



NEWSLETTER

ISSN 1834-4259

No. 171, NOVEMBER 2019

Meeting Report – World Congress of Malacology 2019, Pacific Grove, California, USA.

Lisa Kirkendale, Carmel McDougall, Priscila Salloum, Kerry Walton

WCM 2019 kicked off at the Asilomar Conference Grounds, California, on the 11th of August. The program consisted of four full days of presentations, plus plenty of time for socialising.

The first day of talks was dedicated to keynote presentations on a broad range of topics. **Monica Medina**, better known for her coral research, gave an overarching view of the importance of microbial diversity (and its vulnerability) on coral reefs, and a broader view of the use of genomic resources to understand biomineralization in molluscs. **Sue Kidwell** showed how analysis of death assemblages can help assess human impact on

fauna over time. **Geerat Vermeij** showcased his vast experience on evolution and adaptation, and the likely adaptive nature of morphological shell differences related to diet and predation. **Mandë Holford** amazed the audience with her venomous snails talk, explaining her research on the development of medicine using peptides from snail venom. **Deirdre Lyons** presented elegant work towards elucidation of the gene regulatory pathways of molluscan morphological development, and **Jingchun Li** explained the link between bleaching and the role of symbionts in maintaining shell colour in bivalves.

(continued on page 4)



At WCM meeting, August 2019. From left to right: front row—Lisa Kirkendale, Carmel McDougall, Kerry Walton, Priscila Salloum; back row — Kevin Kocot, Daniel Ramos Gonzales, Stephanie Clark, Frank Köhler, Hamish Spencer, Nerida Wilson, Fred Wells, Kara Layton, Hugh McIntosh. Photo courtesy of Lisa Kirkendale.

Society information

President	Lisa Kirkendale
Vice President	Simon Hills
Treasurer	Carmel McDougall
Secretary	Priscila Salloum
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	Bob Creese
	Felicity Masters
	Kerry Walton

Enquiries

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Victorian branch

Secretary: Michael Lyons, 19 Banksia Street, Blackburn, VIC 3130. Phone (03) 9894 1526 or Email: Michael_lyons1@bigpond.com

Meetings are held at the Melbourne Camera Club, corner of Dorcas and Ferrars Streets, South Melbourne, on the third **Tuesday** of the month. No meetings in April, June, July, September or December.

Membership fees 2019

Includes *Molluscan Research* (published four times per year), the MSA Newsletter (electronic-only publication since Number 158), and discounted registration at the triennial MSA conferences.

Ordinary members (worldwide)	\$AU 70
Institutional membership	\$AU 100
Student member/concession	\$AU 45

Membership fees can be paid (preferably) via the Society's website. Otherwise, send subscriptions via mail to: Malacological Society of Australasia, c/o Matt Nimbs, National Marine Science Centre, PO Box 4321, Coffs Harbour, NSW, Australia, 2450.

Newsletter

Editor: Platon Vafiadis

Email: newsletter@malsocaus.org

The deadline for articles for the next issue of the Newsletter is Friday 7 February, 2020.

MSA website: <http://www.malsocaus.org>

Facebook: <http://www.facebook.com/groups/Malsocaus>

Note: This publication is not deemed to be valid for taxonomic purposes — see article 8.2 in the International Code of Zoological Nomenclature, 4th Edition. Also, opinions expressed within articles in this newsletter belong to the author(s) and are neither necessarily shared nor endorsed by the MSA.



Between Sandy Point and Waratah Bay townships, Waratah Bay, Victoria, Wednesday 4 July, 2018.
(Photo: P. Vafiadis)

Some beautiful bivalves

At left is shown a beached specimen of the heavy bivalve *Eucrassatella kingicola* (Lamarck, 1805) (Crassatellidae), length approximately 70 mm, with the attached algal frond indicating that the *Eucrassatella* is not a deep burrower. It also has the bivalve *Myochama anomioides* Stutchbury, 1830 (Myochamidae) fastened to its right valve - the attachment is via a fusion of the lowermost valve of the *Myochama* (its right valve) to the *Eucrassatella* shell. In this region, *M. anomioides* has also been seen attached to the bivalve *Tucetona flabellata* (Tenison Woods, 1878) (Glycymerididae). It is also reported to attach to rocks

Further reading: Macpherson JH, Gabriel, CJ (1962). *Marine Molluscs of Victoria*. Melbourne University Press, Parkville.

