



The Ecdysiast

Newsletter of The Crustacean Society

Message from the President...

Inside...

Message from the President 1-2

JCB Editor's Report 4-5

TCS Treasurer's Report 6-7

TCS Secretary's Report 8

Recent Meetings 8

Upcoming Meetings 9-12

Spotlight on...
CeDAMar and ANDEEP 13-14

Recent Publications 15-19

Research and Expeditions 20-22

TCS Student Fellowships Announcement and Application 23-24

TCS Board Elections 25-28

Let me begin by acknowledging that I am very fortunate, as are all TCS members, to have had the guidance, support and dedication of the fine and caring people who serve as TCS officers. Like the rest of us, the officers are always busy, but they always find the time to offer their service and sage counsel when I ask for it. Working with your society's officers has been one of the unexpected pleasures in serving as President of TCS, and I encourage all of you to seriously consider running for a TCS office someday, so that you, too, may have the very positive experience of interacting with and supporting your colleagues.

I thank the incumbents who have agreed to run for office again, and the members who have taken that "bold step" to run for office for the first time. Don't forget to vote using the ballot enclosed herein, and please feel free even now to drop a note to Jeff Shields, our President-Elect, if you are interested in running for an open position next November. The Board has been sharing the duties of Program Director, and we would especially appreciate someone contacting us if you would like to learn more about serving in this position. Please consider doing so!

I am happy to report here that TCS is making several positive and exciting changes that we think will further our goals of revitalizing the society and extending more benefits to its members. We proudly announce in this issue a call for applications for the first Denton Belk Memorial Research Fellowship and the first TCS Graduate Student Research Fellowship, the latter to be awarded in three disciplines. Additional details and application forms are enclosed in this newsletter and will also be available on the TCS website. Henceforth, these fellowships will be offered on an annual basis and we hope they will encourage our young colleagues in their research endeavors and motivate them to become active members of our society. We owe a debt of gratitude to TCS members who have made voluntary donations to the scholarship and memorial funds (please continue to do so!), and to our talented Treasurer, Mary Belk, for doing all she can to further the economic health of TCS.

We are also rescinding the \$50 manuscript-handling fee for submitting a paper to The Journal of Crustacean Biology. This will apply to members as well as non-members. We are able to do this because of our current financial health and dedicated efforts of David Camp, editor of our journal. Please spread the word on this and encourage colleagues to submit their manuscripts to JCB! Members will now receive another valuable benefit: JCB will now be available on-line!

Continuing with the good news, 2005 marks the 25th "silver" anniversary of TCS, and this strikes us as a wonderful reason to have a party! TCS will therefore host a "25th Silver Jubilee" during the Sixth International Crustacean Congress to be held next summer in Glasgow, Scotland. As part of the festivities, a founding member of TCS will recount an updated history of the Society, and we will present the prestigious TCS "Excellence in Research Award" to one of our well-deserving colleagues. This is not an occasion to be missed, and I also urge you all to begin to make your travel plans to attend ICC6 and to have the opportunity to meet and interact with our diverse international family of carcinologists!

You will also soon see a new "look" to the cover of JCB: a metallic silver cover to mark Volume 25, appropriate for a silver anniversary! We encourage members to submit manuscripts to what I know will become one of our most memorable volumes. We are also looking into the cost of changing over to a larger journal format for future volumes, and changing the font color of the journal's Table of Contents (as many of us old-timers are having a difficult time reading the current small font and color!).



I am pleased to announce that the relationship between TCS and SICB (The Society for Comparative and Integrative Biology) is back on track. TCS co-sponsored a very successful mini-symposium organized by Shea Tuberty at the 2004 SICB Annual Meeting, and we are co-sponsoring another mini-symposium organized by Marie Simiovich, Andy Bohanak and Judith Williams at to 2005 SICB Meeting to be held in San Diego (please see more information inside). At this same meeting, TCS will also co-host a social with other SICB Divisions and we will hold a business meeting. Many thanks to Brian Tsukimura, TCS's new SICB liaison officer, for representing TCS at the recent weekend-long planning session during which the massive SICB scientific program and schedule of talks was organized.

I realize how terribly depressed you all have been these past years over not being able to publicly express your undying love and support of TCS, but you can now rejoice in the fact that official TCS T-shirts displaying the beautiful artwork of Ruben Rios will soon be available for purchase at meetings and from the TCS website. Many thanks to Jeff Shields for pursuing this option with the kind and competent folks at the VIMS Store.

