May, 2023



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### Message from the President...

Dear TCS-colleagues,

May 2023 was an important month for TCS as we gathered for the 10th International Crustacean Congress (ICC10) organized in Wellington, New Zealand. ICC10 was the first face-to-face summer conference after a hiatus of almost three years of COVID-19 pandemic, when the conferences were either virtual (including the TCS summer meeting in Brazil) or cancelled. During the ICC10, we have held a business meeting for TCS members. The meeting agenda included acknowledgement of our TCS past officers: Ingo Wehrtmann (President 2020-2021), Heather Bracken-Grissom (North American Governor 2021-2022), Sarah Gerken (Secretary, 2018-2022), Darren Yeo (Asian Governor 2020-2021), Kelly Merrin (Ecdysiast Editor, 2017-2020) and Elysia Toh (Social Media Coordinator, 2022).

Thanks also to the Editor-in-Chief of Journal of Crustacean Biology (JCB), Peter Castro who has very kindly donated his year's salary from JCB for supporting student fellowships. Based on this, we have established the

Peter Castro Scholarship for student members.

At ICC10 I was also pleased to announce the launch of the TCS photo-competition for TCS members (please refer to the photography competition regulations and application form on <u>page 11</u>). As in past meetings, TCS had a fundraising booth for student scholarships, through selling the "C'est-Larvae" T-shirts, crustacean paintings and other artworks. In total from the Society of Integrative and Comparative Biology (SICB) in Austin, Jan 2023 and the ICC10 in May 2023, we raised \$1566 USD for student travel awards or scholarships!

Most of our members are aware of the TCS meetings in summer months. However, TCS also has a winter meeting, in collaboration with SICB. The SICB annual meetings (3-7 January) are organized in one of the major cities in USA. TCS typically provides financial support for one or more of the symposia or talks that include aspects of crustacean biology. I encourage you to go to SICB meetings (the upcoming meeting is in Seattle 2024)

and TCS members should consider proposing a symposium for a future SICB meeting to enhance carcinological research.

Benny K.K. Chan President, The Crustacean Society



TCS Presidents, past, present and future. Left to right: Chris Tudge, Ingo Wehrtmann, Shane Ahyong, Benny Chan, Amanda Windsor and Gary Poore





Acknowledgement of past officers of TCS during the ICC10 business meeting: top left - Ingo Wehrtmann (Past President), top right – Heather Bracken-Grissom (North American Governor), second row left – Sarah Gerken (Secretary), second row right – Kelly Merrin (Ecdysiast Editor), third row left – Darren Yeo (Asian Governor), third row right – Elysia Toh (Social Media Coordinator), last row left – Thanks for Peter Castro, Editor in Chief of JCB for his donations for student scholarships (photo taken in the TCS board meeting in SICB 2023, Austin), last row right – TCS fund raising booth at SICB meeting, Austin 2023.



# Thank you to our benefactors

Consider becoming a TCS Patron Member where you support the membership of at least one other member/student. The numbers are still increasing, a thank you to you all!

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<b>Crustacean Society Patron</b>	- M
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Shane Ahyong	1
Raymond Bauer	Ĩ
David K. Camp	Ŵ
¶ Peter Castro	Ŵ
Neil Cumberlidge	- W
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ି Michael Gable	Ŵ
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Carrie Schweitzer	94 1
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Christopher Tudge	90 1
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Amanda Windsor	₩ 9.1
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# The Crustacean Society Board Members, 2021

### President

Benny Chan Academia Sinica, Taiwan email: <u>chankk@gate.sinica.edu.tw</u>

### President-elect

Amanda Windsor US Food and Drug Administration, Maryland, USA email: <u>amwindsor@gmail.com</u>

### Past-President

Ingo Wehrtmann Universidad de Costa Rica, Costa Rica email: <u>ingo.wehrtmann@ucr.ac.cr</u>

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> Secretary Javier Luque Cambridge University, UK email: <u>jl2351@cam.ac.uk</u>

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David Hudson Remote Ecologist, Inc , USA email: <u>dmhudson@remoteecologist.org</u>

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### Asia Governor

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### Latin America Governor

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### North America Governor

Lauren Ballou Florida International University email: <u>Iballou@fiu.edu</u>

The Ecdysiast is published twice yearly in May and November and it is available in electronic form at <a href="http://www.thecrustaceansociety.org/ecdysiast">http://www.thecrustaceansociety.org/ecdysiast</a>. All the past issues are also available from the same web site. Submissions for the May newsletter should be received by mid March, while those for the November newsletter should be received by mid September. All types of crustacean-related contributions are encouraged, including announcements of upcoming workshops and meetings, regional updates, meeting summaries (with photos!), new publications and any other crustacean news.

Send all material directly to the Editor: Kareen Schnabel, <u>kareen.schnabel@niwa.co.nz</u>



# The Crustacean Society Liaison Officers, 2021

The Chinese Crustacean Society Liaison Officer: Jianhai Xiang CAS Institute of Oceanology, China email: jhxiang@qdio.ac.cn

International Association of Astacology Liaison Officer: Kohei Murakami Japan email: <u>fanmail@koheimurakami.com</u>

The Brazilian Crustacean Society Liaison Officer: Fernando Mantelatto University of São Paulo, Brazil email: <u>flmantel@usp.br</u>

The Carcinological Society of Japan Liaison Officer: Akira Asakura Seto Marine Biological Laboratory, Kyoto University, Japan email: <u>asakura.akira.6w@kyoto-u.ac.jp</u>

The World Association of Copepodologists Liaison Officer: Rony J. Huys Natural History Museum, London, UK email: <u>r.huys@nhm.ac.uk</u>

International Research Group on Ostracoda Liaison Officer: Renate Matzke-Karasz University Munich, Germany email: <u>r.matzke@lrz.uni-muenchen.de</u> Latin American Carcinologist Association Liaison Officer: Michel Hendrickx Unidad Academica Mazatlan, Mazatlan, Mexico email: <u>michel@ola.icmyl.unam.mx</u>

