

# The Malacologist

The Bulletin of The Malacological Society of London

NUMBER 71 AUGUST 2018

Contents	
Editorial	2
Notices	2
Annual general meeting—spring 2018	
Annual Report of Council	6
Election to Council	10
AGM CONFERENCE Symposium on New per	spectives on evolution in
Molluscs—from fossils to next generation seque	
generation seque	
BIOGRAPHIES AND ABSTRACTS	
FORTHCOMING MEETINGS	
Molluscan Forum	16
GRANTS AND AWARDS OF THE SOCIETY	19
Membership Notices	
WIEMBERSHIP INOTICES	20

Includes a report of the 125th AGM of the Malacological Society of London, plus a report on the special, day-long symposium, entitled "New perspectives on evolution in molluscs: from fossils to next generation sequencing" co-hosted by the Society together with the Natural History Museum

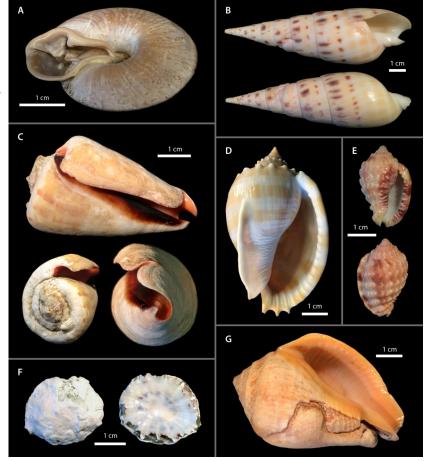


Image from the presentation "Shell function and the history of life: an arena and bedrock of evolution" by Prof. Geerat Vermeij, University of California at Davis, USA (page 12)

# **EDITORIAL**

Perhaps the heat-wave and dry weather across Europe drove malacologists as well as molluscs deep underground, meaning that the content of issue 71 of *The Malacologist* is rather thin compared with previous years. The August issue does however, include an important document for the Society, namely the President's report of Council (page 5). From the President's report, we seem to have an intellectually and financially healthy Society which continues to fulfil its remit (from the Rules of the Society)....to advance education, research and learning for the public benefit in the study of molluscs from both pure and applied aspects by (a) promoting and co-ordinateing meetings and symposia; (b) promoting and co-ordinating research both pure and applied; (c) providing for the worldwide dissemination of results of such research by publication of the Journal of Molluscan Studies; (d) awarding prizes to outstanding students in the field of molluscan biology; advance the study of molluscan biology by awarding research grants to individuals. Inspection of any of the issues of Journal of Molluscan Studies and The Malacologist shows the high quality of malacological work which the Society has helped enable.

#### TAXONOMIC/NOMENCLATURAL DISCLAIMER

This publication is not deemed to be valid for taxonomic/nomenclatural purposes [see Article 8b in the International Code of Zoological Nomenclature 3<sup>rd</sup> Edition (1985), edited by W.D. Ride *et al.*].

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# **NOTICES**

### Molluscs 2018 - Malacological Society of Australasia

The Malacological Society of Australasia is pleased to announce that registration for our upcoming conference. Come and join us in Wellington, New Zealand, from December 2-5, 2018, for an exciting program covering the latest advances in molluscan research. Find all the details at <a href="http://www.malsocaus.org/?page\_id=1063">http://www.malsocaus.org/?page\_id=1063</a>. This is the first time that the MSA is hosting a conference outside Australia, and we hope that many of you are able to attend. Grants are available to assist students with the costs of attending the conference. Full details can be found on the conference website. Carmel McDougall – Molluscs 2018 organising committee



# 12th Annual Meeting of the Ohio (River) Valley Unified Malacologists (OVUM)

Saturday 13 Oct 2018 from 9:30 am to 5 pm at Carnegie Museum of Natural History, 4400 Forbes Avenue, Pittsburgh, PA 15213. This one-day meeting is open to professionals, amateurs, students, and all enthusiasts interested in mollusks. Presentations (15 minutes max.) cover any topic relating to mollusks, such as current research, recent collecting trips, ideas for future projects, interesting specimens, or collection issues. The low key atmosphere is perfect for students, those making first presentations, or anyone seeking friendly feedback. Last-minute talks can usually be accommodated. The collection and library of the Section of Mollusks are available during or after presentations. About 90% is searchable at <a href="http://www.invertebase.org/portal/collections/index.php">http://www.invertebase.org/portal/collections/index.php</a>. If something in particular interests you, consider contacting Tim Pearce so we can have it ready. OVUM follows the fine tradition of similar US regional meetings including Bay Area Malacologists (BAM), Southern California Unified Malacologists (SCUM), Mid-Atlantic Malacologists (MAM), and Florida United Malacologists (FUM).

Timothy A. Pearce, Ph.D., Curator of Collections & Head, Section of Mollusks PearceT@CarnegieMNH.org



# Unionoida Stoliczka, 1871 Facebook

For those interested in freshwater mussels, please consider joining Unionoida Stoliczka, 1871; a facebook group dedicated to all things Unio. All levels of interest are welcome from the newest beginner to the published academic, even those with a only passing interest. Postings on freshwater mussel and other aquatic bivalve natural history (including taxonomy, conservation, ecology, anatomy/physiology, biochemistry, evolution, genetics, paleontology) are welcome. This includes all members of the Molluscan Order Unionoida, but also select species of Arcoida, Myoida, Mytiloida, Pectoinoida, Pterioida, and Veneroida. Postings of current news, events, meetings, conferences, specimen identifications, recent publications and publication reviews, (external) links to related jobs, and related materials sales is encouraged. Please no living or dead shells, please. The facebook address of the group is: <a href="https://www.facebook.com/groups/686713391660616/jay">https://www.facebook.com/groups/686713391660616/jay</a> Jay Cordeiro

Northeast Natural History & Supply & MA Audubon Society unionid@comcast.net



# First FMCS International Meeting in Europe

The first Freshwater Mollusk Conservation Society International meeting outside of the USA will occur on September 16-20, 2018, at the Teatro Maggiore in the beautiful town of Verbania, Italy. The agenda that will be discussed as part of the proposed Meeting has the following items:

- 1. A European committee will be proposed for the FMCS to address all issues related to the conservation of molluscs in Europe. We will propose key people from all regions of Europe that are interested and willing.
- 2. A European strategy for the conservation of freshwater bivalves to be published in the FMCS journal and try to promote a first review paper on the conservation of European sphaeriids and freshwater gastropods.
- 3. A Horizon scanning review document on the emerging issues for the conservation of freshwater bivalves.
- 4. Promote a series of Conservation Evidence papers for propagation and habitat restoration methods for freshwater mussels. https://molluskconservation.org/EVENTS/2018-INTNL/2018 FMCS-INTNLMeet.html



# World Congress of Malacology 2019



Contact Us

Questions or comments about WCM 2019? We're happy to help.

wcm2019@calacademy.org

World Congress of Malacology 2019
August 11-16, 2019 | Asilomar Conference Grounds
Pacific Grove, California, USA

Early Registration: May 1, 2018 — March 31, 2019 General Registration: April 1, 2019 — May 15, 2019

# Scientific Program

Proposals for scientific symposia are now being accepted! See below for details.