As I write this letter, I am thinking of all the work I must do to prepare my talk at the upcoming 3rd Brazilian Crustacean Congress and 2004 TCS Midyear Meeting to be held Oct. 24-28 in beautiful Florianopolis, Brazil. We look forward to this wonderful opportunity to interact with our South American colleagues and we thank Fernando Mantellato and his fellow meeting organizers for hosting this meeting. Please visit the meeting website to view the scientific program and host of interesting symposia, even if you are unable to attend.

On a sadder note, our fellowship suffers from recent losses of esteemed colleagues, but we are grateful for the notable body of work they left behind, and thankful for the students they trained and who will carry on the legacy of their wonderful mentors. Memorials will be included in recent issues of JCB, but I would also like to acknowledge the thoughtful actions of the organizers of the upcoming Brazil Congress and their plans to hold a symposium to honor the life and work of our deeply missed colleagues.

In closing, I am pleased to report that TCS is making strides to become more than "just" a publisher of a scientific journal, but also a society that provides benefits and support to its members, and one that brings colleagues together in the spirit of both scholarship and conviviality. I hope you agree! But we need your help to recruit new members and to make TCS a society that no carcinologist can do without. Please also do your part to let your Regional Governor or any other Board member know how you feel about TCS, and what more the society can do for you.

I wish you well,

CRUST-SOC@VIMS.EDU, the Crustacean Society's List server

The Crustacean Society now has an email list server that is only open to members of the society. The sole function of this list server is to provide you with timely official society business and important society announcements. CRUST-SOC is moderated and closed and is not a forum for discussion. It is not meant to replace CRUST-L because the latter is open to nonmembers and is for broader discussion on Crustacea. For suggestions, contact jeff@vims.edu, your TCS Secretary, or any member of the board (listed at our website <http://www.vims.edu/tcs>).

You can subscribe to CRUST-SOC by becoming a member of the society. Members who aren't subscribed can send SUBSCRIBE CRUST-SOC YOUR NAME (not your email address) as the message body to LISTPROC@VIMS.EDU. You can unsubscribe by sending UNSUBSCRIBE CRUST-SOC to LISTPROC@VIMS.EDU.

We have taken every effort to ensure that your email address has been correctly entered into CRUST-SOC. However, several members have changed email addresses or have made mistakes in entering email addresses. Thus, if you are a member and are not on the list, please enter your correct email address on the annual subscription form, and please subscribe as detailed above. Remember, CRUST-SOC is the official email list server for society information and not a forum for discussion.

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

CRUST-L@VIMS.EDU is the email list server for those interested in Crustacea. It is an informal scientific forum for discussion on all aspect of the Crustacea. CRUST-L is a moderated, open list, but you have to be a member to post messages to it. You can subscribe to the list by sending SUBSCRIBE CRUST-L YOUR NAME (not your email address) as the message body to LISTPROC@VIMS.EDU. You can unsubscribe by sending UNSUBSCRIBE CRUST-L to LISTPROC@VIMS.EDU. Use LISTPROC@VIMS.EDU to post administrative commands such as SUBSCRIBE, INFO, HELP. Use CRUST-L@VIMS.EDU to post messages to CRUST-L. The listproc software includes several features such as searchable archives, and a digest mode for intermittent mailings.



The Crustacean Society Board Members, 2004

President:

Trisha Spears
Florida State University
Tel: (850) 644-1847
Fax: (850) 644-9829
Email: spears@bio.fsu.edu

President-Elect:

Jeffrey D. Shields
Virginia Institute of Marine Science
Tel: (804) 684-7128
Fax: (804) 684-7186
Email: jeff@vims.edu

Past-President:

Gary C. B. Poore
Museum Victoria, Melbourne, Australia
Tel: (61 3) 8341 7436
Fax: (61 3) 8341 7750
Email: gpoore@museum.vic.gov.au

Treasurer:

Mary Belk
San Antonio, Texas
Tel: (210) 224-7743
Fax: (210) 222-0360
Email: dbelk@texas.net

Secretary:

Christopher C. Tudge
Biology Department, American University
and Department of Zoology,
National Museum of Natural History
Tel: (202) 885 2033
Fax: (202) 885 2182
Emails: ctudge@american.edu;
tudge.christopher@nsmnh.si.edu

Editor, Journal of Crustacean Biology:

David K. Camp
Florida Marine Research Institute (ret.)
Tel: (727) 394-0478;
Fax: (727) 394-0238
Email: tcsjcb@tampabay.rr.com

Asian Governor:

Akira Asakura
Natural History Museum and Institute, Chiba
Tel: +81-43-265-3274
Fax: +81-43-266-2481
Email: asakura@chiba-muse.or.jp

European Governor:

Angelika Brandt
University of Hamburg, Germany
Tel: +49/40-42838-2278
Fax: +49/40-42838-3937
Email: abrandt@zoologie.uni-hamburg.de

Indo-Pacific Governor:

Colin McLay
University of Canterbury, New Zealand
Tel: 64 3 364 2887
Fax: 64 3 364 2024
Email: c.mclay@zool.canterbury.ac.nz

Latin American Governor:

Michel Hendickx
Unidad Academica Mazatlan, Mazatlan, Mexico
Tel: (55) (21) 552-5422
Fax: (55) (21) 551-6446
Email: michel@ola.icmyl.unam.mx

North American Governor:

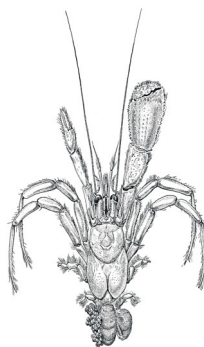
J. Emmett Duffy
College of William and Mary
Tel: (804) 684-7369
Fax: (804) 684-7293
Email: jeduffy@vims.edu

SICB Liaison Officer:

Brian Tsukimura,
California State University, Fresno,
Phone: 559-278-4244
FAX: 559-278-3963
BrianT@CSUFresno.edu

Program Officer:

Pending



The Ecdysiast is published twice yearly and mailed with the May and November issues of the *Journal of Crustacean Biology*. In addition, each issue, from May 1997 to present, is available to be downloaded as a pdf at The Crustacean Society's website (see <http://www.vims.edu/tcs/ecdyasiast.htm>).

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, current research, meeting summaries (with pictures!), new publications and any other crustacean news.

Send all material directly to the Editor:

Rachael A. King, Southeastern Regional Taxonomic Center, Marine Resources Research Institute,
PO Box 12559, Charleston, SC 29422-2559, USA.
Ph: 843-953-9794. Fax: 843-953-9820. Email: rachaelking@crustacea.net



JCB Editor's Report



BioOne was formed by academic library consortia in conjunction with our printer, Allen Press, in an effort to offer a suite of online journals published by nonprofit scientific societies to libraries at a price that is much more affordable than those offered by the for-profit publishing businesses. The society and *Journal of Crustacean Biology* have been associated with BioOne almost since BioOne's inception. Allen Press generates and hosts the online version of JCB, and BioOne pays for those costs. BioOne sells its database of the online journals to libraries and shares the profits with the various scientific societies through a revenue-sharing plan.

Our relationship with BioOne has been profitable over the past couple of years, generating a modest five-digit income for the society each year. This income has partially offset the income lost when libraries have cancelled their subscriptions to the printed version of JCB. The cancellation of subscriptions by libraries to the printed version of journals has been a growing trend in scholarly publishing with the advent of more online journals. Academic librarians prefer the online versions, which take up no shelf space and can be distributed to campus computer networks, but they cannot continue to afford both the printed version and the online version simultaneously. As reported in this column previously, librarians were worried about the long-term (i.e., decades long) archiving of electronic journals and went to great lengths to assure that a printed version was archived somewhere among their consortium member libraries. Now, with costs growing prohibitive to do even that, librarians seem to have thrown in the towel and are putting their trust in computer technology to solve the problem of long-term archiving. Thus, as more journals become available online, subscriptions to the print versions have fallen rapidly. This trend has befallen JCB as well. That is one reason our association with BioOne is so important. The society depends upon four sources of income for the journal to remain financially viable. They are membership dues, page charges to authors, library subscription fees for the print version, and revenue sharing from BioOne.

BioOne has recognized its important role in the financial wellbeing of nonprofit societies and their journals. Thus, BioOne has embarked on a mission to increase its contributions to societies while maintaining BioOne's ability to offer its services. Last month, Heather Joseph, President and Chief Operating Officer of BioOne, conducted a teleconference with representatives of the societies served by BioOne in order to announce several important changes to the way BioOne will operate and the effect that will have on the societies. I participated in that teleconference, along with representatives from about 20 other societies (not all of the societies served by BioOne participated), and I would like to share the highlights of the announcements with you.

(1) Changes in BioOne–CrossRef Relationship.