Colloquium Crustacea Decapoda Mediterranea Group

Liaison Officer: Enrique Macpherson Centro de Estudios Avanzados de Blanes, Spain email: <u>macpherson@ceab.csic.es</u>

> Terrestrial Isopod Biologists Group Liaison Officer: Jasna Strus University of Ljubljana, Slovenia email: jasna.strus@bf.uni-lj.si

Large Branchiopod Working Group Liaison Officer: D. Christopher Rogers University of Kansas, Kansas email: <u>branchiopod@gmail.com</u>

> Amphipod Group Liaison Officer: Wim Vader Tromsø Museum, Norway email: <u>wim.vader@uit.no</u>

German Carcinologists Group Liaison Officer: Sebastian Klaus Goethe Universität, Frankfurt am Main, Germany email: <u>klaus@bio.uni-frankfurt.de</u>

# Follow The Crustacean Society on social media



@TheCrustaceanSociety



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@ thecrustaceansociety



# **Treasurer's Report for May 2023**

As of May, TCS had 270 renewed members (182 regular members, 21 patron members, and 67 student members). This is down by about 20 members overall from the same time last year (2022 numbers: 225 regular members, 25 patron members, and 39 student members. It is encouraging that we are doing better member in student memberships but regular members need to please check their membership status and renew. Please also encourage your colleagues and students to join! Note that the link to join or renew memberships is: <a href="https://scienceserv.com/tcs/membership/membership.php">https://scienceserv.com/tcs/membership.php</a> and you can contact (<a href="membership.org">membership.org</a> directly if you have any issues with payments. A copy of the membership form is provided at the end of this issue of the Ecdysiast.

The TCS Executive Committee (President Benny Chan, President-Elect Amanda Windsor, Treasurer Jason Williams, Secretary Javier Luque, and Program Officer David Hudson) approved the open access APC and institutional online subscription price increases for the Journal of Crustacean Biology (4% and 5% increases, respectively). Note that the online subscription price increases pertain to institutions only; they do not impact individual TCS membership pricing, this has not been increased. As was set up last year, the insurance policies for TCS (i.e., General Liability; Director and Officer; Error and Omission) will be renewed through the Nonprofits Insurance Alliance. The TCS Executive Committee approved covering travel costs for past-President Ingo Wehrtmann to attend the ICC10 (well-deserved considering he used none of the allotted travel funds while president of TCS). Finally, I am happy to report that a total of \$1566USD were raised for student scholarships from the auction/merchandise tables at the ICC10 in New Zealand and the TCS/SICB meeting in Austin, TX 2023. Thanks to everyone that contributed!

TCS investments with Schwab now total over US\$713K. However, with the increased expenditures indicated above, the society is likely to run a defect of approximately \$8K for 2023 so we likely have to use some of these monies. In the upcoming months I will be working with BAI and the TCS Executive Committee on the proposed 2024 budget.

Respectfully submitted,

Jason Williams







# **2023 MID-YEAR PROGRESS REPORT**

There are so far encouraging results in the publication of our journal this year.

lssue	Articles published or at proof stage	Manuscripts being re- vised by authors	In peer-review
2022 no. 2 (April-June)	15	7	10
2023 no. 1 (January- March)	15	13	15
2023 no. 2 (April-2 June) [in preparation]	21	15	18

We recently published the first article in our new category, Short Reviews. The articles resulting from at least one symposium will be published before the end of the year. Oxford University Press recently re-designed JCB's website to be more informative by including columns of both the latest and the most-read articles in addition to our usual "Featured Article." Check our website at <u>https://academic.oup.com/jcb</u>.

The second issue of the year 2023 is being published as Volume 43, Issue 2 in June 2023 (<u>https://academic.oup.com/jcb/issue/43/2</u>). Take a look at the interesting range of carcinological research on display.

Peter (Pedro) Castro Editor-in-Chief, Journal of Crustacean Biology

> Consider publishing in the JCB, remember that page charges (for the first 12 pages of the typeset article) are waived for TCS members.





# **The Social Media Corner**

My name is Karlotta Kürzel, and I am the new Social Media Coordinator for TCS. I first developed an interest in crustaceans during my Master's degree at the University of Hamburg and the German Center for Marine Biodiversity Research (DZMB), where I conducted my thesis on benthic deep-sea isopods. After completing my degree, I had the opportunity to work as a manager for a sustainable tourism company in Svalbard, Norway. This experience allowed me to engage in scientific communication by leading nature-focused tours and interacting with tourists in the Arctic region.

However, I missed working in a scientific context, which led me to return to Germany, where I am currently pursuing a PhD with the University of Hamburg and the DZMB. For my PhD, I aim to understand the distribution patterns of deep-sea benthic fauna and their environmental drivers in the Atlantic, specifically focusing on amphipods.

Alongside my academic pursuits, I have always had a passion for photography and social media. I am thrilled to combine my love for crustaceans and scientific outreach with my skills in this area as the Social Media Coordinator.

- Karlotta Kürzel, TCS Social Media Coordinator

<u>@TheCrustaceanSociety</u> on Facebook (currently 517 followers) <u>@CrustaceanSoci</u> on Twitter (currently 564 followers) <u>@thecrustaceansociety</u> on Instagram (currently 353 followers)



### May, 2023

# **TCS student awards**

The Crustacean Society (TCS) is pleased to announce the winners of the Best Student Paper and Poster Competition held during ICC10 in Wellington, New Zealand.

This year, there were over 60 student oral and poster presentations at ICC10 in New Zealand! Many thanks go out to all the judges, and especially to Edwin Cruz-Rivera for coordinating on the ground. Please consider volunteering to judge student presentations in the future, as many hands make light work. Below are this year's Student Oral Presentation and Poster Presentation winners.

