Collected by the Marine Research Group.

Photo Platon Vafiadis

Collecting at Tathra and Merimbula

19th January 2019 snorkel from Tathra beach towards jetty

Relatively calm seas saw me snorkelling along the reef that commences at the southern end of Tathra Beach, towards the jetty. One thing that struck me was the number of stingrays buried in sandy patches alongside and between rock outcrops, in quite shallow water. I did not attempt to identify them, but they were all less than a metre in diameter, pale brown-grey, and usually buried with their eyes exposed. Shells seen included *Cabestana spengleri*, *Charonia lampas*, *Ranella australasia*, *Cymatium parthenopeum*, *Turbo torquatus*, *Thais orbita* and *Haliotis rubra*.

I explored under rocks and in crevices, mainly hoping to find *Conus papilliferus* (of which I saw one small example) or any other shells of interest.

When I was around three quarters of the way to the jetty I turned back. Finally, under a rock in 1 metre of water I found a *C. papilliferus* which was large enough to keep. In around 2 metres of water I saw the largest banjo shark that I have ever seen; it had a tail length of at least a metre and a disc diameter almost as much, a fearsome looking fish that refused to swim no matter how much prodding I dared give it!

I also found a stunning, small *Semicassis labiatum*, which was small and white with prominent tubercles at the shoulder. Unfortunately, it had a damaged anterior canal so was left. A bit later I found a larger conventionally coloured example beneath a rock, but it was in the process of growing a new lip so was also left. As I got closer back to the beach, I found an interestingly deformed *Cabestana spengleri*, which I elected to keep.

20th January 2019 Tathra Jetty dive

Max depth: 13.9 metres

Duration: 114 minutes

Water temp: 19 degrees

This dive was done on a fairly low tide, so the entry was a little trickier than usual, requiring a very shallow 'giant step' from the rocks adjacent to the jetty. The topography of the site is basically a steep slope of rocks that look to have tumbled down from the cliff above the water line. I had decided that I would swim away from the jetty, higher 'up the slope' in the hope that turning rocks in shallower water would yield results. However, I was not finding much, save for the occasional *Cymatium parthenopeum* and a few *Cominella eburnea filicea* (in sand patches) so headed down to the sand line at the base of the slope in around 11 metres.

There was a definite thermocline below around 8 metres. The water below this depth had a definite greenish tinge, with visibility dropping to around 5 metres, and was considerably cooler than the 'blue water' above. Fish life was less abundant than I have experienced on dives during previous years and blue groper were conspicuously absent. A highlight, however, was seeing a nice Rainbow Cale.



Rainbow cale

After finning a fair distance and not finding any shells I headed back to shallower water and turned rocks. The only species of note to be found under the rocks was *Haliotis coccoradiata*. The muricid *Agnewia tritoniformis* was abundant. Interestingly, all rocks that I turned had extensive invertebrate life beneath them, especially large annelid worms, but very little in the way of molluscs. Chitons, especially the spectacular *Chiton jugosus* were reasonably common. As my air got low, I descended back down to the sand/reef interface and followed it back to the jetty and my entry point. Along the way I found a small, dead *Tonna tankervillei*, which was in excellent condition and was kept.

Near the jetty is a distinct yellow-orange sponge which I use as a signpost that I am near my exit point and, upon sighting, turn south and head up the slope. Exiting the water was aided by a well-timed wave which pushed me up a gently sloping rock face - followed by a laborious crawl beyond the reach of the following wave, and a rather strenuous climb to the carpark.

22nd January 2019 Merimbula Jetty dive

Max depth: 16.5 metres

Duration: 86 minutes

Water temperature: 20 degrees

Conditions were ideal for this dive, with negligible swell and an offshore wind. In order not to incur the wrath of the fishermen on the jetty and the rocks adjacent to it, I entered the water well to the east down a gently sloping Pyura (cunjevoi) encrusted rock formation.

Visibility was good at 10+ metres as I finned my way down to a depth of around 8 metres (a depth at which I have had good shelling success on previous dives). Here the terrain consists of 'urchin barren' rocks that are covered in thin red encrusting alga. I commenced searching but with little success. Shells here were similar to Tathra, with *Agnewia tritoniformis*, *Clanculus* sp, *Haliotis coccoradiata* and *Chiton jugosus* all common. The only shell of interest that I collected was a nice sized Vanikorid, possibly *Vanikoro cancellata*.

All the usual NSW tritons were seen but I only collected a single *Sassia parkinsonia*, which was unusually

devoid of encrusting growths. Other shells collected included a *Chicoreus denudatus* from 8 metres and two dead venerids, *Antigona chemnitzii*.

I dived to a maximum depth of 16.5 metres, but here the rocks were all embedded in anaerobic ooze, with very little beneath them.

As my air depleted, I headed back to shallower water. In 9 metres I turned a rock which, to my great surprise, was home to a rather large *Haliotis brazieri*. This species is easy to separate from the more common *H. coccoradiata*, by their raised respiratory holes and the fact that they remain stationary when exposed to light (*H. coccoradiata* and *H. rubra* both crawl rapidly for shelter when they are exposed). Unfortunately, this specimen has a chunk of its spire missing – so was spared.

Before long, my air was spent, and I made my way back to shore for an easy exit.

24th January 2019 Merimbula Jetty dive

Max Depth: 14.7 metres

Duration: 87 minutes

Water temperature: 20 degrees

Conditions for today's dive were not ideal, with a moderate swell and onshore wind. Entry was just to the east of the jetty and as soon as I entered the water my thoughts centred around how I was going to exit at the end of the dive!