Previously, each publisher had the option to subscribe to the services of the CrossRef organization or not. I chose to subscribe to CrossRef when JCB joined BioOne, and the TCS board approved that decision. As you probably know, CrossRef assigns Digital Object Identifiers (DOI's) to each journal article and maintains a database of cross-references between journals. That allows us to embed links to entries in the Literature Cited section of each article that will let the reader click on that link and jump to the full-text article of the referenced paper if it resides online on any server. The annual subscription fee to CrossRef was \$600, which TCS has paid since joining BioOne. This summer, BioOne became a supporting member of CrossRef. BioOne and CrossRef signed an agreement whereby all of the BioOne publishers henceforth automatically will be enrolled in CrossRef and assigned DOI's. In turn, BioOne negotiated a much reduced membership fee with CrossRef. After year 2004, BioOne and not the publisher (i.e., TCS) will pay the entire publisher membership fee in CrossRef. That expense is outside the revenue-sharing agreement between BioOne and member publishers, so our income from BioOne will not be affected. Thus, BioOne has saved TCS \$600 per annum with that new contract.

(2) New BioOne/JSTOR partnership.

BioOne and JSTOR recently finalized a contract whereby JSTOR will fully fund the work to digitize all back issues of all journals published by the core group of BioOne publishers, which includes TCS. Other journals are currently trying to join BioOne, but they will not be considered part of the "core group," which is all of those journals that went with BioOne from its inception, including JCB. There will be no cost to BioOne core publishers or to BioOne for digitizing back issues, so the revenue-sharing pool of funds will not be affected by this project. The contract calls for a non-exclusive arrangement between JSTOR and each publisher (i.e., TCS). A publisher such as TCS can not only have the digital files stored at JSTOR servers, but it can also, through a lease arrangement, use the data elsewhere, such as making them available to subscribers on our own "SILO" (sign in/log on) site, should we ever start one. A revenue-sharing agreement for this would have to be negotiated between the publisher and JSTOR. The JSTOR is de-emphasizing the importance of journal impact factor, which has governed its selection of journals in the past, and is moving toward a greater diversity of content. Thus, all BioOne associated journals, such as JCB, which currently has an impact factor of 0.864, qualify for inclusion in the digitizing project. There is no portion of the revenue going to BioOne, which merely brokered the deal on behalf of its publishers. The society will have to make available a complete set of JCB to JSTOR for digitizing, and some issues are out of print. I have volunteered issues from my own set for this project, if necessary. I do not know when the project will begin. However, having every issue of JCB online will someday be very important for the society.



(3) BioOne Business Model Restructuring.

BioOne is concerned about the financial welfare of its publishers in light of dwindling library subscriptions for print journals, because that financial health eventually affects BioOne. BioOne has researched economic models that will allow it to improve revenues to its publisher partners from the sale of the online database. BioOne has set forth a business model that they hope will triple the income to publishers over the next five years. The model will call for a gradual series of price increases for the core database over the next five years; an expansion of the number of subscribers, hopefully achieved by aggressive marketing outside the U.S.A.; a shift in the revenue sharing between BioOne and the publishers; and a lowering of publishing costs. BioOne is sensitive to the inadequate budgets of its subscribing libraries, and it must be cautious about increasing its prices, but because BioOne was conceived principally by academic library consortia, it has plenty of advisors to help it proceed correctly with appropriate price increases. BioOne currently has 630 subscribing libraries, of which 534 are in the U.S.A., and the libraries have remained very loyal. There have been only four cancellations since the inception of BioOne. BioOne will begin immediately to market the database overseas. (By the way, BioOne offers free access to its database to libraries in countries identified by the United Nations as falling below a poverty level of per capita income less than \$3000USD. Currently, libraries in Slovakia, Slovenia, Zimbabwe, and Ghana access the BioOne database, and thus JCB, at no cost.) Revenue sharing between BioOne and publishers should shift over the next five years from the current model of 50:50 to eventually reach 70% (publisher) : 30% (BioOne). These are currently only projections based on economic models that depend on increased sales of the database, and they are subject to change. However, BioOne has performed the business modeling and has decided that if revenues increase as expected, BioOne can operate with only 30 percent of the projected income. It will pass the other 70 percent on to its publishers.

(4) Open Access Update.

The U.S. House of Representatives has introduced legislation that mandates the posting of papers resulting from research funded by the U.S. National Institutes of Health on an open access server at PubMed Central. If the legislation is passed, other funding agencies such as National Science Foundation may follow along, and this may eventually affect papers published by authors with funding from those sources that wish to publish in JCB. The language of the bill is still being debated and may be changed. The bill also must pass the U.S. Senate. Many publisher groups and scientific societies, notably AIBS (American Institute of Biological Sciences), are lobbying against the bill, which specifies that the posting must occur as soon as the paper has been accepted but before it has been published in print. BioOne is remaining neutral on this issue, because it is not a member society and feels it cannot represent the diverse