### **Oral Presentation Winners:**

Best Oral Presentation: **Keshet Shavit**, Ben-Gurion University of the Negev, "A Crystalline Photonic Device Enabling Crustaceans to See But Not be Seen", Sponsor: Dr. Benjamin Palmer

1st runner up: **Wave Moretto**, Scripps Institution of Oceanography, "*The effect of temperature on the feeding ecology of brown box crabs*" Sponsor: Dr. Jennifer Taylor

2nd runner up: **Sharon Moscovitz**, Ben-Gurion University of the Negev, "*Monosexprawns and crayfish* 



as biocontrol agents against pest snails" Sponsor: Dr. Amir Sagi

### **Poster Presentation Winners:**

Best Poster Presentation: **Ruma Chatterji**, University of Cinncinnati, "*Eye movement reflexes establish the home direction in path integrating fiddler crabs,* Uca pugilator" Sponsor: Dr. John Layne

1st runner up (tie): **Elysia Toh** (same mark), National University of Singapore, "All is not lost: ex-situ and in -situ studies reveal resilience to drought stress in the critically endangered Singapore freshwater crab Johora singaporensis" Sponsor: Dr. Darren Yeo 1st runner up (tie): **Sudarshan Gurucharan** (same mark), Ben-Gurion University of the Negev, "Analysis

of embryonic prawn primary cell culture by metabolic activity, cell cycle analysis and lipid metabolomics" Sponsor: Dr. Amir Sagi

Each award consists of a certificate, US \$100 cash, and a one-year membership in The Crustacean Society, including subscription to The Journal of Crustacean Biology.

On behalf of TCS, I congratulate the winners.

-TCS Program Officer: Dr. David Hudson



# TCS Fellowships and Awards

While the TCS Graduate Fellowship date has past, please remember that the next travel award date, for SICB 2024, is coming up in September!

# TCS Early-career, post-Ph.D. Travel Awards

TCS annually awards up to three (3) US\$1,500 travel awards for early-career researchers with a Ph.D. awarded within five years of the application deadline. Extension of up to eight years post-Ph.D. will be considered at the discretion of the Program Officer for applicants having taken a career break for family reasons. The grants shall cover travel to present, preferably in an oral session, results of their research in any field of study involving crustaceans at a TCS meeting (mid-year or SCIB meeting). Preference will be given to applications that will result in a manuscript suitable for publication in Journal of Crustacean Biology.

DEADLINE FOR APPLICATION: 15 March and 15 September annually. Find online application here.

# TCS Student Travel Awards

TCS annually awards a maximum of ten (10) US\$500 awards to support student attendance at TCS meetings (mid-year, SICB). Applicants must be enrolled in an undergraduate or graduate degree program, be the presenter of an oral or poster presentation at the TCS meeting they attend and demonstrate financial need for TCS support of travel to the meeting.

DEADLINE FOR APPLICATION: 15 March and 15 September annually. Find online application here.

For additional information, please contact: Dr. David M. Hudson, Program Officer <u>dmhudson@remoteecologist.org</u> <u>http://thecrustaceansociety.org/scholarship.php</u>



### Themes:

- 1. Live crustaceans in their natural (or aquarium) environment.
- 2. Laboratory-based crustacean specimen photographs (e.g., light or scanning electron microscopy)

### Prizes:

First (500 US dollars), second (300 US dollars), third (100 US dollars), Honorable Mentions (certificates)

The First Place Winner will have their photo featured on the cover of the Journal of Crustacean Biology

### SUBMISSIONS WILL BE ACCEPTED FROM 1 JUNE 2023 UNTIL 31 AUGUST 2023.

### Details:

Eligibility: The contest is open to all TCS members with current membership. The contest is free to enter. TCS Executive Committee members, regional governors of the TCS, and editor of JCB are not eligible to enter to avoid conflicts of interests.

Two themes: 1) Live crustaceans in their natural (or aquarium) environment; 2) Laboratory-based crustacean specimen photographs or strikethroughs (e.g., light or scanning electron microscopy).

Color or black and white photos are acceptable for both themes.

Photographs that the contest entrant didn't take, or for which someone else owns the copyright are not acceptable. The photograph must be the original work of the contest entrant. Illegal or prohibited photographs or with watermarks, any other overlaying images, logos are not acceptable.

Upload photos and the application form to a Google drive – send a shared drive link to balena525@gmail.com

- Up to three submissions per theme per contestant will be accepted. To avoid a single contestant winning multiple prizes, only one entry per contestant can be selected as a First, Second, or Third Place Winner. Each photograph must be accompanied with <250 words describing the target species and brief details on their biology/ecology.
- Photographs must be in digital format. High quality scans of negatives or prints will be accepted. Photographs must be submitted in .jpeg or .tiff format. Contest winners will be required to submit a high-resolution file (8.655 inches in width by 11 inches in height at 400 dpi) in .tiff or .jpeg format. Winners that cannot supply the required high quality photographs will be disqualified.
- Minor adjustments, including cropping, editing color saturation are acceptable. Photos whose content has been significantly altered are ineligible.
- Entrants including who are selected as the First Place Winner, Second Place Winner, Third Place Winner and merits will be required to sign a license agreement granting permission to use for TCS unlimited uses for scholarly publication or other social media purposes (including promotion of the future photo contest; publication on the website, facebook, twitters of TCS; and in promotional or advocacy documents, pamphlets, or reports. Any photograph reproduced will include a photographer credit).

Entry Deadline: 31 AUGUST 2023.

Judging: A judging committee will be convened by the TCS Executive Committee. Judges will make their selection based on the following judging criteria: Composition, clarity, species description, technical quality (50%) and creativity (50%).

Decisions of the judges are final.

### TCS member photo competition application form:

<u>Upload photos and the application form to a Google drive – send a shared drive link to</u> balena525@gmail.com

Please copy and paste the following if you have multiple entries or different themes (note each applicant can have a maximum of three entry per theme. Only one entry per contestant can be selected as a First, Second, or Third Place Winner.)

Name: <u>TCS membership number</u>: <u>Themes</u>: Please tick below: Natural photographs of live crustaceans including aquarium shots ( ) Laboratory taken, specimen photographs ( ) <u>Entry title</u>: <u>Entry file name</u>: <u>Entry description</u> (<250 words) - describing the target species and their brief interesting biology/ecology or biological significance

Please declare below whether the image has been edited including minor adjustments (note: minor adjustments, including cropping, editing color saturation are acceptable. Photos whose content has been significantly altered are ineligible):



# Obituary

We remember our colleagues who we lost recently, with gratitude for their contributions to crustacean research and to our community.