#### **Keynote Speakers:**

- Mandë Holford: "Investigating molluscan venom from evolution to molecular function. Discovery, characterization, optimization and delivery of venom peptides from predatory conoidean marine snails"
- David Lindberg and Winston Ponder: "Comprehensive review of Mollusca"
- Didi Lyons: "Gene regulatory networks in molluscs"
- Susan Kidwell: Topic TBD
- Jingchun Li: "Evolution of photosymbiosis in bivalves"
- Monica Medina: "Genomics and the future of tropical marine ecosystems"
- Geerat Vermeij: "Evolution of molluscan shells and the predatory arms race"

#### Confirmed Symposia and Workshops

- · Evolution of Toxins in Molluscs: Baldomero Olivera
- · Molluscs in Citizen Science: Rebecca Johnson
- Molluscs as Critical Players in Ecological Systems: Patrick Krug
- AMS Presidential Symposium on Molluscan Collections: Ellen Strong, Julia Sigwart, Terry Gosliner
- The Evolution of Molluscan Weirdness: Julia Sigwart, Ellen Strong
- Molluscs as Models for Paleontological Systems: David Jablonski, Peter Roopnarine
- Publishing Books on Molluscs: Daniel Geiger





On behalf of the Organizing Committee of the Third Argentine Congress of Malacology (3CAM) and the Asociación Argentina de Malacología, I have the pleasure of inviting you to the 3CAM, which will take place in the city of Bahía Blanca (Argentina) from December 4 to 6, 2019, at the Universidad Nacional del Sur. This congress is organized by the Argentine Association of Malacology and brings together most of the malacologists from Argentina and several colleagues from neighbouring countries. It would be nice to share conferences, symposiums, workshops, talks and posters.

You can visit our website (<a href="https://malacoargentina.com.ar">https://malacoargentina.com.ar</a>) and our facebook Asociación Argentina de Malacología (<a href="https://www.facebook.com/Asociacion-Argentina-de-Malacologia-126689074100681/">https://www.facebook.com/Asociacion-Argentina-de-Malacologia-126689074100681/</a>) to keep up to date with the latest news.

Dr. Pablo R. Martín, Universidad Nacional del Sur, Argentina

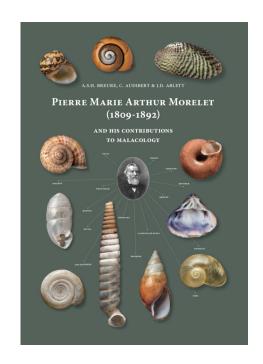


#### New: a monograph on Arthur Morelet

Those who are working with non-marine molluscs may have encountered the name of Morelet. He introduced more than 700 species names in - currently - 84 different families of land and freshwater molluscs. Who was Arthur Morelet and what has become of his huge collection?

Pierre Marie Arthur Morelet (1809-1892) was an amateur scientist who devoted himself to both shell collecting and botany. He organised several expeditions, of which those to Cuba and Central America (1846-1848) and the Azores (1857) are especially noteworthy. His contributions to malacology were thus significant and we have reconstructed his legacy with a survey of archival sources and his type material in the historical collections of several museums.

The resulting monograph is made up of two parts. In the first part we present a biography, some remarks on the whereabouts of his collection, and more than 200 recovered letters (transcribed and translated) to contemporary malacologists, such as Crosse, Fischer, Baudon and Dautzenberg. His contact network has been reconstructed using data from his correspondence and his publications. This part offers an unique view into the world of malacology in the second half of the 19th century. In the second part a bibliography of Morelet is presented, as well as all his newly introduced taxa, with detailed documentation and figures of the species. More than 80 per cent of his type material has been re-



found and original figures, if they exist, have been reproduced for the remaining species. Of the taxa represented by actual shell material, more than 150 are now figured for the first time. The book has indices for both taxonomy and persons mentioned and is a must-have for anyone interested in the history of malacology and those dealing with non-marine molluscs.

The book, which has 544 pages and more than 1300 figures, is available after its launch on 23 June 2018. Thanks to financial support from Association Cernuelle (France), Royal Belgian Institute of Natural Sciences (Belgium), Natural History Museum (United Kingdom), and the Netherlands Malacological Society (Netherlands), the electronic version of the book is freely available at <a href="https://www.spirula.nl/andere-uitgaven/moreletEN">www.spirula.nl/andere-uitgaven/moreletEN</a>. A printing on demand hard cover version of the book can be ordered at <a href="https://www.boekenbestellen.nl">www.boekenbestellen.nl</a> (search for title or ISBN) for € 67.50 (net price, excluding postage).

Breure, A.S.H., Audibert, C. & Ablett, J.D., 2018. Pierre Marie Arthur Morelet (1809-1892) and his contributions to Malacology. Netherlands Malacological Society, Leiden, 544 pp. ISBN 978-90-815230-2-8 (PDF) / 978-90-815230-0-4 (p.o.d.)





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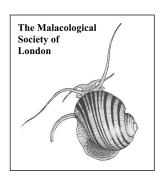
# **Advance Notice**

The
2019

Annual General Meeting
of the

Malacological Society of London
will take place on
27<sup>th</sup> March 2019
in the
Flett Lecture Theatre

Natural History Museum, London





#### MARTIN LISTER AND HIS REMARKABLE DAUGHTERS

The Art of Science in the Seventeenth century By Anna Marie Roos £25, hardback, 12 October 2018, Bodleian Library Publishing

The story behind the first comprehensive scientific study of conchology, *H istoriæ Conchyliorum* (1685-92), comprising over 1,000 copperplates of shells and molluscs collected from around the world:

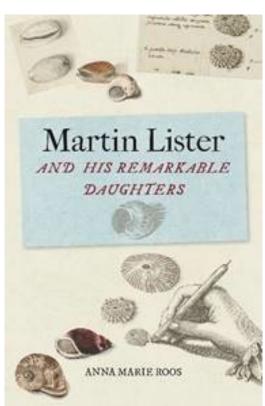


When the extraordinarily prolific natural historian and fellow of the Royal Society Martin Lister (1639–1712) wrote to his wife Hannah in 1681 from France, he explained that he was enclosing a box of paint "colours in shells" for his two oldest daughters, 11-year-old Susanna and 9-year-old Anna Lister. Before the invention of squeezable tubes, the earliest containers for artists' paints were shells, typically mussel and mother of pearl.

Disappointed with the work of established artists, Lister decided to teach his daughters how to illustrate images of the specimens he studied. Within a few years, Martin Lister, the first scientific arachnologist (spiders) and conchologist (molluscs), was relying on his daughters to illustrate his scientific works.

The sisters became so skilled that Lister entrusted them with illustrating his landmark Historiae Conchyliorum, (1685-92), which was later cited by Linnaeus. Using archival materials in the Bodleian Library, Anna Marie Roos reconstructs the process of the creation of Lister's masterwork from the original shells that Sir Hans Sloane lent Lister and his daughters to sketch, to the drawings themselves, to the copperplates, and finally the draft and final prints and books (both black-and white and hand-coloured). Susanna and Anna not only portrayed the shells as curious and beautiful objects, but as specimens of natural history rendered with sensitivity and keen scientific empiricism. The sisters were amongst the first women to use microscopes to help produce some of their scientific illustrations. MARTIN LISTER AND HIS REMARKABLE DAUGHTERS is a fascinating reappraisal of the art of early science, which reveals the early techniques behind scientific illustration, as well as the often unnoticed role of women in the scientific revolution.

Anna Marie Roos is Reader in the history of science and medicine at the University of Lincoln.





# Annual report of Malacological Society Council for 2017/2018

# delivered by the President, Dr Suzanne Williams

### **Membership** (reported by Tom White)

The last year has been somewhat challenging in terms of maintaining the membership database. I would like to take this opportunity to thank members for their patience; many have had difficulties with their subscriptions, either in making payments or receiving their copies of *JMS*. Part of the problem was an unknown issue with the 1&1 email forwarding system, which meant that many message sent via the 'membership@malacsoc.org' address did not get through. Issues with back-issues of *JMS* have been affected by a slow response from OUP, who are now only contactable via a generic email address rather than a specific member of staff. I am continuing to chase up outstanding issues.

Further compounding the issue of renewing subscriptions was the decision to terminate the Society's PayPal account (see Treasurer's report) and switch entirely to the Stripe payment system. This resulted in recurring payments being cancelled, which was the only way to make the change. It is hoped that a recurring payment system can be reinstated this year via Stripe; members could also take up the option of setting up a direct debit to the Society's new bank account (details provided on the Membership webpage), now that the subscription rates have stabilised at the new level.