views of its 54 publisher partners. The Crustacean Society is forbidden by its Constitution from political lobbying as well. However, open access is an important concept in online publishing. BioOne supports publishers who want to move toward open access for their own journals, and there are currently open access journals represented on the BioOne database (which surprised me). Open access is the hot item in scholarly publishing, and TCS must be aware of its importance. Many experimental models are currently being used to finance open access publishing, and the best way to do things has not yet been determined. Most models require the author (or author's institution) to fully fund the cost of publishing an article on an open access server. One publisher at the BioOne teleconference offers authors the option to either publish through open access or not. If the author chooses open access, he or she must pay \$500 for the privilege; 65 percent of that publisher's authors have chosen open access, which is a testimony to its popularity. BioOne will work with any publisher to achieve the goal of open access publishing. The BioOne revenue-sharing model will be affected according to the number of articles in a journal that are available through open access online: the more open access articles there are in an issue, proportionally less revenue will go to the publisher from the BioOne revenue pool. I do not know whether JCB will be published in an open access manner in the near future, but the possibility is worthy of consideration.

I believe our association with BioOne has been a great success toward providing for an online presence of JCB, and I look forward to working with them in the future. BioOne seems to have the best interests of the nonprofit societies and their journals at heart.

Other Changes Coming to JCB

Pending approval by the TCS Board of Governors, the format of JCB will change beginning either with volume 25, number 1, or volume 26, depending on how long it takes to implement the changes. The trim size will be increased to a large format, similar to that of *Nature* or *Science*. In order to commemorate the 25th anniversary of the journal, and at the suggestion of President Trisha Spears, the covers of volume 25 will be a silver background, with the text and logo in black ink. After volume 25, the cover paper will revert back to the current one, but the text and logo will be printed using another color of ink in order to increase the readability of the Table of Contents. That color has not been chosen as of this writing. Hopefully, along with the increase in the overall size of each book, a larger typeface can also be used in the Table of Contents in order to make it easier to read. I have been loath to change the format that Arthur Humes helped design when he was the founding editor of JCB, but I have been convinced that the larger format will serve the journal well in the future. I hope that you all agree. Please help your journal by submitting more manuscripts to it for publication. Additional help can be offered through generous contributions of money to the JCB Endowment Fund.

Respectfully submitted,
David K. Camp, Editor, JCB, 22 September 2004⁵



TCS Treasurer's Report...

For the year 2003

I am glad to report that TCS has had a very good year this year. The market has recovered and our losses have been made up. We have invested more of our money as it became available and some of this new investment was done at the bottom of the market cycle. We have been able to pay all our bills and even with the adjustment of lowering the top membership prices, we are in the black. The worst thing is that we have lost membership; therefore, this is something we need to focus on. We are starting to award several scholarships, which will be cash for education, for students who are interested in crustacean biology. This is something dear to the hearts of all members of TCS and is now coming to fruition. The first awards will be made in 2005. See pages 23-24 for more information and the application form for the 2005 student fellowships.

I am going to spell out the results of this past year in plain English rather than try to use Balance Sheets etc. I think most members are more interested in the bottom line than in how well the information fits some financial style.

Financial Standing Dec. 31, 2003 for The Crustacean Society	
Charles Schwab Accounts Total	\$ 216,383.73
JCB Fund (Windsor II)	\$141,832.49
GDB Memorial Scholarship Fund (Wellington)	\$21,949.24
General Endowment Fund (Harbor Fund)	\$18,715.68
Investment Funds:	
Harbor HY Bond Fund	\$2,211.74
Navellier Mid Cap Growth	\$29,668.44
Cash	\$2,006.14
Wells Fargo Savings & Ck	\$45,013.57
Douglas County BK CD's	\$61,689.71
Douglas County BK Checking	\$28,605.28
Editor's office prepaid expenses	\$902.26
Total TCS Funds end 2003	\$352,594.55

Editor's Office 2003							
Month	Postage	Telephone	Office Supp.	Long Dist.	P.O.Box	Meetings, travel	Total
January	\$208.99	\$33.48	\$75.15				
February	\$90.45	\$33.48					
March	\$89.07	\$33.48	\$18.89	\$52.17			
April	\$290.78	\$33.56	\$85.16				
May	\$146.09	\$33.55		\$46.04	\$220.00		
June	\$168.51	\$33.55	\$52.15			\$1,227.52	
July	\$168.56	\$33.66					
August	\$76.38	\$33.62	\$46.76	\$2.48			
September	\$178.13	\$33.69	\$45.50				
October	\$137.29	\$33.64	\$209.46				
November	\$157.32	\$33.64					
December	\$92.48	\$33.64	\$73.00				
Totals	\$1,804.05	\$402.99	\$606.07	\$100.69	\$220.00	\$1,227.52	\$4,361.32

JCB Expenses:	
Editor's Stipend	\$7,500.00
Back Issue Mailing	417.61
Back Issue Storage	118.76
PDF files purchased	449.40
Editorial Office Support	2,233.71
Printing, Distribution	70,886.66
Total	\$81,606.14

continued...