### Colin McLay (11 September 1942 – 3 December 2022)

Colin Lindsay McLay was the eldest son of Fred and Agnes McLay, and brother to younger siblings Helen, Irene and Alan. He grew up in Oamaru, a small town in the southern half of New Zealand's South Island, famous for the white limestone buildings common in the 19<sup>th</sup> century town's centre. Colin was a keen fisherman throughout his life and spent many days of his youth fishing from the Oamaru wharf.

Colin moved to Dunedin to study at Otago University, graduating with a bachelor's degree with honours in 1965. His early research focussed on freshwater ecology and resulted in pioneering publications on invertebrate drifting behaviours in streams. During his time at Otago University, he met his future wife and fellow student Margaret. Colin won a Commonwealth Scholarship to study at the University of British Columbia, Vancouver and began his doctorate in 1967 under the supervision of Professor Peter Larkin with Margaret in tow. His thesis continued his studies on freshwater ecology, but this time focussing on the competition



Colin receiving an honorary member title at the 2015 annual meeting of Carcinological Society of Japan (photo by Dr. Naoya Ohtsuchi)

between ostracod species in ephemeral puddles that filled tyre tracks in a field owned by the Canadian Department of National Defence at the time. Colin's thesis integrated the use of empirical data and computer modelling to predict the population dynamics within this curious habitat.

After completing his studies in Canada, Colin spent a post-doctoral year at the University of Santa Barbara studying freshwater plants before returning to New Zealand with Margaret in 1971. He took up a post at the University of Canterbury where he spent his long academic teaching career. He rose through the ranks and was head of the Zoology Department from 1987 to 1992 and retired as an Associate Professor in 2007. Generations of students will vividly remember him leading marine invertebrate field trips to the Edward Percival Field Station in Kaikoura, where he would demonstrate intertidal zonation on the nearby rock platforms while continuously puffing on his pipe.

Initially his research remained on freshwater ecology, but soon drifted to marine arthropods, including spiders, but it was during a sabbatical spent in Queensland at the Deception Bay Fisheries Research Station where his special affectation for the sponge carrying crabs of the Dromiidae began. Colin credits Meryl J. Williams as the one who introduced him to this amazing group, which seems to have propelled him down the path of carcinology. The first forays into crab behaviour and population dynamics were soon followed by his catalogue of *New Zealand Brachyura and crab-like Anomura* in 1988, which remains a mainstay reference for crab biodiversity and identification for kiwi marine biologists.

Colin's interest in taxonomy began in earnest after describing *Sphaerodromia brizops* with Alain Crosnier in 1991 and his subsequent works on this group will be utilised well into the future by scientists. Colin spent time examining collections in Paris and Singapore, as well as receiving specimens from around the world for his studies. Colin authored or co-authored 23 genus and 46 species names, primarily from the Dromiidae and the related Dynomenidae.

Not content with 'just' taxonomic research, Colin maintained a very productive research program in other

aspects of crab biology, including reproduction, mating strategies and population ecology, during his distinguished career and authored over 200 papers and he mentored many graduate students through the University of Canterbury. Colin was noted for his avuncular and gentle manner, patience, dry sense of humour, and was not beyond joining with his students in a collegial beverage in an appropriate manner.

The passion Colin had for science, like so many researchers, spilled out into his personal life, with many vacations being co-opted into field expeditions. Margaret, along with children Peter, Catherine and Kirsten, spent holidays staying at the University's Edward Percival Field Station with Colin conscripting them into field assistants. The family car was often used to transport study subjects to and from the field with some found later rustling around in the back having attempted to escape.

Even after retirement, Colin maintained active research programs with colleagues around the globe. He was active and publishing up until the time of his death in December 2022. His last publication before his death was a catalogue of sponge crabs from Western Australia, which included the description of the fluffy sponge crab, *Lamarckdromia beagle*, that made quite a splash in the international media, including being listed in the top ten new marine species of 2022 by the World Register of Marine Species (see <u>below</u>). It is expected that Colin will continue to publish posthumously with the colleagues with whom he had made strong collaborative ties.

- Andrew Hosie, Anneke can den Brink & Chris Woods

### Christoph Schubart (1967 – 21 March 2023)

I didn't want to have to write this, and I shouldn't write this, but I finally accepted it because it is a good way to show publicly my deep appreciation and acknowledgment to Christoph as a colleague and friend.

The carcinological community is deeply saddened to hear of the death of our dear and appreciated colleague Christoph D. Schubart. Especially when this happened at such a young age.

Although he started publishing on cirripeds in 1995, he later focussed on decapods, publishing around 200 papers (in a 27-year period), in collaboration with more than 60 colleagues from different countries.

His main lines of research were molecular ecology, DNA barcoding, evolution, genetic diversity, spe-



Tortuguero Natial Park (Costa Rica), 1996, collecting sesarmids for his PhD thesis

ciation, taxonomy, population genetics, phylogeny and phylogenetic biogeography, systematics, molecular taxonomy, and related fields. He was very prolific, he loved traveling, meet new colleagues, many of whom later became good friends and collaborated with him.

He was a pioneer in the use of DNA in systematic of decapods. Now, most of us work on integrative taxonomy, and it is very common to use DNA techniques in phylogeny. Christoph, however, started already to work on this in his PhD thesis (1997), when the common DNA extraction method used was "phenol-chloroform" and when they read the sequences in autoradiogram by hand! He learned these techniques at the Institute of Molecular Evolutionary Genetics of the Pennsylvania State University (USA) with Dr. Blair Hedges.

He made many important contributions to the systematic of decapods, especially in the Thoracotremata, with the establishment of new taxa (families, genera and species), and new relationships between them.