Any members with outstanding issues and who have not been able to contact me via the 'membership' email address should write to me at tom.white@nhm.ac.uk (please note that I have also moved on from my Cambridge position) and I will endeavour to deal with them as soon as possible.

#### Finance, for the financial year ending 31 December 2017 (reported by Katrin Linse)

The finances of the Malacological Society have been satisfactory during 2017 with a gain of £26,376.

Our investments had an overall gain of more than £22.6k (comparing market value at 31 December 2016 with market value at 31 December 2017), with the COIF Investment Fund making a gain of £22,982 and the COIF Fixed Interest Fund a loss of £306. During 2016, a total of £34k was transferred from the current account to savings accounts: £5k was transferred from the current accounts into the COIF Investment Fund and £29k to the COIF Fixed Interest Fund.

Separately, the profit-share from the publication of the *Journal of Molluscan Studies* in 2015 provided the Society with the majority of its income contributing £38k. The Editor of the Journal, Dr David Reid, and the Assistant Editors are to be commended for their hard work contributing to the publication of our scientific journal. In addition, sales of the digital archives provided over £10.4k of income.

More funds were used for awards (22.6k) in 2017 compared to 2016, with travel awards to conferences and society meetings such as the Molluscan Forum increased, while the spending on research awards decreased. The Society spent overall less money in 2017 compared to 2016 mainly based on meeting charges (hospitality for 2017 Molluscan Forum not charged in 2017) and JMS colour figures charges.

### **Meetings**

The 124th Annual General Meeting of The Society was held at the Natural History Museum, London, on the 27th of April 2017 in the Flett Theatre at the Natural History Museum. We had eleven speakers for a one day symposium entitled, 'Molluscan Colour and Vision'. In this symposium speakers covered a range of topics that highlighted the extraordinary nature of colour and vision in molluscs. Speakers included two invited keynotes from Daniel Speiser and Sönke Johnsen. Other speakers were Jakob Vinther, Trevor Wardill, Lauren Sumner-Rooney, Marcel Koken, Suzanne Williams, Nick Roberts, Angus Davison, Alexander Arkipkin and Julia Sigwart. Over 100 people registered to attend the event.

On 30th November 2017 the Annual Molluscan Forum was held in the Flett Lecture Theatre at the Natural History Museum, London, organized by Andreia Salvador, with help from Jon Ablett, Tom White and the President. A total of 75 people from 10 countries attended the Molluscan Forum 2017. Travel awards amounting to £1,646 were given to 15 students. There were 17 speakers and 6 posters. Luke Helmer (University of Portsmouth) was awarded the Oxford Prize for Malacology for his talk, 'The efficacy of suspended broodstock cages as a restoration strategy for the European flat oyster Ostrea edulis Linnaeus, 1758: A case study in the Solent, UK'. The Society provided lunch for all attendees and this served to create a cohesive meeting, with excellent opportunity to discuss the posters. The Forum was again held consecutively with the Young Systematists' Forum, affording an opportunity for students to attend both meetings. A full report of the Forum will appear in number 70 of The Malacologist.

## **Publications**

## The Malacologist (reported by Georges Dussart)

Unfortunately, publication of the August issue (Number 69) was delayed until early November as several items had been awaited. It comprised thirty three pages, including research grant reports, travel grant reports, the minutes of the AGM, abstracts of the AGM conference on colour and vision and an obituary. The research grant reports were from Jorge Audino, (Applying confocal microscopy to study neuro- and myoanatomy of bivalves: a successful approach focusing on the mantle margin) and Alexandra Németh (Age distribution and habitat reconstruction of Glycymeris insubrica shells from Late-Holocene sediments). The travel grant report was from Lisette de Hoop of Radboud University in the Netherlands who described her visit to the 20th International Conference on Invasive Species in Florida where she presented a paper on on the quagga mussel (Dreissena rostriformis bugensis) and its use by municipalities and conservancies as an eco-engineer (biofilter) in Dutch urban surface waters. The obituary was for Elizabeth Platts, a long-serving member of the Council who is much missed. This issue also included a comprehensive list of past award winners of the Society, included as a future reference source. The February issue (70) was thirty pages long and published on time. As usual for this issue, it was mostly taken up with abstracts from the Malacological Forum held at the NHM in November 2017. A research grant report from Trond Oskars of Bergen University, Norway reported on his work aiming to understand the diversity of the herbivorous cephalaspid family Haminoeidae. One of the goals of his research is to document the diversity, systematics and taxonomy of the Indo-West Pacific (IWP) genus Haloa and to try to use this knowledge to better understand speciation and biogeography of shallow-water gastropods. As a corollary to the list of prize winners published in the previous issue, Issue 70 included lists of all the previous officers of our now somewhat venerable Society. As is unfortunately frequent these days, the issue again included an obituary, in this case of Dai Roberts who had been a Treasurer of the Society for many years. Finally, as usual, the issue presented the official notice of the forthcoming AGM and the nominations for Council.

### Journal of Molluscan Studies (reported by David Reid)

The ISI impact factor for the *Journal* in 2016 increased to 1.250 (compared with 1.185 in 2015, 1.326 in 2014, 1.495 in 2013, 1.358 in 2012 and 1.227 in 2011). The *Journal* stands at number 65 in the ISI list of 160 zoological journals (up from 68 in the previous year). Our chief competitor, *Malacologia*, had a lower impact factor in 2016 (0.943), so the *Journal*'s leading position in the field is confirmed by citation statistics. The *Journal* continues to be truly international in terms of the geographical distribution of its authors; for volume 82 (2016) the corresponding authors represented 18 countries (of which the leaders were 18% USA and 12% Japan). Circulation for the *Journal* in 2017 was 45 institutional (of which 20 were online-only and 15 print-only) and 154 membership subscriptions (compared with 51 and 145 respectively for 2016). In addition a further 2,569 institutions have electronic access to the *Journal* through publishers' consortia (includes migrated figures; compared with 2,645 in 2016) and 1,092 (unchanged from 2016) have access through OUP's Developing Countries Offer (for details see <a href="http://www.oxfordjournals.org/access purchase/developing countries.html">http://www.oxfordjournals.org/access purchase/developing countries.html</a>). This means that the *Journal* is now available to 3,860 member and institutional subscribers (compared with 3,933 in 2016). The new pricing structure has been fixed for 2018. The cost for a combined print plus online institutional subscription is £486 and print-only subscription is £579.

Volume 83 (2017) contained 56 papers and research notes, totalling 483 pages (a significant decrease on the exceptional 606 pages of the preceding volume). The mean delay between acceptance of a manuscript and electronic publication was 6.4 weeks. In total, 176 manuscripts were submitted in 2017 (a decrease of 10% on the 195 in the previous year) and the acceptance rate was approximately 32%. The response of symposium organisers from the 2016 World Congress of Malacology in Penang was disappointing; only four papers from the Opisthobranch Symposium have been published in the *Journal*. The image of *Wunderpus photogenicus* on the cover of Volume 83 was kindly donated by Colin Marshall.

The access problems arising from migration to the new OUP website for the *Journal* in 2017 have now been resolved. Members are reminded that they can access the entire electronic archive of *Journal of Molluscan Studies* (and its precursor *Proceedings of the Malacological Society of London*).