P. Vafiadis



Notice of the Malacological Society of Australasia 2019 Annual General Meeting

Date: Wednesday November 27, 2019

Time: 1:00pm AEST (2:00pm AEDT)

Venue: The conference will be hosted via Zoom. Please read the information below and choose your preferred way to join the meeting room. If you have any doubts, please contact me.

Zoom Meeting

Direct link: <https://auckland.zoom.us/j/659051794>

Meeting ID: 659 051 794

One tap mobile:

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Meeting ID: 659 051 794

Please forward any agenda items, nomination forms or proxy forms to Priscila Salloum via email by the **15th of November**. If you cannot participate in the meeting and would like to appoint a proxy, please complete the form provided and nominate a person **who will be participating in the meeting** to vote on your behalf. If no suitable nominee is available, I as secretary can act as your proxy. Please contact me prior to the meeting to discuss your voting preferences.

Nominations are sought for MSA council positions (please use the following form, self nominations will be accepted).

If you would like to receive a copy of the agenda for the meeting and proposed council nominees, please contact me by the 15th of November.

Yours faithfully,

Priscila Salloum (Secretary)

psal591@aucklanduni.ac.nz

PhD student - School of Biological Sciences, The University of Auckland

Nomination form for council positions of the Malacological Society of Australasia 2019–2020

Nominee: _____

Position: _____

Nominated by: _____ (name) _____ (signature)

Seconded by: _____ (name) _____ (signature)

(* nominations may also be seconded by participants during the meeting)

Proxy Form

I, _____, hereby appoint _____ as my true and lawful proxy to vote on my behalf at the Annual General Meeting of the Malacological Society of Australasia to be held via Zoom (Meeting ID: 659 051 794) on the 27th of November, 2019.

Signed: _____ Date: _____

Editor's note:

The above AGM notice and nomination forms were emailed to MSA members on 31 October 2019.

Meeting Report – World Congress of Malacology 2019, Pacific Grove, California, USA (cont'd from p.1)

Among all this science, **David Lindberg** gave an update on ‘the book’ (the eagerly awaited *Biology and Evolution of the Mollusca*, by Ponder, Lindberg and Ponder, in 2 volumes, through CRC Press), of which a full draft was available in hard copy to peruse, while reminding all of the importance of unifying the terminology used in different fields, with the aim to better integrate them. The rest of the conference hosted talks in a wide range of symposia – there was certainly something for everyone!



David Lindberg presenting at WCM 2019
Photo: C. McDougall

The program hosted a wide array of social events, including an entire day devoted to various local field trips. Many opted to see the local sights – including exploring the Big Sur coastline, searching for land snails and slugs, or checking out the marine fossils of Capitola Beach. The whale-watching group were rewarded with sightings of a good number of humpbacks, Risso's dolphins and three blue whales. Other attendees explored the local culture - a.k.a. wine tasting in Carmel Valley – which started out as a classy affair, but became more 'relaxed' as time went on. Later in the conference there was also an opportunity for a back-of-house tour of the Monterey Bay Aquarium.



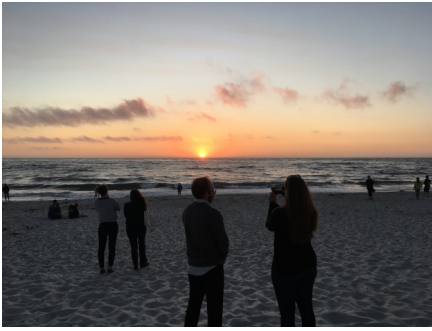
Symposia at WCM 2019

- Molluscs as Ecological Players
- Systematics
- Physiology
- AMS Presidential Symposium on Molluscan Collections
- Biogeography
- Evolution of Molluscan Weirdness
- Systematics and Biogeography of Continental Molluscs
- Molluscs in Citizen Science
- Novel Approaches to Managing Invasive and Pest Molluscs
- Utility of Molluscan Genomics
- Evolution of Toxins in Molluscs
- MSL Symposium on Colour and Vision in Molluscs
- Molluscs as Model Paleontological Systems
- Molluscs as Key Ecological Players

A particular highlight was the molluscan auction – at which donated items (malacological literature and various other mollusc-themed treasures) were sold to support student travel awards for future conferences. Bidding was fierce, and a certain squid-themed hoodie donated by an MSA member ended up fetching 120 US dollars! No doubt a boon for the WCM coffers, but, due to the unfortunate exchange rate, most MSA attendees went home empty-handed.