Expenses paid during 2003

Society Operations	\$16,989.19
JCB	81,606.14
Editor's Office	4,361.32
Treasurer's Office	3,082.21
Newsletter	1,520.32
ASC membership	350.00
Awards	338.00
Banking Fees	2,689.52
Total Expenses	\$110,936.70

Income For 2003

Contributions	\$1,483.00
General Fund	308.00
Endowment Fund	275.00
JCB Fund	50.00
Special Mem Needs	50.00
D Belk M Sch Fund	800.00

JCB \$44,517.23

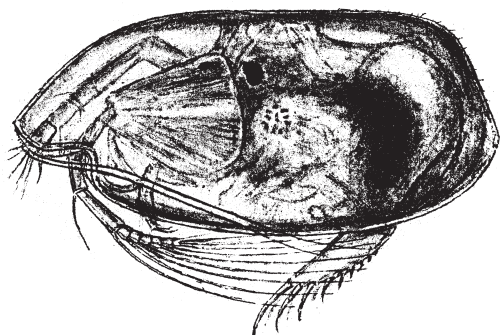
Late Fee	5.00
BioOne	7,293.23
Color Plates	2,491.25
Figures	5,152.00
Handling Fee	3,000.00
Page Charges	22,136.00
Revisions	766.00
Single Issue Sales	723.75
Tables	2,648.00
Other	302.00

Library Subscriptions	\$20,301.00
Membership Dues	\$49,253.00
(categories mixed in transition year)	
Membership Label Sales	\$ 400.00
Unrealized Gains on Invest.	\$53,369.68
Bank and CD interest	\$ 2,306.04

Total Income for 2003 = \$ 171,629.95

Respectfully Submitted,

Mary Schug Belk Treasurer, The Crustacean Society



***The Denton Belk
Memorial Fund***

The Crustacean Society would like to remind our readers that it is soliciting contributions to an endowed fund to honor the memory of Denton Belk, a founding member and past treasurer of TCS. The endowment will be used to fund scholarships for students performing large branchiopod research, a field in which Denton excelled and made significant contributions. Students will be able to use funds to support research costs and/or travel (either to scientific meetings or for research purposes).

As reported in Dr Christopher Roger's moving remembrance (JCB 21(4): 1077-1081, 2001), Denton was exceptionally generous in his lifetime to students in need who expressed an interest and passion for large branchiopods. We feel it is a fitting tribute to our colleague and friend to continue this tradition in his passing. We encourage and appreciate your contribution!

Please note that you do not need to become a member of TCS to make a donation!

Personal checks (in U.S. Dollars) may be made out to "TCS - The Denton Belk Fund". Alternatively, contributions using Visa or Master Card can be made by printing out a copy of the membership application from the Society's website (<http://www.vims.edu/tcs>), indicating the amount (in U.S. Dollars) that you are willing to contribute on the appropriate line, and mailing the form to the Business Office at the address below.

Please send contributions to:
 Business Office
 The Crustacean Society
 P.O. Box 1897
 Lawrence, Kansas 66044-8897
 U.S.A.

For additional inquiries, please contact Mary Belk (TCS Treasurer) by email (dbelk@texas.net) phone (210-224-7743) or fax (210-222-0360).



From the TCS Secretary...

Since I only took over the secretarial role just before the summer of this year I do not have too much to say in this column. But one of the perks of being the secretary is that you get to see the membership list for the society. I thought it might be interesting to provide a few statistics on the membership in 2004 and compare it too the previous year. So, my quick and dirty analysis shows the following:

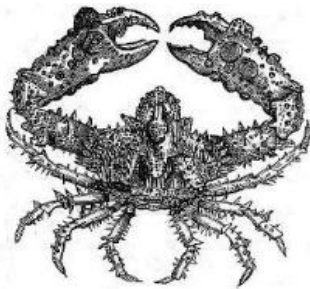
2004 TCS Membership: Total members = 609 (from 44 countries). Only 45% of this membership is based in the United States.

2003 TCS Membership: Total members = 577 (from 46 countries). Only 42% of this membership is based in the United States.

2003 Institutional Subscriptions for JCB: Total = 278 (from 33 countries). 56% (141) of these are in the United States, with the next highest being 0.6% (15) in Australia and then 0.5% (13) in Canada.