I quickly descended to a depth of 8 metres whereupon I commenced searching for shells. The first shell of interest was a nice specimen of the beautiful trochid, *Astele scitulum* and the second was another small unidentified trochid from 9 metres (possibly *Calliostoma comptum* but larger than our Victorian examples and caramel coloured with chestnut spots on the periphery of each whorl). Also collected was a nice *Prototyphis angasi* and a red *Cardita aviculina*.



Mystery trochid

At a depth of 14 metres I found a large *Chicoreus denudatus* and a dead *Amalda oblonga*.

As I headed back towards shore, I collected another *Astele scitulum*, this time in 5 metres. Arriving back at the surface I swam to my entry point to find a couple of snorkellers attempting to exit the water with great difficulty. Declining their offers of help with exiting the water, I elected to swim to the jetty to exit via a ladder (not to be taken lightly as the climb is around 7 metres!).

Michael Lyons

November meeting report

Angus Hawke delivered a presentation on fossils with an emphasis on cowries.

Angus's Power Point presentation was wide ranging and informative and included information on:

- Climatic and plate tectonic variation over time and how this affected the life in the oceans and on land.
- Ocean water temperatures and how we determine the temperature of the past
- Regional basins of South East Australia and discussion of fossil locations in chronological order
- Classification of Cenozoic Cypraeoidea of Australia
- Detailed introduction to the different genera of fossil cowries from South East Australia
- The evolution of Umbilia throughout time
- Splitters VS groupers

Michael Lyons

An interesting Cowrie radula

In 1996 Bradner and Kay published "An Atlas of Cowrie Radulae" where they identified 13 patterns "based primarily on the form of the central tooth. The patterns, originally intended merely as a convenient means of comparing like with like, are remarkably consistent with M.Schilder and F.Schilder's (1971) generic arrangement of cowries". For each pattern a model species was selected, in some instances, the type of the genus, in others the oldest name in the group, or in others a matter of convenience.

The patterns are: Lynx 17 species, (Erosa 31), (Teres 6), (Stolida 7), (Errones 25), (Mauritiana 24), (Tigris 13), (Isabella 6), (Achatidia 20), (Talpa 2), (Testudinaria 1), (Limicina 10), and (Cicercula 37).

In this work 202 species were studied and their radulae illustrated by both SEM and optical microscopy. Radular measurements were tabulated in a form similar to the one shown below.

In February 1996 VBB-194, I summarized a talk given Victorian branch meeting, where I had shown most of the patterns from photomicrographs of radular slides in my own collection. When the SEM became popular around 1970, optical microscopy seemed irrelevant, but the studies of the authors and of my own have proved otherwise.

SEM images can show external tooth details taken from three directions but do not reveal internal structure. Tooth staining itself visible with optical microcopy, viewed directly above the radula can reveal an internal bract or a different chemical make up of sections of, or the entire tooth. The main disadvantage of optical microscopy is a narrow depth of field, whereas the central tooth may be in focus, but the marginals may not. A new program, photostacking or (focus stacking) now available, which combines multiple images taken at different focal distances, resulting in an image with a greater depth of field can overcome this problem.

The purpose of this article is to show a radula of one pattern (Talpa) which has only one distinct species in the genus *Talparia* Troschel 1863. In *Cypraea Talparia talpa* Linne, 1758, the teeth are not crowded or overlapping, making the teeth much more accessible for both SEM and optical microscopy. This radula was stained with Lignin Pink and sealed in Aquamount on 29/12/1996 and the images taken by a digital camera by the old method recently.

Image B shows half a row of nascent teeth. These teeth in all cowrie radulae, always stain completely and evenly as they have not yet mineralized or hardened, whereas the later formed teeth progressively resist the stain, which may then highlight certain areas of the teeth. It is interesting to compare these images with Troschel's original line drawings.

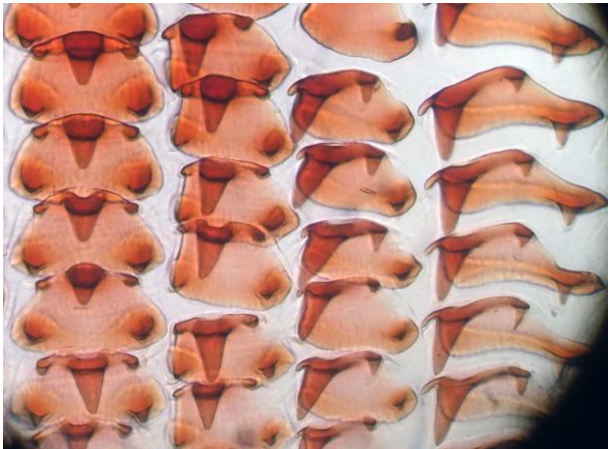
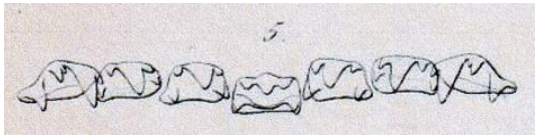


Image B: half row of nascent teeth



5. Ein Glied aus der Radula von *Cypraea (Talparia) talpa* L.

Image A: taken from around the centre of the ribbon

Franz H Troschel's 1863 line drawing pl.17 fig.-5

Species	Reg.Number	Shell length	Radula length	Number of rows	Rows per mm	Radula width (µm)	Central Tooth Length & Width (µm)	
<i>Cypraea talpa</i> Port Vila Vanuatu 6/1984	A. 15 Cram collection	65.9 mm	19.0 mm	172	9.1	1435	120	180
Measurements in microns (µm) rounded to the nearest 5								

References

Bradner, H. & Kay, E.A. 1996. An Atlas of Cowrie Radulae, *The Festivis*, A publication of the San Diego Shell Club. 28

Troschel F.H., 1863. Das Gebis der Schnecken zur Begrundung einer naturlichen. Drawings of Cowrie radulae pl.17 fig.5

Don Cram