Our board of Associate Editors is now: Coenraad Adema (immunology, genomics, parasitology), Thierry Backeljau (molecular phylogenetics and genetics), Liz Boulding (population and reproductive biology), Robert Cameron (ecology and genetics of terrestrial gastropods), Richard Cook (agricultural malacology, physiology, feeding behaviour), Simon Cragg (life histories, sense organs), John Davenport (marine ecology and physiology), Mark Davies (marine ecology and behaviour), Dan Graf (freshwater bivalves), John Grahame (population genetics, morphometrics), Liz Harper (marine bivalves), Bernhard Hausdorf (terrestrial gastropods), Robert Hershler (freshwater gastropods), Michal Horsák (ecology and biogeography of terrestrial gastropods), Kurt Jordaens (systematics, ecology and pest control of terrestrial gastropods), Yasunori Kano (systematics of vetigastropods, tropical ecology), Joris Koene (reproductive behaviour of gastropods), Manuel Malaquias (opisthobranchs), Peter Marko (marine biogeography and phylogenetics), Pablo Martín (freshwater ecology, life history), Ellinor Michel (ecology, freshwater gastropods), Jeff Nekola (community ecology of terrestrial gastropods), Nicolas Puillandre (neogastropods), Ellen Strong (freshwater and marine caenogastropods), Mikael Thollesson (opisthobranchs), Janet Voight (cephalopods), Janice Voltzow (microscopic anatomy), Heike Wägele (opisthobranch biology), Tony Walker (biochemistry, immunology, cytology), Suzanne Williams (molecular phylogenetics and genetics), Nerida Wilson (opisthobranchs, deep-sea and Antarctic molluscs) and Yoichi Yusa (general ecology and behaviour). I am sorry to report the resignation of Associate Editor Anne Lockyer.

I would like to thank all the members of the editorial board, those members of the international malacological community who have contributed to the review process, and the staff of Oxford University Press, for their work on behalf of the *Journal* 

Finally, I have given notice to the President and Council of the Society that I shall resign as Editor at the end of 2018, after 16 years. The Council has agreed to a transitional period of six months (from July 2018), during which I shall work together with the incoming Editor.

#### The Society's websites - www.malacsoc.org.uk (reported by Tom White)

The website has not been changed substantially over the last year, other than to update various pages with relevant information. It continues to function well, providing information relating to awards, membership and subscriptions and upcoming MSL events, as well as links to the *Journal of Molluscan Studies* and issues of *The Malacologist*. The Wordpress system does not provide analytics in the same way as previously, so data such as the number of visits etc. could not be compiled. If members experience any issues with the website, or notice issues such as broken links or incorrect information, please let know so that these can be corrected.

# The Society's Facebook account www.facebook.com/malacsoc (reported by Chong Chen)

The Society's Facebook page continues to perform well. We now have over 2,100 followers on the page, an increase of about 300 from last year. This means we have a direct outreach population of 2,100 people/organisations who sees our posts; some posts reach over 2,500 views thanks to other organisations who share our posts. For example, the final announcement of the Molluscan Forum reached 2,600 views.

Again, although the Facebook page is doing well so far, it will benefit greatly from an increased number and variety of posts. If you come across items of potential interest for our Facebook audience, please e-mail me (<a href="mailto:cchen@jamstec.go.jp">cchen@jamstec.go.jp</a>) with recommendations and I will generate posts. Also, if you have a Facebook account and would like to join the admin team with posting rights and see the performance stats, just let me know which e-mail address you used to register for Facebook, and I will add you as an admin.

If you have suggestions / comments on the Facebook page, please do not hesitate to contact me.

#### Awards (reported by Jon Ablett)

Overall, the Society is very pleased with the number of applications that it receives for Travel Awards and Research Grants. The schemes seem to be achieving their global aim to enable young scientists to engage in malacological research activity both in the laboratory/field and at meetings. Reports from researchers funded through both schemes appear in *The Malacologist*.

The Society aims to make the following awards annually.

Travel Awards - at least 5 each of up to £500 for Society members, £300 for non-members

Research Grants - at least 5 each of up to £1500

Application forms and guidance notes for both schemes have been updated recently and can be downloaded from The Society's website.

# **Travel Awards**

In 2017 there were 2 rounds of Travel Awards, June and December. The Society received 9 applications for awards to travel and was able to fund 8 of these requests. All Travel Award applications are reviewed by an Awards Committee. The Society is pleased to have announced the following awards.

June Travel Awards

María Pilar Cadierno (Universidad Nacional de La Plata)

£300 for the '14th International Congress on Invertebrate Reproduction and Development'

Matías Giglio (Universidad Nacional de La Plata)

£300 for 'Physiomar 17'.

Lisette de Hoop (Radboud University)

£300 for the 'Global Action Against Aquatic Invasive Species Conference'

Nathaniel T. Marshall (University of Toledo)

£500 for the '14th International Congress on Invertebrate Reproduction and Development'.

Patricia Peinado (University of Tasmania)

£500 for 'Physiomar 17'.

Leonardo Santos de Souza (Universidade Federal do Rio de Janeiro)

£500 for the 'X Congreso Latinoamericano de Malacología Development'.

December Travel Awards

Jorge Alves Audino Sampaio (Universidade de São Paulo)

£300 for the "American Malacological Society Annual Meeting" symposium. USA

Umberto Rosani (University of Padova)

£300 for the "American National Shellfisheries Association". USA

A total of £3000 was allocated by The Society for Travel Awards. All applicants have been notified of the outcome. Note that this amount does not necessarily reflect actual 'spend' as occasionally students withdraw from the intended visit.

#### Research Grants for 2017 - Senior Research Grants & Early Career Research Grants

The MSL council decided to restructure the research grants from 2016 by awarding Senior Research Grants and Early Career Research Grant. Early Career Research Grants are conferred on students and researchers without professional positions, but without regard to nationality or membership of The Society. Senior Research Awards are aimed at established researchers in professional positions, but without regard to nationality. Applicants for Senior Research Awards must be members of The Society. Early Career Research Grants will be reviewed by MSL council members and Senior Research Grants may be reviewed by a Reviewers Panel including both council and non-council members invited for that purpose.

## **Early Career Research Grants**

By the closing date of 15<sup>th</sup> December 2017 the Society had received 26 applications from workers from 23 institutions in 12 different countries. In general, the scientific quality of the research projects submitted was excellent. On behalf of the Society, I would like to formally thank the members of the Grants Review Panel for their hard work in re-

viewing all applications. The Panel has agreed the following awards, in alphabetical order. Amodio, P. (University of Cambridge, UK), £1500

'Are octopuses creative tool users or tool specialists?'

Cobo Llovo, M. (University of Alabama, USA), £1300

'Solenogastres from remote locations, a step forward in the knowledge of Aplacophora'

Fernández-Vilert, R. (Harvard University, USA), £1410

'Assessing the phylogenetics and systematics of the nudibranch mollusc family Dotidae

(Gastropoda, Heterobranchia) in the Mediterranean'

Kang, V. (University of Cambridge, UK), £1500

Finding molecules that stick: Identifying adhesive proteins and understanding their role in the limpet's powerful adhesion'

Laibl, C.( SNSB Bavarian State Collection of Zoology, Germany), £1135

'Barcoding coffee grounds – Exploring the diversity of pteropods in the world's oceans using sediment deposits in collection jars'

Lundquist, S. (University of Cambridge, UK), £755

'Freshwater mussels as environmental indicators for climate history'

Ostermair, L. (Ludwig-Maximilians-Universität, Germany), £1128

Taking advantage of contamination: Molecular analyses of solenogaster midgut contents to determine food sources'

Prasetiya, F.S. (Universitas Padjadjaran, Indonesia), £1500

'Physiological effects of marennine-like pigment on Pinctada maxima, the South Sea Pearl Oyster (PoMPier)'

Rama Rao, S. (Sunway University, Malaysia) £1461

'Population genetic diversity of invasive apple snails (Pomacea spp) in Malaysia'

Sampaio, E. (University of Konstanz, Germany),  ${\bf £1500}$ 

'Disentangling multi-partner effects on octopus-fish cooperative hunting'

Sleight, V. (University of Cambridge, UK), £1500

'Developmental biomineralisation mechanisms'

Therefore **11** Research Grants have been funded at a total cost of £14,689. The success rate was **42%**. The Grants Review Panel would like to emphasise that the quality of all applications was high and that it funded as many excellent projects as possible. Applicants will be formally notified of the outcome of their application within three weeks of the AGM.