Above: mollusc-themed items (Photo: Carmel McDougall). At left: the Asilomar conference grounds (Photo: Lisa Kirkendale).



Above: A beautiful eastern Pacific sunset, impressive Californian coastal scenery, and Priscila and Carmel having fun at the Monterey Bay Aquarium.
(Photos above by Lisa Kirkendale, except top left and top right images, which are by Carmel McDougall).

The MSA was well represented among the conference attendees, and members of your council couldn't resist the opportunity to promote our society, thanks to some branded t-shirts organised by **Kerry Walton**! Kerry himself had about a dozen enquires about the MSA when wearing the shirt, and many comments, although a lot of the latter related to the fact that he was wearing a body-conforming woman's size, since it was significantly cheaper to order all women's sizes rather than one men's. The MSA council thanks Kerry for his dedication to the cause.

Overall, the conference was well-organised, intellectually stimulating, collaboration-building, and incredibly collegiate. The setting at the stunning Asilomar grounds away from the crowds was relaxing and helped us to focus on the conference, also providing plenty of opportunities to meet and mingle with other participants.

The MSA attendees would like to extend our grateful thanks to the WCM 2019 conference committee – a job well done. We hope to see many of the participants at the MSA's **Molluscs 2021** triennial conference in Perth!



Above: some elegantly patterned intertidal limpets amongst algae.
Photo: Carmel McDougall.

See also pages 8-10 for selected WCM conference topics and additional photos.

Honorary MSA membership awarded to Don and Val Cram

Platon Vafiadis

The MSA Council periodically invites selected individuals to become Honorary Members of the Society and to receive the benefits of MSA membership free of charge for ten years. Honorary Members must demonstrate long-standing service and contribution to the MSA (eg. council or branch leadership, publication development, conference or workshop organisation), outstanding achievements in malacology (including those relating to education, natural history or public outreach) and more than 10 years of MSA membership.

This year, council has awarded honorary membership to Don and Val Cram, of Melbourne, Victoria.

Don and Val became members of the MSA on 30 January 1969 and still have their acceptance letter from Sheila P.M. White, the then Honorary Secretary of the Victorian Branch. The late Florence 'Fay' Murray was present at the first branch meeting that Don and Val attended and welcomed them warmly. Don is highly suspicious that she also rigged the shell raffle in their favour during that meeting! They still treasure their prize (a *Spondylus tenellus*) from that evening as a special memento.

Ever since that embracing welcome, both Don and Val have remained active members of the Victorian Branch. They have been editing the *Victorian Branch Bulletin of the Malacological Society of Australasia* from the February-March 1984 issue through to the present day. Don has digitised every issue of the *Victorian Branch Bulletin* - it is because of this, together with Rachel Przeslawski's assistance, that it is now accessible through the MSA website (see under 'Publications' on the site). Don has also served in the committee of the Victorian Branch for decades and also at various capacities at the national level. He is listed as one of the new MSA council members in the first issue of *Australian Shell News* (31 January, 1973, page 2) when the MSA "headquarters" moved back to Melbourne from Sydney.

Don and Val were close with the late malacologist Brian Smith (who encouraged amateurs through monthly Saturday workdays at the National Museum of Victoria) and regularly assisted him in putting together *Australian Shell News* during Brian's editorship—a lot of cutting and pasting was needed in that pre-computer era! Brian also mentored and encouraged Don with the latter's special interest in *Notocypraea*, on which Don went on to publish numerous articles in *Australian Shell News* and also *American Conchologist*. He is currently working with Nerida Wilson on a comprehensive



Where the malacological journey all began:
Don and Val at Shelley Beach, San Remo Back
Beach, Victoria in June, 2016.
Photo: Dr. David Cram.

review of the Australian *Notocypraea*.