His carcinological trajectory began in Jamaica, and he visited numerous countries in America, Africa, Asia, and Europe. Rudy Diesel was the supervisor of his PhD thesis, and Christoph later collaborated with Darryl L.

Felder (1997-1999) and Peter K.L. Ng (1999-2000) during his postdoc stays in Lafayette, Louisiana, USA, and Singapore, respectively.

Since 2000 he was Assistant Professor at the Institute of Zoology, University of Regensburg, Germany, which allowed him to travel all over the world with field trips to visit European fresh waters, Atlantic Ocean and Mediterranean waters, to the Neotropics, and Southeast Asia, developing joint projects with Spain, Italy, Bulgaria, Brazil, Chile, and Hong Kong. He was advisor of numerous Ph.D. students, as well as Diplom, Master, and Bachelor students.

As I mentioned above, I would like to use the opportunity to publicly thank Christoph, because he changed my life. Yes, I know how this may sound, but it is true. We got in touch when we were doing our PhD thesis, and then he invited me to a field trip to Panama and Costa Rica, which changed the objectives of my thesis. Later, he also suggested where I might do a postdoc, and he introduced and taught me the use of molecular techniques. Since then, we began a close friendship and a fruitful collaboration, with some joint projects, several field trips to the Americas and Europe, around 25 papers, etc. We were currently planning our next steps that were unfortunately truncated abruptly.

He died doing what he loved, and this is our only consolation. The human and academic legacy of Christoph will live on, and he will be so deeply missed in person but not in our work, where he will be always present, for current and future carcinological generations.

Jose A. Cuesta



3<sup>rd</sup> Brazilian Crustacean Congress & The Crustacean Society Meeting 2004 in Florianópolis, Brazil, with Ingo S. Wehrtmann, Darryl L. Felder, Fernando L.M. Mantelatto and Jose A. Cuesta



# Upcoming meetings



GEO BON Global Conference on Biodiversity and Monitoring **14 - 18 August 2023:** The organisers of the 7th International Symposium on Chemosynthesis-Based Ecosystems (CBE7) are pleased to announce that the CBE7 will be held in São Paulo city at the University of São Paulo between 14 and 18 August 2023. Registration deadline is 20 June 2023. <u>www.cbe7.com</u>



**5–8 September 2023:** CrayfIT, a regional European IAA meeting organized by Life CLAW, University of Pavia, Italy CrayfitHome - Crayfit (//crayfit.eu)

The **meeting** will be held **at the University of Pavia**, in one of the historic classrooms of the ancient University Palace. The programme will include invited lectures, contributed oral and poster presentations as well as a rich social programme **and a field trip in the North-Western Apennines**. We will visit lowland sites for *Procambarus clarkii* and hilly sites for *Austropotamobius pallipes*, as well as breeding facilities for native crayfish. The day will end in Genoa with a tour of the Aquarium, where we will also have the meeting social dinner.

A session will be dedicated to Life projects conserving and managing crayfish and aquatic fauna.



International Large Branchiopods Symposium (ILBS) in La Paz, Mexico,

Monday 2nd to Friday 6th of October 2023.

Our ILBS will be part of the XII National Meeting "Alejandro Villalobos" (XII-RNAV). The RNAV is a periodical congress dedicated to the presentation of studies on any aspect of the biology of the Crustacea.

The XII-RNAV and the ILBS will be bilingual (English and Spanish). For information, contact <u>rnav2023@cibnor.mx</u>



2–6 January 2024: SICB annual meeting, Seattle, WA, USA



**May 2024:** Mid-Year Meeting in Taipei, Taiwan (check TCS website for announcements due shortly)



# **Reminiscing of past meetings**



Snapshots of the 10<sup>th</sup> International Crustacean Conference in Wellington, New Zealand

by Kingsley Wong, PhD student, National Taiwan University, Taiwan

As a (still) young researcher, I would like to share my experience of being among our circle of fellow crustacean biologists, colleagues and friends. I am currently a PhD student at the Institute of Ecology and Evolutionary Biology, National Taiwan University, Taiwan, being long interested in diversity and taxonomy of decapods, and now investigating on coralassociated cryptochirid crabs from seas of Taiwan and nearby. My trip to attend the ICC10 was made possible by the TCS Travel Award. So blessed to have participated in this extraordinary event, and utterly grateful to all who had made this possible. Below are some of my favorite memories.

### Where?

At the heart of the coastal city of Wellington, small yet beautiful capital of New Zealand, hosted at the Nation Museum of New Zealand Te Papa Tongarewa, itself an elegant showcase of the rich natural and cultural heritages. This nation in the Southwest Pacific is bicultural, and, appreciably spiritual, cannot be more highlighted by the wealth of Māori beliefs. Old hosts of this land long believed natural elements and all living beings all possess a life force, and are all somehow interconnected. The spirituality was omnipresent, starting on the first fine morning — well since the *Pōwhiri* taking place under the mellow morning sun and the gentle sea breeze, at Te Marae Rongomaraeroa, an exquisitely decorated ceremonial hall on the top floor of the museum, the venue a forum of the bicultural nation. The welcoming ceremony progressed with singing, chants, and home researchers and visitors exchanging greetings by friendly elbow bumps. A casual seagull on the poles outside the hall inadvertent oversaw our commemoration. Blissful sign indeed.

### When?

One fine *crustie* week at the venue, from the 22<sup>nd</sup> to 26<sup>th</sup> of May. Very significant was this being the first in-person gathering since the covid pandemic outbreak in 2020, and genuine personal interactions never quite replaceable by online chats (sorry past organizers). Time flies with the passing of three choky years, and our gathering signifies the resilience and good vibes we all share and cherish.

For the love of those beloved *crusties* we gather, yet too startled to trace all those who departed during these turbulent times. We bid farewell to numerous good friends and mentors, and cannot be more indebted to the flames they each passed on: Colin McLay, James K. Lowry, A. J. "Sandy" Bruce, Ngan Kee Ng, Donald R. Fielder, and so recently Christoph Schubart, who tragically left us during his prime years.