So, the society is still predominantly international in its membership base and we experienced a minor (0.5%) increase in members from 2003 to 2004.

Chris Tudge, TCS Secretary



The Crustacean Society Website

The Crustacean Society website, <http://www.vims.edu/tcs>, is designed to provide our members with information on meetings, society news, business, instructions for the Journal of Crustacean Biology, the Ecdysiast, and other helpful links. Noteworthy features include: (1) membership applications and new benefits to members; (2) society poster and page for recruitment (great pics!); (3) fliers and official info for upcoming meetings; (4) an official copy of Martin & Davis (2001) *Classification of the Crustacea*; and of course the classic (5) manuscript tracking page for JCB submissions (updated monthly). This website is designed to serve you and our society's diverse interests, if you have an idea, item, link, or information of general interest, please forward it to jeff@vims.edu for inclusion in our website. We're also looking for participants to help in maintaining this site, if you're interested, contact Jeff.

Invitation to contribute to Invertebrate Biodiversity Prioritization

The Invertebrate Conservation Trust, Buglife, is a European organization devoted to the conservation of invertebrates. It and several other societies for invertebrates are undertaking a review of the invertebrates for inclusion in the Biodiversity Action Plan Priority List. The list was drawn up 10 years ago and the review will determine which species qualify for the list. Buglife has taken the initiative to involve all relevant societies and experts to express their views about which species should qualify as priorities for the next round of action plans. Accordingly, Buglife has asked the Crustacean Society to nominate a person or persons who can coordinate views on the lists of species to be proposed. Our representative would coordinate determining which crustaceans, if any, would qualify as BAP priorities in terms of decline or global importance. Criteria for selection are based on international conservation status, rarity and rates of decline. However, data are not always available for these criteria, and for this reason Buglife is encouraging a more pragmatic approach. The list of species will be forwarded to Defra by early 2005. For more information, visit http://www.buglife.org.uk/html/project_action.htm. If interested, either contact Buglife directly, or contact Jeff Shields, jeff@vims.edu, and he will forward your nominations as representatives of TCS.

Recent Meetings...

**XXVIII SCAR & COMNAP XVI
Open Science Conference
25-31 July 2004, Bremen, Germany**

More than 1000 scientists and governmental bodies participated in the conference.

First day: panel discussion and key note lectures; second and third day: individual sessions (10 in parallel); last two days: scientific standing groups. Angelika Brandt participated in the life sciences scientific standing group. One of the topics was the discussion about SCAR-EVOLANTAR being replaced by SCAR-EBA in January of 2005. During a workshop held at the SCAR Biology Symposium in Curitiba Brazil (<http://www.pucpr.br/scarbiologysymposium>) shortly after the ICC6 (25-29 July 2005), SCAR-EBA will be implemented and will start January 1st, 2006. Further details can be downloaded from the SCAR webpage (Life Sciences Scientific Standing Group - LSSSG).

See page 20 in this issue for more information about SCAR-EBA.



Upcoming Meetings, Conferences and Workshops...

SICB 2005 Annual Meeting

January 4-8, 2005

Town & Country Hotel, San Diego, CA

(<http://www.sicb.org/meetings/2005/index.php3>)

Co-sponsored by The Crustacean Society

Mini-symposium: "Crustacea of Ephemeral Wetlands and Crustacean Diapause in Variable Environments"
(<http://www.sicb.org/meetings/2005/symposia/ephemeral.php3>)

Organizers: Marie Simovich (University of San Diego), Judith Williams (U. of S. Mississippi), and Andrew Bohonak (San Diego State University)

After the symposium, there will be a tram to the University of San Diego for a lunch reception and tour of the new Shiley Center for Science and Technology. This is free to symposium speakers and presenters of associated posters. The cost is \$10 for all others. It can be paid at the TCS booth the first full day of the meetings or to me by check via snail mail.

Marie Simovich Biology Dept. University of San Diego, San Diego, CA 92110. Questions can be directed to simo@sandiego.edu

As TCS is co-sponsoring the conference, all TCS members pay the reduced rate registration fee.

To qualify for discounted registration fees, registration forms and payment must be received at the SICB Business Office by Friday, December 3, 2004. Go to the conference website for more details.

International Workshop on Culture, Fisheries and Stock Enhancement of Portunid Crabs

Hotel del Rio

Iloilo City, Philippines

20-22 January 2005

(<http://inco-cams.seafdec.org.ph/workshop/eccamshome.html>)

The deadline for abstract submission has passed

There will be oral and poster presentations on the following: Broodstock Nutrition, Larval Culture and Nutrition, Nursery Grow-out, Fisheries and Stock Enhancement, Genetics and Taxonomy, Socio-economics.