# **Senior Research Grants**

By the closing date of 15<sup>th</sup> June 2017 the Society had received 3 applications from workers from 3 institutions in 3different countries. On behalf of the Society, I would again like to formally thank the members of the Grants Review Panel for their hard work in reviewing all applications. The Panel has agreed the following awards, in alphabetical order.

Dr Joris M. Koene, Vrije Universiteit, the Netherlands.

£1500 'Cuban Cupids: Mating behaviour of dart-possessing land snails

Dr Katja Peijnenburg, Naturalis Biodiversity Center and Leiden University, the Netherlands.

£1500 'Adaptive potential of pteropods along a meridional transect in the Atlantic Ocean '

#### The Annual Award

The Society received three nominations for the 2018 Annual Award. The Judging Panel elected to offer the Annual Award to Philip R. Hollyman (Bangor University, UK.) for a thesis entitled 'Age, growth and reproductive assessment of the whelk, Buccinum undatum, in coastal shelf seas'. The Society sends its best wishes and congratulations to Dr Hollyman

# The Oxford Prize for Malacology

The Oxford Prize for Malacology is awarded annually for the best presentation at the Molluscan Forum, is generously supported by Oxford University Press, publisher of the Society's journal. The 2017 winner is Luke Helmer for his talk entitled 'The efficacy of suspended broodstock cages as a restoration strategy for the European

#### **Euromal**

The society provided £2000 to the organisers of the 2017 Euromal Committee to fund student placements at the 8th EU-ROMAL in Krakow, Poland. The recipients were chosen by the Euromal Committee and were:

Sofifa Bakalayeva - £81 Luis Javier Chueca - £55

Dr Ana Vanessa Pinto Modesto Bento - £300

Dr Eder Somosa Valdeolmillos - £300

Dr Feng Tang - £464

Dr Amaia Caro Aramendia - £300

Dr Justin Kemp - £500

The Society awarded 3 student prizes at Euromal 2017 for the best student oral presentation. The winner of the award was David Willer for his talk 'Improving productivity of bivalve mollusc aquaculture using microencapsulated products' and the two runners up were Alyssa Rita Frederick (Differential disease resistance patterns in eastern Pacific Haliotids) and Dagmar Rihova (Coat for every occasion: periostracum of selected land snails – a preliminary report).

# **Officers and Council**

This is my final year as President of the Society and as in the previous two years, it has been an absolute pleasure to work with all Society's Officers and Councillors. I am proud to be involved with such an active Society, whose activities contribute to the Society's stated goals to "advance education, research and learning for the public benefit in the study of Mollusca from both pure and applied aspects". The Society does this by providing grants and awards to students, early career researchers and established scientists to promote malacological research, publishing two excellent publications, as well as maintaining an active website, which is updated regularly, and a Facebook account, which highlights events and papers of interest to the malacological community. It also organizes stimulating meetings and has managed to maintain both a healthy membership and financial status.

None of this would be possible without the hard work, dedication and inspiration of the Society's Officers and Councillors who are all volunteers. As such, I would like to express my sincere gratitude and appreciation to all of them. In stepping down as President I know I will be handing over to very capable hands and that the new incumbent will be greatly aided by the professionalism of the Council and Officers.

Year of existence	2017-2018	2018-2019
	124	125
President	Suzanne Williams (3)	John Grahame (1)
Vice Presidents	Richard Preece (2)	Richard Preece (3)
	John Grahame (3)	Robert Cameron (1)
Ex officio		Suzanne Williams
Councillors	Aidan Emery (1)	Aidan Emery (2)
	Phil Fenberg (2)	Phil Fenberg (3)
	Harriet Wood (1)	Harriet Wood (2)
	Debbie Wall Palmer (2)	Debbie Wall Palmer (3)
	Robert Cameron (3)	Andreia Salvador (1)
	Simon Cragg (3)	Fiona Allen (1)
Co-opted	Andreia Salvador	
Journal Editor	David Reid	David Reid/Dinazarde Raheem
Bulletin Editor	Georges Dussart	Georges Dussart
Treasurer	Katrin Linse	Katrin Linse
Membership Secretary	Tom White	Tom White
Hon.Secretary	Rowan Whittle	Rowan Whittle
Web manager	Tom White/Chong Chen	Tom White/Chong Chen
Awards Officer	Jon Ablett	Jon Ablett

Numbers indicate years in post; posts are for 3 years.



# Annual General Meeting— associated scientific meeting

Meeting following the AGM of the Malacological Society of London

Talks were given by an international team of malacologists and were followed by a wine reception. The meeting was free with no need to register. There will be a more extended report of this meeting in the next issue of *The Malacologist*.

New perspectives on evolution in molluscs: from fossils to next generation sequencing









21st March 2018

125<sup>th</sup> Malacological Society of London & Natural History Museum

Flett Theatre, Natural History Museum, London

In order to celebrate the **125th AGM of the Malacological Society of London**, the Society together with the Natural History Museum co-hosted a special day long symposium, "New perspectives on evolution in molluscs: from fossils to next generation sequencing". Talks from world renowned experts covered aspects of life history and evolution in the phylum Mollusca ranging from pharmacology, palaeontology and chemosymbiosysis to larval development and shell structure. Although focused on molluscs, these talks were of interest to evolutionary biologists, biogeographers, marine biologists and palaeontologists.

10.00-10.30h
10.30-10.40h
10.40-11.25h
10.40-11.25h
11.25-12.10h
12.10-13.30h
12.10-13.30h<



13.30-14.15h Prof. Toto Olivera: Venomous fish-hunting Conus from behaviour and phylogeny to drug development
 14.15-15.00h Prof. Yasunori Kano: Larval ecology matters: macroevolution and spatiotemporal distributions of neritimorph gastropods

15.00-15.30h Tea & coffee

15.30-16.15h Prof. Dan Distel: *Kuphus polythalamia:* uncovering the biology of a giant shipworm

16.15-17.00h Dr Carmel McDougall: The molecular basis of molluscan biomineralisation

17.00-18.45h Wine reception

# Conference biographies and abstracts

# Prof. Geerat Vermeij, University of California at Davis, USA

Geerat J. Vermeij (born 28 September, 1946 in Sappemeer), is a Dutch-born professor of paleobiology at the University of California at Davis. Blind from the age of three, he graduated from Princeton University in 1968 and received his Ph.D. in biology from Yale University in 1971.

An evolutionary biologist and paleontologist, he studies fossil and living molluscs. He started writing about his Escalation hypothesis in the 1970s. He received a MacArthur Fellowship in 1992. In 2000 Vermeij was awarded the Daniel Giraud Elliot Medal from the National Academy of Sciences. In 2006 he received the Paleontological Society Medal. He was a member of the Board of Trustees at the California Academy of Sciences from 2006-2015.

His books include *Evolution and Escalation: An Ecological History of Life, A Natural History of Shells, Privileged Hands, Nature: An Economic History,* and *The Evolutionary World: How Adaptation Explains Everything from Seashells to Civilization.* In addition, he has published more than 250 scientific papers on subjects ranging from taxonomy to functional morphology, patterns in the history of life, invasion, the causes of extinction, and the relation between economics and evolution.



# Shell function and the history of life: an arena and bedrock of evolution

Molluscs occupy an enormous range of habitats, and their functionally comprehensible shells provide a rich fossil record dating back to the Early Cambrian. Changes in adaptive shell architecture over time therefore offer a window on evolving patterns of natural selection. I consider contrasting histories for several shell types: limpets, evolving at least 54 times from the Cambrian onward; gastropod varices, with 40 independent origins, mainly during the Late Mesozoic and Cenozoic; the labour-saving labral tooth in predatory gastropods, originating about 60 times from the Late Cretaceous onward; shell envelopment, with some 50 independent origins, mainly concentrated during the Cretaceous and Cenozoic; and burrowing-specialized morphology in gastropods and bivalves, chiefly again a phenomenon of the Cretaceous and Cenozoic. These patterns were mostly driven by intensifying predation and ecological expansion, but some (such as limpets) also indicate occupation of ecological refuges from predation. The functional and evolutionary study of shells is a rewarding pursuit that should complement phylogenetic and taxonomic research.