Don and Val are always regular attendees at Victorian Branch meetings. Their combined knowledge of molluscs, Don's skills in microscopy (including radula extraction and preparation techniques) and their welcoming enthusiasm have made them valuable mentors for the Victorian Branch members. Don's emphasis on the importance of referring taxonomic questions back to type material has, in particular, been an important message to aspiring malacologists.

We congratulate Don and Val and wish them an ongoing long and fruitful association with the MSA.

Australian Natural History Medallion 2019 awarded to Simon Grove

Platon Vafiadis

Congratulations to Dr. Simon Grove, Curator, Tasmanian Museum and Art Gallery, and MSA council member, for being awarded the 2019 Australian Natural History Medallion by the Field Naturalists Club of Victoria (FNCV). This recognises his great contributions to natural history, entomology and (of course!) malacology. The presentation was made by Nicola Williams, Vice President of the Royal Society of Victoria, at the FNCV clubrooms, Blackburn, Melbourne, on Monday 11 November, 2019. After the presentation, Simon spoke on his Tasmanian molluscan survey results.

Simon has authored numerous scientific papers, as well

as a book and website on Tasmanian molluscs (the latter co-administered with Rob de Little, the nidus of which was an earlier 2006 checklist). We wish Simon every success with his ongoing work.

Selected references:

- Grove SJ, Kershaw RC, Smith BJ, Turner E (2006). A systematic list of the marine molluscs of Tasmania. *Queen Victoria Museum and Art Gallery Occasional Paper No. 8*: 1-120.
- Grove S (2011). *The seashells of Tasmania : a comprehensive guide*. Tarooma Publications, Tarooma, Tasmania.
- Grove S, de Little R (website). Molluscs of Tasmania. A guide to the seashells and other marine molluscs of Tasmania. Available at <https://molluscsoftasmania.org.au/>

MSA malacological research grants

Lisa Kirkendale, Felicity Masters and Simon Hills

There were seven high quality applications for 2019 MSA malacological research grants, these giving the judging committee plenty to think about in their deliberations.

The **first prize** of \$1500 was granted to **Paige Maroni** (University of Western Australia) for the project entitled, '**The ecology and evolution of an adaptive marine radiation of Antarctic sea slugs**'. This research aims to build a robust phylogeny for *Doris* nudibranchs from the Southern Ocean, and to map metabolic traits to this phylogeny to determine where compounds of pharmaceutical interests are found.

The **second prize** of \$500 went to **James Peyla** (visiting research student at the University of South Australia) for the project entitled, '**Investigating the long-term effects of ocean acidification on the giant Australian cuttlefish**'. This project will analyse the microstructure of cuttlebones in Australian museums to determine whether the gradual decrease in ocean pH over the

past century has caused *Sepia apama* cuttlebones to change over time.

The **third prize** of \$500 went to **Angus Lawrie** (Murdoch University) for the project entitled, '**Evaluating the taxonomic status of the endemic salt lake gastropod *Coxiella striata* in south-eastern Australia**'. This study will involve a detailed evaluation of the taxonomic status of *C. striata* in south-eastern Australia. The specific aim is to assess whether *C. striata* in this region is a single morphological variable species or a complex of undescribed species.

According to the budgets presented in these applications, the awards will make a significant contribution to the researches being undertaken.

In addition, council granted one year of honorary membership to all prize winners, and wishes all applicants every success with their research.

Molluscan Research Achievement Award

Bob Creese, Kerry Walton and Wayne O'Connor

There were eleven eligible papers for the Molluscan Research Achievement Award (these are papers contributed by amateur malacologists or malacologists with less than five years of research experience).

The judging committee agreed that the clear winner is **Tsuyoshi Takano**, for the paper: Takano, Itoh & Kano (2018) **DNA-based identification of an echino-**

-derm host for a deep-sea parasitic snail (Gastropoda: Eulimidae). *Molluscan Research*, 38 (3): 212-217. They used proboscis tissue samples to detect traces of the snail's echinoderm prey, which could then be identified by matching against known genetic databases.

Congratulations to Tsuyoshi and co-authors!

Tide-line collecting on Front Beach, Bowen, Queensland.