### Who? Crustacean researchers gathering

Over 170 *crustie* researchers from at least 28 nations, cordially watched over by Tangaroa, the Māori personification of the ocean and the ancestor of all fish (and crustaceans?). We shared our *crustie* stories, and inspired and enjoyed those of everybody else's'. The event cannot be even possible without the organizers of The Crustacean Society and the organizing committee of ICC10 – especially hard work of hosts Kareen Schnabel and Rachael Peart (NIWA) and their team. Big thank you also for all the support of any sort, including donations through fundraising sales of *crustie* items in the silent auction, as well as prints, and *C' est Larvae* T-shirts at the TCS counter. Alternatively, we all *crustie* researchers can also support and inspire through the *JCB* (Journal of Crustacean Biology), and articles and images are much welcomed. The upcoming photo contest brings stunning *crustie* images to covers of *JCB* issues. Stay tuned!

We celebrate life-long contributions by senior researchers of the community: congratulations to two recipients of the The Crustacean Society Excellence Research Award (TCSERA): Prof. Ka Hou Chu from the Chinese University of Hong



Top left: The energetic welcoming *Kapa Haka* performance by Ngati Toa. Top right: Beer contest! Bottom left: Fundraising for the TCS: prints and the C'est Larvae T-shirt at the TCS counter. Bottom right: Big thank you to our ICC10 organizing committee!

Kong, Hong Kong, our pioneer in barcoding and phylogenetic investigations among various crustacean groups; and Prof. Neil Cumberlidge, Northern Michigan University, United States, a renowned expert of the Old World, particularly African, freshwater crabs.

Under the symposium "Frontiers in Crustacean Biology: Asian Perspectives: Part III" I had presented about status and challenges in chasing down cryptochirid taxa. Icing on the cake was the post-symposium dinner at the WBC restaurant near Te Papa, joined by fellow participants including Tadashi Kawai, Jibom Jung, Benny Chan, Taewon Kim, Boyang Shi, Da Pan and Shivam Tiwari. So nice to meet you all!

### What adventures?

Crustaceans are nearly ubiquitous in aquatic environments, and crustie hunters are quite an adventurous batch. Three keynote speakers each guided us through their exceptional adventures. Tara McAllister (freshwater biologist, but yes, also seen as one of us) reminded us, despite of equity policies, Māori academics have been underrepresented in the local academia, and advocated for significant actions to recruit, retain, support and promote indigenous scholars. So eyecatching was Megan Porter's presentation, from the first slide showing a cuddly stomatopod antizoea (? anyways raptorial claws still pending) saying "hello world", drifting well between both bulbous, bilobed corneas of an adult. Megan led us through deep evolutionary time, gave an overview on how crustaceans happen to see the world through molecular, morphological, physiology and behavioral considerations. Towards the deep, Alan Jamieson brought us to hadal depths of oceanic trenches > 6,000 m of depth, there presumed deficient in ample food sources, baiting experiments using fish carcasses drew attention of all sorts of exotic crustaceans — including those "predictable" gigantic amphipods, brazenly feeding and always ready to tail-stab into the faces of, thus deterring against their chondrichthyan counterparts. Agnathan fishes are messy feeders, practically spitting out sideways as much as the intake through their circular mouths, whereas those crimson penaeids as infrequent encounters, but showing no distinct or recognizable behaviors! The vigor persisted from the first day to the last, from the Kapa Haka, the absorbing and spirited welcoming performance of Maori chants and dances, the beer contest that follows, all through the days of chats and cheers, up to the Poroporoaki, all waving goodbye with warmest wishes, promising future encounters.





Top left: Congratulations to Prof. Ka Hou Chu, recipient of the TCS Excellence Research Award, for his decades of contributions! Top right: Professor Megan Porter's plenary talk about the amazing visual systems of crustaceans. Bottom: A memorable conference dinner at the Te Papa Museum.



Thank you to all who joined us At ICC10 2023 in Wellington in Aotearoa New Zealand!

# **Book Reviews**

### Marine Decapod Crustacea. A Guide to Families and Genera of the World Gary C.B. Poore & Shane T. Ahyong 2023.

CSIRO Publishing, CRC Press, 916 pp., <u>https://doi.org/10.1071/9781486311798</u>

**Reviewed by Enrique Macpherson,** Centre d'Estudis Avançats de Blanes (CEAB-CSIC), Spain (adapted from a Correspondence piece published by <u>Zootaxa</u> on 24 April 2023)

Years ago, a colleague told to me how to easily explain the work of taxonomists to the rest of the word. «Imagine that taxonomy is a set of huge dictionaries, with thousands of empty pages each. Our job, the work of the taxonomist, is to populate this dictionary—discover each word, define it carefully, and print this information on those sheets. These enormous books are Nature knowledge, and the words we define allow us to understand Nature language. Without these words we would never appreciate Nature correctly».

It is a powerful image. And, by and large, the world of taxonomists has been working, as best they can, to rise to the magnitude of the task. Yet taxonomy, like language is a dynamic thing and never stays the same. Could you imagine a language that does not update its dictionaries? Our dictionaries become obsolete all the time, as new concepts and terms enter into common parlance in society. The world of taxonomy is the same, as new ecological actors (species names) are continuously discovered. The less we update Nature's dictionary to keep up with these new discoveries, the more deficient will our ecology be, the poorer our biological approaches.

Considering the current attrition of taxonomists and biodiversity crisis, every attempt to update the large dictionary of

# living things should be celebrated. Poore and Ahyong's book «Marine Decapod Crustacea» is one of these updated dictionaries, focusing on a small but critical part of the taxonomic lexicon. This ambitious book will enormously facilitate our understanding of decapod crustaceans and help make sense of how they contribute to the marine ecosystems of which they are part. Decapod crustaceans are among the most diverse and abundant animals in our oceans (around 12,000 species). They belong to a set of families, genera and species with different morphologies and behaviours; they are found in and contribute to nearly all extant habitats of marine ecosystems, from the pelagic realm to the abyssal plain. Moreover, they represent a necessary link in marine food webs, transferring matter and energy from primary producers to upper consumer levels.