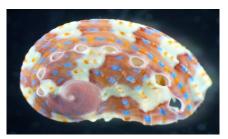
# Dr Carmel McDougall, Griffith University, Australia

Carmel McDougall is a molecular biologist with a broad interest in functional and evolutionary genomics, particularly of marine invertebrates. Her primary research has been in the field of molluscan biomineralisation, with a focus on identifying the genes involved in controlling shell synthesis, understanding how these genes have evolved, and investigating how variation in these genetic factors leads to differences in shell (or pearl) properties. Her research also uses comparative and functional genomics and experimental studies to provide practical outcomes for sustainable molluscan aquaculture. She is from Brisbane, Australia, and obtained her BSc (Hons) at the University of Queensland. She then undertook her PhD at the University of Oxford (spending her final year at the University of St Andrews) in the UK, investigating the evolution and development of polychaete worms. Her postdoctoral work brought her back to UQ, where she continued research into biomineralisation in abalone and pearl oysters. She is now an Advance Queensland Fellow at Griffith University, Brisbane, Australia, where she heads the Molecular Ecology Laboratory.



#### The molecular basis of molluscan biomineralization

Molluscan shells exhibit a large diversity of architectures at both the macroscopic and microscopic levels. Ultimately, these architectures are controlled by gene expression in the epithelial cells of the dorsal mantle, however very little is known about how these genes, and the proteins they encode, regulate the formation of such spectacular structures. Next-generation sequencing has opened up the capacity for significant new insights into the molecular basis of molluscan biomineralisation. On one hand, the availability of mantle transcriptome data from an ever-increasing number of species enables broad-scale comparisons that shed light on the evolution of shell formation in molluscs. These comparisons also reveal common features of mantle secretomes that



through ocean surface dispersal.

Haliotis asinina

likely underlie key functional principles of shell formation. On the other hand, recent developments in low-input RNA-Seq have enabled fine-scale mapping of gene expression across the mantle tissue. Differential gene expression in regions of the mantle associated with particular shell features can reveal the molecular basis for control of their production. In this presentation I will outline key findings from a recent comparative analysis of mantle transcriptomes and shell proteomes of gastropods and bivalves. I will also share preliminary results of a fine-scale RNA-seg analysis of the juvenile abalone mantle, which reveals the likely pathway of molecular control of shell pigmentation patterning. These examples demonstrate the utility of 'omics studies in elucdating the molecular basis of molluscan biomineralisation.



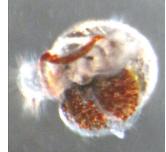
# Prof. Yasunori Kano, Atmosphere & Ocean Research Institute, Tokyo University, Japan

Yasunori Kano began his career as an avid beach comber and shell collector at the age of four, and 24 years later earned his PhD in Biological Sciences from the University of Tokyo. His thesis focused on comparative anatomy and taxonomy of living gastropods, although he was also interested in fossil molluscs and was strongly influenced by his mentor, palaeontologist Prof. Tomoki Kase. After two years as a postdoc in Tokyo, where he learned molecular phylogenetics and population genetics, he was appointed Associate Professor at the Atmosphere and Ocean Research Institute (AORI), University of Tokyo, in 2010. His current aim at AORI is to understand better the natural history of molluses in the tropics and in the deep sea, by adding such disciplines as larval culture and elemental and isotopic analyses with the help of his students and postdocs. He currently serves as the Vice President of the Malacological Society of Japan and is an associate editor for its journal, Venus, and for the Journal of Molluscan Studies of the Malacological Society of London.



# Larval ecology matters: macroevolution and spatiotemporal distributions of neritimorph gastropods

Characteristics of early ontogeny — the duration of pelagic larval period in particular — are known to strongly influence the geographic and geologic ranges of benthic invertebrate species. But what about the importance of larval ecology on such macroevolution as habitat shifts and succeeding ecological radiation? The Neritimorpha, one of the six main clades of Gastropoda, represent a prime example of animal radiation and adaptation by inhabiting rocky shores, seagrass beds, mangrove swamps, freshwater streams, subterranean waters, submarine caves, deep-sea sunken wood, hot vents and cold seeps, in addition to terrestrial and arboreal ecosystems. Our comprehensive molecular phylogeny of the clade illustrates their multiple invasions of each of the intertidal, stream, groundwater, submarine-cave, deep-sea and terrestrial habitats; reversals from freshwater to shallow marine have also occurred. We provide several lines of new information about their larval ecology: (1) Regardless of where adults occur, the planktotrophic larvae of most aquatic neritimorphs disperse in the surface water of the open ocean for many months or perhaps over a year, and (2) resulting enormous dispersal faculties contribute to their wide geographic distributions, panmictic structures and low rates of speciation and extinction. (3) These neritimorphs have thereby retained potential for evolutionary habitat transitions



Planktotrophic larva of Shinkailepas myojinensis



# Prof. Sarah Samadi, Muséum National d'Histoire Naturelle, Paris

The common background of Sarah Samadi's scientific activities is the analysis of the conceptual grounds of systematics and evolutionary biology. Her present empirical projects, on invertebrates from poorly known environments of the deep-sea benthos (mainly molluscs), have been developed in the framework of 'Integrative Taxonomy'. In this framework, her aim is to combine various methods in phylogenetics, population genetics and ecology, to provide insights into the origin of species



# Feedback on the use of NGS in molecular systematics of molluscs in Paris Sarah Samadi & Nicolas Puillandre

For the last few years, our team in Paris started to introduce new methods based on Next Generation Sequencing techniques for the molecular systematics of molluscs. These projects included phylogenomics at various scales, based on mitogenomes or transcriptomic data, but also Rad-sequencing for species delimitation, and metabarcoding of gut content and endosymbiotic bacteria to inform on the speciation processes involved. I will here describe our successes, including the publication of several mitogenome and exon-capture-based phylogenies, but also our failures, such as the low success rates of the RAD-sequencing approach in the Bursidae (and, in a lesser extent, in the Turridae), to discuss what we should do next to take benefit from, rather than be drowned under, the data flood. In particular, we had to develop technical and analytical strategies to deal with limitations specific to the molluscs, such as the low quantities of DNA (moreover swamped with PCR inhibitors) or the lack of genomic reference data. The main examples will come from the CONOTAX project leaded by Nicolas Puillandre on Conoidea, but also on recently achieved PhD projects (notably Cocculinids with Hsin Lee; Bursidae with Malcolm Sanders)



# Prof. Toto Olivera, University of Utah, USA

Baldomero ("Toto") Olivera grew up in the Philippines; his early research contributions include the discovery and biochemical characterization of E. coli DNA ligase, an important enzyme of DNA replication and repair that has become a keystone of recombinant DNA technology. Toto Olivera initiated the characterization of predatory cone snail venoms. A large number of peptide neurotoxins ("conotoxins") are present in each venom. Several peptides discovered in Olivera's laboratory reached human clinical trials and one (Prialt) has been approved for the treatment of intractable pain. He has been elected a member of the American Philosophical Society, the U.S. National Academy of Science, and the U.S. National Academy of Medicine. He was given the Outstanding Alumni Award of Caltech, the Redi Award from the International Society for Toxinology and the Harvard Foundation Scientist of



the Year 2007 Award. When he first arrived in Utah, he organized the Biochemistry/Molecular Biology Core curriculum for undergraduates. As Founding Director, he organized the University of Utah Interdepartmental Neuroscience Program. He is presently focused on establishing academic and research programs that link Neuroscience to the Biodiversity of the Marine Environment.