T. Joan Hales, Inverloch Shell Museum, Victoria

email phasianella@dcsi.net.au

Bowen lies at the northern end of that part of central Queensland known as the Whitsunday region. Winters are warm, dry and windy and Bowen has sometimes been referred to as “Blowin’ Bowen” with good reason. While staying in the area, there are a number of beaches that can be explored. This year (2019), major works are being carried out along the beachfront, necessitated by the damage done by Cyclone Debbie early in 2017.

Front Beach is a flat, shallow expanse of sand with a sparse covering of short seaweed. The tide-line usually has a selection of many mollusc species to offer those interested in spending the time to look. This year, there has been more seaweed washed in along the area than usual, possibly a product of the works program combined with the offshore superboat races shortly before we arrived. Despite the event’s name, the races are held close to the shore at Bowen.

While there have always been some shells washed in with seaweed attached, in August 2019 they seemed to be more abundant. The seaweed attaches and grows mainly on bivalve shells. As the weed grows, it dominates the shell and causes the shell to be carried around with the currents and tides until eventually it is washed in to the tide-line and left high and dry. At this point most bivalves have lost the battle for survival. In some cases, a grey ascidian also takes advantage of the bivalve and attaches to

the shell along with the seaweed. Many bivalves are effected including:

Anadara passa Iredale, 1939,
Circe plicatina (Lamarck, 1816),
Placuna lobata Sowerby, 1871,
Modiolus moduloides (Röding, 1798),
Lunulicardia retusa (Linnaeus 1758),
Placamen retroversum (Deshayes, 1853) and
Solen fonesi Dunker, 1862.

In the end, a very unsatisfactory solution for the seaweed, the ascidian and the bivalve.



A selection of bivalve species collected from the Bowen tide-line on 7th August 2019. Photo: Joan Hales.

Selected topics, World Congress of Malacology 2019 conference, Pacific Grove, California, USA.

Editor’s note: Selected topics involving MSA members & associates are shown below (the presenter is underlined).

Replacing mechanical protection with colourful faces – twice: parallel evolution of non-operculate marine worm-snail genera (Caenogastropoda: Vermetidae)

Rüdiger Bieler¹, Camila Granados-Cifuentes², Timothy M. Collins², Rosemary Golding^{1,3}, John M. Healy⁴, and Timothy Rawlings⁵

1. Integrative Research Center, Field Museum of Natural History, 1400 Lake Shore Drive, Chicago, Illinois 60605, U.S.A.

2. Department of Biological Sciences, Florida International University, 11200 SW 8th St., Miami, Florida 33199, U.S.A.

3. Malacology, Australian Museum, 6 College Street, Sydney, NSW 2010, Australia

4. Biodiversity and Geosciences Program, Queensland Museum, PO Box 3300 South Bank, Queensland, Australia, 4101.

5. Department of Biology, Cape Breton University, 1250 Grand Lake Road, Sydney, Nova Scotia, B1P 6L2, Canada

Neogene diversification of the crown helicostyline land snails (Gastropoda: Stylommatophora: Camaenidae) in the Philippines

Gizelle A. Batomalaque^{1,2,3}, Adnan Moussalli⁴, and Gary Rosenberg^{1,2}

1. Dept. of Biodiversity, Earth and Environmental Science, College of Arts and Sciences, Drexel University, Philadelphia, USA
2. Malacology Department, Academy of Natural Sciences of Philadelphia, Philadelphia, USA
3. Institute of Biology, College of Science, University of the Philippines Diliman, Quezon City, Philippines
4. Department of Science, Museum Victoria, Melbourne, Australia

Macro (and micro!) molluscs of the Kimberley Marine Region of Western Australia

Lisa Ann Kirkendale¹, Zoe T. Richards^{1,2}, Andrew Hosie¹, Peter Middelfart¹

1. Western Australian Museum, Aquatic Zoology Department
2. Curtin University, Trace and Environmental DNA Laboratory, School of Molecular and Life Sciences

The more, the merrier: expanding taxon sampling to address heterobranch phylogeny in a phylogenomic context

Vanessa L. Knutson¹, Bastian Brenzinger², Yasunori Kano³, Michael Schrödl², Nerida Wilson⁴, and Gonzalo Giribet¹

1. Museum of Comparative Zoology, Harvard University
2. NSB-Bavarian State Collection of Zoology
3. Department of Marine Ecosystem Dynamics, Atmosphere and Ocean Research Institute, The University of Tokyo
4. Molecular Systematics Unit and Aquatic Zoology, Western Australian Museum