This ambitious volume has been launched by CRC Press to provide a modern revision of the Marine Decapod Crustacean fauna. This updated revision is a necessarily thick and heavy book of 916 pages and includes the diagnosis of all 189 families and 2121 genera inhabiting the oceans. It opens with an introduction and lays out the general systematics of Crustacea, including an identification key to suborders and infraorders of Decapoda and shrimplike marine crustaceans, which, I suspect the non-specialist will find immensely useful. No less important is the extensive reference list of regional studies. The key to the decapod infraorders links to twelve chapters, which form the bulk of the book. Within each infraorder, there is a key for all families, and inside each family, a separate key to all genera. For each genus the authors have included the valid name, and the authority that provided the description and named the taxa. The common name is also included for some commercial or popular taxa. This is followed by a brief diagnosis, accompanied by detailed drawings that facilitate identification. Each genus has one or more

# Marine Decapod Crustacea

A Guide to Families and Genera of the World



Gary C. B. Poore and Shane T. Ahyong

figures, grouped into families. These figures make the keys much easier to use, since most of the diagnostic characters are easy to find. The number of figures in each infraorder reflects the diversity of the infraorder. The figures are detailed and include all structures essential to identify each genus using the keys. Those infraorder with few families and genera, e.g. Procarididea, Glypheidea, Polychelidea, only have one figure, while the most diverse taxa, e.g. Caridea, Anomura, Brachyura, have 54, 31 and 209 figures, respectively. There are also 72 colour plates containing more than 700 species belonging to numerous families. Data on their geographic distribution, and number of species per region, complete the information given for infraorder, family and genus. The reference to other studies with keys to species is also included for most genera. Each taxa level (infraorder, family and genus) has its own reference list. Therefore, it is relatively easy to locate the most recent and complete studies for all species in each genus. A glossary that includes figures of the main terms, followed by an index of genera, families and higher taxa in alphabetical order, close the volume and help to find any particular taxa. By following this structure at each taxonomic level, the authors have ensured that the reader will have no difficulty in keeping track of each species.

Rarely has a work of this type garnered as much expectation as Poore and Ahyong's book has. This is the volume that many of us have been awaiting for a long time. I am happy to say then that the book exceeds all expectations. In retrospect, it really could not have been otherwise, given how scientifically meticulous, enthusiastic and endlessly dedicated both Poore and Ahyong are. Their energy and attention to detail is evident in every page of the book, and it is clearly a labour of love. The scientific value of the book is unquestionable. It will serve not only as a useful tool for current and future carcinologists, but also as a long-lasting compendium of taxonomy in general and decapod crustaceans in particular. If there is a problem with the publication it is its sheer size. It is a weighty tome, and you certainly cannot carry it with you in your pocket! Given the detail with which the authors present their taxonomy however, this is a small price to pay.

It is well known that having comprehensive and easy-to-follow taxonomic guides greatly facilitates biological studies. With the publication of this book, I anticipate a step change in the way biologists across the world will engage with decapod research. This change could not have come sooner. On the one hand we are witnessing a dramatic loss of diversity from the world's oceans. On the other, marine decapod species are on the move, and are finding themselves as aliens in many ecosystems. Having a single volume to document these changes will be a huge benefit. Given a certain chaos that exists in decapod taxonomy, the present volume also serves to clean up the mess. It is a true scientific milestone that deserves everyone's recognition.

In conclusion, Poore and Ahyong have done a great job of summarizing a highly dispersed decapod taxonomy. I recommend this as a required addition to the bookshelf of every crustacean taxonomist certainly, but I believe that every person remotely interested in decapod crustaceans will delight in this book. It is, in the final analysis, an excellent tribute to classical taxonomy.

### CRUST-L@VIMS.EDU, the Discussion List for Crustacea



CRUST-L@VIMS.EDU is the email listserver for those interested in Crustacea. CRUST-L is an unmoderated open list, but you have to be a member to post messages to it. It has around 850 members! You can subscribe or unsubscribe to the list by following the links below. Use CRUST-L@VIMS.EDU to post messages to CRUST-L. The sympa software includes several features such as searchable archives, and a digest mode for intermittent mailings. If you have trouble with your subscription or settings, send a help request to jeff@vims.edu.

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# Hot off the press & Online resources

# Shrimps: Their Diversity, Intriguing Adaptations and Varied Lifestyles

**Raymond T. Bauer** University of Louisiana, Lafayette 720 pp., 199 b/w and 19 color figures, 26 color/greyscale (SEM) plates. Available in hard cover and eBook. https://link.springer.com/book/10.1007/978-3-031-20966-6

This book explores the biology of decapod shrimps (sergestoids, penaeoids, carideans, procaridideans, stenopodideans), a group of animals known to most people as a nutritious and tasty food item. Shrimps are amazingly diverse in size, shape, coloration, behavior and natural history. Shrimp fisheries and aquaculture are a vital part of the USA and world economies. These crustaceans are key ecological and food-web components of marine and freshwater habitats. The book synthesizes information on the taxonomic and ecological diversity of shrimps, the structure and function of shrimp anatomy, antifouling adaptations, coloration and camouflage, reproductive biology, sexual systems, mating systems and behavior, life history strategies, symbioses between shrimps and other organisms, shrimp fisheries and aquaculture, as well as the evolution and phylogeny of shrimps. All chapters are written within an adaptational and evolutionary perspective. Important questions about shrimp biology are asked, and hypotheses for testing in future research are proposed. The book is spiced up with personal anecdotes and observations from the author's research experiences.



# Intertidal Rocky Shore Fauna of Brazil: Vol. 1 Crustacea, Decapoda & Peracarida

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# 5 PhD Positions: ERC DeepTrace Project

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The Institute of Marine Sciences at the Middle East Technical University is inviting applications for PhD positions in the frame of ERC Consolidator Grant DeepTrace: A new project that will run from 2023 to 2028 at Turkey's Centre of Excellence in Oceanography. Each of the five positions offers unique career paths at the intersection of chemical oceanography, nanotechnology and astrobiology and also linked to other EU projects at the institute such as the METU-coordinated Bridge Black-Sea Project. Candidates from all relevant engineering fields, geology, molecular biology, chemistry, physics and mathematics are encouraged to apply. For more information visit the Institute's website.