# The Conus predation video

In his presentation at the Conference, Prof. Olivera showed a video film made in collaboration with Dylan Taylor who was also present at the conference  $\underline{thefishstation@gmail.com}$ . This text accompanies the film:-

All of the cone snails (Genus Conus) are predators, individual species of cone snail specialise in terms of the prey they hunt. There are three main categories of cone snail that are recognised; piscivores that consume fish, vermivores that prey on worms and molluscivores that feed on other snails. We will see examples of each type, as well as some footage of a vampire snail from the Genus Colubraria, feeding on the blood of a live fish. The cone snails and their relatives have become the focus of intensive research, in large part due to their possession of extremely diverse venom compounds including conotoxins. These conotoxins have led to breakthroughs in neuroscience and the development of new pharmaceutical products. At the start of the field trip, local fishermen in The Philippines collect the snails and deliver them to the researchers. The researchers sort them into individual species and prepare to extract the venom ducts. The scientists dissect the snails to locate the venom duct. Each venom duct is then carefully removed and preserved for shipment to the various university facilities that will later extract the numerous venom components that each species possesses. The venom components are being studied to further understand their properties and potential applications in various fields. Most of the subsequent research happens in laboratories, at a molecular level using cutting-edge techniques and processes. It is common for an individual venom sample from a cone snail to contain what is effectively a cocktail of hundreds of different venom components, each of which has a different effect on the victim. The conotox-

THE VIDEO WHICH PROFESSOR OLIVERA SHOWED AT THE MEETING WILL SOON BE AVAILABLE FOR VIEWING ON THE WEBSITE OF THE MALACOLOGICAL SOCIETY



# Prof. Dan Distel, Ocean Genome Legacy Center, Northeastern University, USA

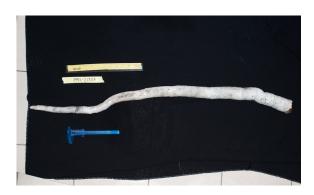
Dan Distel received his B.S. in Biology from Cook College, Rutgers University, NJ (1979) and his Ph.D. in Marine Biology from Scripps Institution of Oceanography, UCSD (1988). He served as a Post-doctoral Researcher at Woods Hole Oceanographic Institution, MA and at Scripps Institution of Oceanography, UCSD and as a research scientist at Harvard University, Cambridge MA. In 1994, he joined the faculty at the University of Maine, Orono. After receiving tenure, he left the University of Maine to become the founding director of Ocean Genome Legacy Foundation, Ipswich MA, which in 2014 merged with Northeastern University. He is currently a research professor and Director of the Ocean Genome Legacy Center at Northeastern University. His research interests include the biology, ecology, evolution and function of marine bacteria-animal symbioses, with emphasis on the wood-boring bivalve family Teredinidae (shipworms).



# Kuphus polythalamia: uncovering the biology of a giant shipworm













# Forthcoming meetings

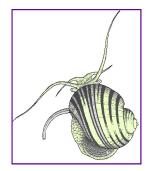
# The Malacological Society of London

HTTP://WWW.MALACSOC.ORG.UK

# Molluscan Forum

# 20th ANNIVERSARY

Thursday 22<sup>nd</sup> November 2018 9:00 am – 6.30 pm Flett Lecture Theatre Natural History Museum, London



# CALL FOR REGISTRATIONS AND PAPERS

This informal, annual, and successful meeting is designed to bring together people starting their research on molluscs, to give them the opportunity to present and discuss their work and to compare notes on methods and problems. The Forum will be held the day before the Young Systematists' Forum (www.systass.org/ysf), which will also take place at the Natural History Museum. This has been arranged so both meetings can be attended, although if attending both, you will have to register for both meetings separately.

Attendance at the Molluscan Forum is open to all, but presenters should be research students, post-doctoral researchers, undergraduate students starting molluscan projects, and amateurs engaged in substantial projects that have not yet been published. Any topic related to molluscs is acceptable: palaeontological, physiological, behavioural, ecological, systematic, morphological, cellular or molecular.

Short talks (~15 min) or posters may be offered. They need not be polished accounts of completed work; descriptions of new methods, work in progress, and appeals for assistance with unsolved problems are equally acceptable.

In addition to talks and posters there may be opportunities to acquire books and other items contributed by members of the Society. Lunch will be provided and The Forum will end with a wine reception, both sponsored by The Malacological Society of London.

THERE IS NO REGISTRATION FEE AND A LIMITED AMOUNT OF HELP WITH TRAVEL COSTS WILL BE AVAILABLE FOR PRESENTERS WHO CANNOT CLAIM THEM FROM ELSEWHERE.

# **Enquiries and registrations to:**

Andreia Salvador, Curator of Marine Gastropoda and Historical Mollusca Collections, Natural History Museum (<u>a.salvador@nhm.ac.uk</u>)

**Non-presenters:** please let us know you will be coming so that we can estimate numbers.

For more information see: <a href="http://www.malacsoc.org.uk/MolluscanForum.htm">http://www.malacsoc.org.uk/MolluscanForum.htm</a>

# The Malacological Society of London

# Molluscan Forum, Thursday 22nd November 2018 9:00 am – 6.30 pm Flett Lecture Theatre, Natural History Museum, London

# **REGISTRATION FORM**

# Return before 19th October 2018, by email to:

Andreia Salvador, Curator of Marine Mollusca, Natural History Museum (a.salvador@nhm.ac.uk)
Name
Address
Tel. No
Email
<b>Status:</b> Research Student / Undergraduate / Post-doctoral researcher / amateur (delete as appropriate)
'Other' (please state)
Will you attend the Young Systematists' Forum on 26th November 2016?
I wish to give a paper / poster (delete as appropriate) entitled:
Please attach, as a Microsoft Word attachment, an abstract of not more than 350 words, TOGETHER WITH TWO .JPG IMAGES IN SUPPORT OF THE ABSTRACT Abstracts and images of accepted contributions will be published in the Society's ISSN bulletin, <i>The Malacologist</i> , and on its website.
Posters should be roll-ups or mounted on stiff cards, and should require no more than a $1$ metre $x$ $1$ metre display area. They will be mounted on boards (velcro supplied).
If you are <u>unable</u> to get financial support from elsewhere (students and amateurs only) and need assistance with travel costs, please enter here the cost of the cheapest possible public transport return fare to London.  £
Funding is not guaranteed but we endeavour to support as many presenters as possible. Late registrations may miss the

opportunity for financial support. The support will be limited, so funding from elsewhere should be sought first. A provi-

sional programme and confirmation of registration will be sent out late October.

# **Abstract submission**

Number 71 (August 2018)

Abstracts submitted for the Molluscan Forum should be sent as Microsoft Word files.