The tyranny of remoteness: contemporary chances and challenges for collection-based malacological research Down-Under

Frank Köhler¹

1. Australian Museum Research Institute, Australian Museum, William St, Sydney, NSW 2010, Australia

Land snails (1) : dinosaurs (0) – phylogenomics resolves late Mesozoic diversification of helicoid land snails

Frank Köhler¹, Makiri Sei², Gary Rosenberg³ and Adnan Moussalli⁴

1. Australian Museum Research Institute, Australian Museum, 1 William St, Sydney NSW 2010, Australia
2. Smithsonian Institution, National Museum of Natural History, PO Box 37012, MRC 163, Washington, D.C. 20013–7012, USA
3. Academy of Natural Sciences of Philadelphia, Drexel University, 1900 Benjamin Franklin Parkway, Philadelphia, PA 19103, USA
4. Sciences Department, Museum Victoria, GPO Box 666E, Melbourne Vic 3001, Australia

Exon capture resolves a recent radiation and uncovers mitonuclear discordance in nudibranchs

Kara K.S. Layton^{1,2,3}, Jose I. Carvajal², and Nerida G. Wilson^{1,2}

1. University of Western Australia, School of Biological Sciences
2. Western Australian Museum, Aquatic Zoology and Molecular Systematics Unit
3. Memorial University of Newfoundland, Department of Ocean Sciences

Deep down-under: Australia's abyssal mollusc fauna

Hugh MacIntosh¹, Francesco Criscione², Anders Hallan², and Frank Koehler²

1. Museum Victoria
2. Australian Museum

Elucidating the molecular basis of pigmentation in the tropical abalone *Haliotis asinina*

Carmel McDougall¹, Daniel J. Jackson², and Bernard M. Degnan³

1. Australian Rivers Institute, Griffith University
2. Department of Geobiology, Georg-August University of Göttingen
3. School of Biological Sciences, University of Queensland

Integrating population genetics and genomics with shell shape analyses on the brooding chiton *Onithochiton neglectus* (Polyplacophora: Chitonidae)

Priscila M. Salloum¹, Anna W. Santure¹, Pierre de Villemereuil², and Shane D. Lavery¹

1. School of Biological Sciences, The University of Auckland, New Zealand
2. Centre for Functional and Evolutionary Ecology (CEFE), Montpellier, France

***Mytella strigata* emerging as an invasive marine threat in south-east Asia**

Kitithorn Sanpanich ^{1,2} and Fred E. Wells ^{3,4}

1. Institute of Marine Science, Burapha University

2. Harry Butler Institute, Murdoch University

3. School of Molecular and Life Sciences, Curtin University

4. Field Museum of Natural History

Contrasting phylogeography of two limpet genera in the Southern Ocean

Hamish G. Spencer ¹, Claudio González-Wevar ²

1. University of Otago, Department of Zoology

2. Universidad Austral de Chile, Instituto de Ciencias Marinas y Limnológicas (ICML)

Biodiversity, biogeography and vulnerability of hydrothermal vents: a case study using bathymodioline mussels

Kerry Walton ^{1,2}, Bruce Marshall ², and Ashley Rowden ^{3,4}

1. Department of Zoology, University of Otago

2. Museum of New Zealand Te Papa Tongarewa

3. National Institute of Water and Atmospheric Research

4. School of Biological Sciences, Victoria University of Wellington

Growth rates of potamidid snails in mangroves in northern Australia

Fred E. Wells ^{1,2} and John Keesing ^{3,4}

1. School of Molecular and Life Sciences, Curtin University

2. Integrative Research Center, Field Museum of Natural History

3. CSIRO Oceans and Atmosphere, Indian Ocean Marine Research Centre, The University of Western Australia

4. Oceans Research Institute, Indian Ocean Marine Research Centre, The University of Western Australia.

Australia's first monoplacophoran: diving deep off Western Australia

Nerida G. Wilson ¹

1. Western Australian Museum, Molecular Systematics Unit



The MSA in action at WCM 2019 conference:

Upper left: Kara Layton

Lower left : Hugh MacIntosh

Lower right: Hamish Spencer

(All images: Kerry Walton)