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Training: Habitat Mapping and Trophic Ecology of Marine Animal Forests

### 25 September - 1 October 2023

### Application deadline 15 June 2023

MAF World is delighted to share a call for applications for the training school "Habitat Mapping and Trophic Ecology of Marine Animal Forests" that will be held in Portugal at the Center for Marine Sciences in Faro,
from 25 September to 1 October 2023. The training school is arranged through the MAF-WORLD COST Action 20102 and travel bursaries are available for successful applicants. More details, including topics and instructors, eligibility criteria, contact details and application process can be found on the MAF World website.



# **Research Papers**

Please continue to share your recently published research papers (other than in JCB) that have relevance to crustacean research. If possible, include a link where the paper can be downloaded.

— Kareen Schnabel (Editor *The Ecdysiast*)

Brandt, A., Chen, C., Tandberg, A.H.S., Miguez-Salas, O., Sigwart, J.D. (2023) Complex sublinear burrows in the deep sea may be constructed by amphipods. Ecology and Evolution, 13(3): e9867. <u>https://doi.org/10.1002/ece3.9867</u>



Hughes, L.E., Lörz, A.-N. (2023) Unciolidae of Deep-Sea Iceland (Amphipoda, Crustacea). *Diversity*, 15(4): 546. <u>https://www.mdpi.com/1424-2818/15/4/546</u>

Kaiser, S., Christodoulou, M., Janssen, A., Kihara, T.C., Mohrbeck, I., Pasotti, F., Schnurr, S.M., Vink, A., Arbizu, P.M. (2023) Diversity, distribution and composition of abyssal benthic Isopoda in a region proposed for deep-seafloor mining of polymetallic nodules: a synthesis. Marine Biodiversity, 53(2): 30. <u>10.1007/s12526-023-01335-2</u>

Leila, B., Sedláček, P., Anastasopoulou, A. (2023) Plastic pollution in the deep-sea Giant red shrimp, Aristaeomorpha foliacea, in the Eastern Ionian Sea; an alarm point on stock and human health safety. Science of The Total Environment, 877: 162783. <u>https://</u>

doi.org/10.1016/j.scitotenv.2023.162783. (not OA)

Kakui, K., Fukuchi, J., Ohta, M. (2023) *Diexanthema hakuhomaruae* sp. nov. (Copepoda: Siphonostomatoida: Nicothoidae) from the Hadal Zone in the Northwestern Pacific, with an 18S Molecular Phylogeny. *Acta Parasitologica*. <u>10.1007/</u> <u>s11686-023-00676-z</u> (not OA)

- Uhlenkott, K., Meyn, K., Vink, A., Martínez Arbizu, P. (2023) A review of megafauna diversity and abundance in an exploration area for polymetallic nodules in the eastern part of the Clarion Clipperton Fracture Zone (North East Pacific), and implications for potential future deep-sea mining in this area. Marine Biodiversity, 53(2): 22. <u>10.1007/</u> <u>\$12526-022-01326-9</u>.
- Weston, J.N.J., Stewart, E.C.D., Maroni, P.J., Stewart, H.A., Jamieson, A.J. (2023) Eurythenes signiferus and Eurythenes andhakarae (Crustacea: Amphipoda) are sympatric at the abyssal Agulhas Fracture Zone, South Atlantic Ocean, and notes on their distributions. Deep Sea Research Part I: Oceanographic Research Papers, 196: 104050. <u>https:// doi.org/10.1016/j.dsr.2023.104050</u>
- Wilson G.D.F. & Morel N. 2022. Isopod crustacean fossils from the Cenomanian stratotype: five new species in suborders Cymothoida, Asellota and Valvifera. Annales de Paleontologie 108 (102538): 1-20. <u>https://doi.org/10.1016/j.annpal.2022.102538</u>
- Wilson G.D.F. & Shaik S. 2022. Evidence for Early Mesozoic diversification of Hypsimetopidae Nicholls, 1943 (Isopoda), with the description of a new genus from Andhra Pradesh and notes on threats to Indian cave environments. Journal of Crustacean Biology 42 (4): 1-24. <u>https://doi.org/10.1093/icbiol/ruac052</u>

On a different note...



Congratulations to this year's 'Ten remarkable marine species from 2022' nominated by the World Register of Marine Species (WoRMS). Find all ten species in the Press release on the LifeWatch Portal <u>here</u>



# Fluffy Sponge Crab

### Lamarckdromia beagle

Mclay, C. L.; Hosie, A. M. (2022). The sponge crabs of Western Australia and the Northwest Shelf with descriptions of new genera and species (Crustacea: Brachyura: Dromiidae). *Zootaxa*. 5129(3): 301-355., available online at <a href="https://doi.org/10.11646/zootaxa.5129.3.1">https://doi.org/10.11646/zootaxa.5129(3)</a>

Crustacea-adjacent:

# The Golden Cloak Anemone

Stylobates calcifer with Pagurodofleinia doederleini

Yoshikawa, A.; Izumi, T.; Moritaki, T.; Kimura, T.; Yanagi, K. (2022). Carcinoecium-Forming Sea Anemone *Stylobates calcifer* sp. nov. (Cnidaria, Actiniaria, Actiniidae) from the Japanese Deep-Sea Floor: A Taxonomical Description with Its Ecological Observations. *The Biological Bulletin*. 242(2): 127-152., available online at https://doi.org/10.1086/719160







# Squidward's Sphyriid Copepod

Boxshall, G. A.; Barton, D. P.; Kirke, A.; Zhu, X.; Johnson, G. (2022). Two new parasitic copepods of the family Sphyriidae (Copepoda: Siphonostomatoida) from Australian elasmobranchs. *Systematic Parasitology*. 99(6): 659-669., available online at <u>https://</u> doi.org/10.1007/s11230-022-10054-4



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