Please use the following format:

Title (12pt, left justified)

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Authors (10 pt, left justified, presenting author underlined; use superscript numbers to indicate institutional affiliation)

<blank line>

Institutions (10pt, left justified; in this order: Number (superscript), Department, Institution, City, Country)

Presenting Author email

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Abstract (11pt, no indentation, left justified, 350 words maximum)

# **EXAMPLE ABSTRACT**

The geographic scale of speciation in *Stramonita* (Neogastropoda: Muricidae)

Martine Claremont<sup>1,2</sup>, Suzanne T. Williams<sup>1</sup>, Timothy G. Barraclough<sup>2</sup>, and David G. Reid<sup>1</sup>

<sup>1</sup>Deptartment of Zoology, Natural History Museum, London, UK <sup>2</sup>Department of Biology, Imperial College London, Berkshire, UK

Email: m.claremont@nhm.ac.uk

Stramonita is a relatively small, well-defined genus of muricid marine gastropods limited to the tropical Eastern Pacific and the Atlantic. The type species, S. haemastoma, is known to have teleplanic larvae and is estimated to remain in the water column for several weeks. Stramonita haemastoma shows regional variation, and this has led to the recognition of five geographical subspecies: S. h. haemastoma, from the Mediterranean and Eastern Atlantic to Brazil, S. h. floridiana, on the east coast of Florida and in the Eastern Caribbean, S. h. caniculata on the west coast of Florida and the Gulf of Mexico, S. h. rustica in the Western Caribbean and S. h. biserialis in the Eastern Pacific. The protoconch has been shown to be similar across the S. haemastoma complex, implying that all subspecies have equally long lived larvae. Within these subspecies, cryptic variation is suspected. For example, S. h. biserialis is suggested to be differentiated North/ South on a small scale. In the presence of teleplanic larvae, speciation on such a small scale seems paradoxical. Various explanations for this paradox are possible. Actual (or realized) dispersal of *Stramonita* species may be more limited than presently believed, leading to allopatric differentiation. Alternatively, morphological differentiation may not be a reliable indicator of genetic differentiation, and S. haemastoma (sensu lato) might indeed prove to be a single taxon. It is also possible that ecological speciation could result in geographical speciation on a small scale in the presence of wide dispersal. My results suggest that five species of Stramonita are present in the Caribbean, at least three of which occur sympatrically. Gene flow is maintained between Caribbean and Mediterranean populations in at least one species, while no genetic differentiation was found along the Eastern Pacific coast. The implications of these results are discussed.

NOTE THAT ABSTRACTS ARE PUBLISHED IN *THE MALACOLOGIST* WHICH IS THE BULLETIN OF THE SOCIETY AND HAS AN ISSN NUMBER.

BEFORE THE FORUM, PLEASE EMAIL TO THE EDITOR TWO IMAGES TO ACCOMPANY YOUR ABSTRACT. TRY TO MAKE THESE IMAGES ONES THAT YOU WOULD NOT USE IN AN EVENTUAL FULL PAPER.

EDITOR georges.dussart@canterbury.ac.uk



# **Grants and Awards**

# **Malacological Society of London Awards and Grants**

The Research Awards Scheme was established to commemorate the Society's Centenary in 1993. Under this scheme, the Society gives awards to support research on molluscs that is likely to lead to publication. The closing date for applications each year is 15th December. Grants are preferentially conferred on students and researchers without regard to nationality or membership of the Society. Preference is also given to discrete research projects that fall within the subject areas covered by the Society's *Journal of Molluscan Studies*. Applications will be assessed by scientific merit, value of the project and for student applicants, the extent to which the research will benefit the applicant's scientific aspirations. The successful applicants will be notified by 31st March and announced at the Annual General Meeting. Awardees are encouraged to publish their work in the *Journal of Molluscan Studies* (full papers) or *The Malacologist* (travel award reports, research award reports, news of ongoing research etc) as appropriate,

# Early Career Research grants

Eligibility is restricted to those investigators at the outset of their independent scientific career. Applications must therefore be 1) postgraduate students, 2) within five years of being awarded their PhD (adjustable for career breaks), or 3) independent researchers not having a PhD. Early Career Research Grants will only be awarded to individuals twice, but not within 3 years of receiving a first award

# Sir Charles Maurice Yonge Award

There is no application process for Sir Charles Maurice Yonge Awards. These awards are given for the best Travel Award application on bivalves, by a member of the Society to attend an international meeting (not including the Molluscan Forum). Authors of exceptional studies on bivalves in *the Journal of Molluscan Studies* may on occasion also be given this award. The Editor will nominate such papers as he/she sees fit. The award covers the costs requested in a Travel Award, or for open access publication of the paper. Members of the Society will also receive a personal cash prize of £300. Non-members will receive a personal cash prize of £250 plus one year's membership to the Society. If a paper is multi-authored, the award will be made to the corresponding author.

# Senior Research Awards

are aimed at established researchers in professional positions, but without regard to nationality. Applicants for Senior Research Awards must be members of the Malacological Society of London. The Society currently awards up to five Senior Research Grants per year, each with a value of up to £1,500, to support research on molluscs that is likely to lead to publication. The maximum amount available should not be considered as a 'target'; rather requests should reflect the research that is proposed. The grants are reviewed by a Reviewers Panel including both Council and non-Council members invited for that purpose.

#### Travel Grants

Travel Awards are available as bursaries to support attendance at a conference or workshop relevant to malacology. Grants are preferentially conferred on students but researchers without professional positions may also apply. The maximum amount for one of these awards is £500 for Society members and £300 for non-members. Preference will be given to members of the Society. There are two closing dates each year, 30th June for travel starting between 1st September of the current year and 28th February of the following year, and 15th December for travel starting between 1st March and 31st August of the following year.

For further information, guidance notes and to access the application form see here - http://malacsoc.org.uk/awards-and-grants/travel-grants

### **Annual Award**

This Award is made each year for an exceptionally promising initial contribution to the study of molluscs. This is often a thesis or collection of publications. The value of the Award is £500. Candidates need not be a member of the Society but must be nominated by a member. There is no application form: the nominating member should send the material for evaluation with a covering letter or letter of support to the Honorary Awards Secretary. The closing date each year is 1st November. The winner(s) will be notified by 31st March, and announced at the Annual General Meeting.

# **Applications**

Applications for Research Awards and Travel Grants should be sent to the Honorary Awards Secretary, Jonathan Ablett, Division of Invertebrates, Department of Life Sciences, Natural History Museum, London, SW7 5BD For further information, guidance notes and to access the grant application form see <a href="http://malacsoc.org.uk/awards-and-grants/research-grants">http://malacsoc.org.uk/awards-and-grants/research-grants</a> Please note that all applications must be sent by email to MSL\_awards@nhm.ac.uk.



# Malacological Society of London—Membership notices

# **Objects**

The objects of the Society are to advance education and research for the public benefit by the study of molluscs from both pure and applied aspects. We welcome as members all who are interested in the scientific study of molluscs. There are Ordinary Members, Student Members and Honorary Members. Members are entitled to receive a digital &/ or paper copies of the *Journal of Molluscan Studies* and such circulars as may be issued during their membership. The society's Web Site is at: http://www.Malacsoc.org.uk

#### **Publications**

The Society has a continuous record of publishing important scientific papers on molluscs in the *Proceedings*, which evolved with Volume 42 into the *Journal of Molluscan Studies*. The *Journal* is published in annual volumes consisting of four parts which are available on line by members and student members. A paper copy of the Journal is available for ordinary members who are willing to pay a hard-copy premium. Members also receive access to *The Malacologist*, which is the bulletin of the Society, issued twice a year, in February and August.

# **Meetings**

In addition to traditional research on molluscan biology, physiological, chemical, molecular techniques are amongst the topics considered for discussion meetings and papers for publication in future volumes of the *Journal*.

# **Subscriptions**

# Membership fee structure

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Ordinary Members: Journal on-line only £45 Ordinary Members: Journal on line and printed £70 Student Members: Journal on-line only £25

#### **Methods of Payment**

- (1) Sterling cheque to "The Malacological Society of London".
- (2) Banker's standing order to: HSBC (Sort code 40-16-08 Account no. 54268210) 63-64 St Andrew's Street, Cambridge C32 3BZ
- (3) Overseas members wishing to pay electronically should should use IBAN GB54MIDL4016084268210
- (4) Credit card: Overseas members ONLY may pay by credit card: the Society can accept VISA and MasterCard payments only. Please provide the Membership Secretary with your card number and expiry date, card type (VISA or MasterCard.), the name on the card, and the cardholder's address (if this differs from your institutional address). Receipts will only be sent if specifically requested.

# **Institutional Subscriptions to the Journal**

Enquiries should be addressed directly to Oxford University Press, Walton Street, Oxford OX2 6DP, U.K.

## **Change of Member's Address**

Please inform the Membership
Secretary of a change of postal or
email address

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