12th Crustaceologen-Tagung

17-20 February, 2005

Wilhelmshaven (German Centre for Biodiversity)

(<http://www.crustaceologentagung.de/>)

This is the 12th Meeting of German speaking crustacean researchers. Talks are typically held in German or English and students are encouraged to give presentations.

CRAYNET – FINAL CONFERENCE

European crayfish as heritage species- linking research and management strategies to conservation and socioeconomic development.

INTERNATIONAL WORKSHOP

Biological invasions in inland waters

Florence, Italy, May 2-7, 2005

(<http://univ-poitiers.fr/craynet>)

We are pleased to invite you to attend the Final CRAYNET Conference to be held in Florence, Italy. CRAYNET is an EU Thematic network focusing on the European crayfish as keystone species and aims at linking science, management and economics with sustainable environmental quality. The network consists of a consortium from 11 European countries under the co-ordination of Catherine Souty-Grosset (University of Poitiers, France).

The Florence conference will summarize the most relevant themes discussed in the previous CRAYNET conferences, such as the status of European endangered crayfish species, the research activities conducted so far, and the management options adopted by the European countries. It also aims at developing common guidelines for the conservation of indigenous crayfish as heritage species. These purposes will be achieved through an interdisciplinary discussion focusing on general issues related to freshwater biodiversity and its conservation. To this end, the conference will gather European and extra-European crayfish researchers together with ecologists, economists, geneticists, historians of science, managers, and zoologists. A frescoed palace of the Florentine Renaissance will provide the historical atmosphere for this conference. Papers will be published in a special edition of the Bulletin Français de la Pêche et de la Pisciculture.

For more information about the CRAYNET conference, Florence registration form and detailed program, visit the website <http://univ-poitiers.fr/craynet>. Francesca Gherardi and post-docs, PhD and undergraduate students of the University of Florence (Patrizia Acquistapace, Claudia Angiolini, Laura Aquiloni, Silvia Bertocchi, Sara Brusconi, Andrea Cacchiani, Barbara Renai, Riccardo Russo, and Elena Tricarico) are the local organizers. The scientific committee is composed of: Francesca Gherardi (Italy), Catherine Souty-Grosset (France), David M. Holdich (UK), and Julian Reynolds (Ireland).

A necessary addendum of the CRAYNET conference will be the two-day International Workshop "Biological invasions in inland waters" (InWat), held under the auspices of the University of Florence, IUCN Invasive Species Specialist Group, Unione Zoologica Italiana, and the Italian Ministry of the Environment. The organizer is Francesca

continued...

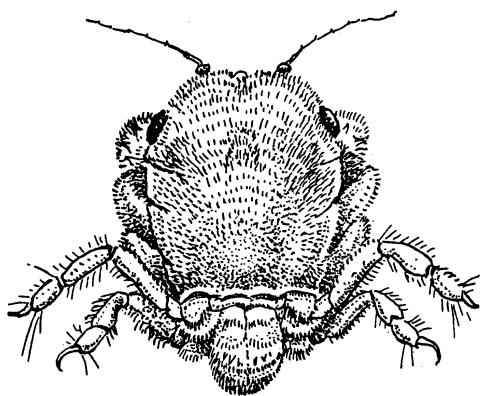


Upcoming Meetings, Conferences and Workshops...

CRAYNET Conference...

Gherardi (University of Florence) and the scientific committee is composed by Guido Chelazzi and Francesco Dessi-Fulgheri (Florence), Sandro Lovari (Siena), Piero (Papik) Genovesi (Bologna), and David M. Holdich (Nottingham, UK). The venue will be the historical headquarter of the University of Florence, the "Aula Magna" adjacent to the Academia Gallery with Michelangelo's David. Through the analysis of empirical cases from diverse freshwater ecosystems, the Workshop will aim at finding the necessary basis for a quantification of the costs (ecological, economic, and social) of biological invasions and for an improvement of controls of aquatic nuisance species. The exchange among scientists and managers is expected to lead to the proposal of actions to mitigate and/or to halt the invasive processes. Selected papers will be published in *Biological Invasions* (Kluwer publisher, edited by James Drake).

For those scientists and managers intending to join the InWat group and to present papers and/or posters, please contact the organizer (Francesca Gherardi) via e-mail at the address: gherardi@dbag.unifi.it before the end of February, 2005



Sixth International Crustacean Congress (ICC6)

July 18th – 22nd 2005

University of Glasgow, Scotland UK

(<http://www.gla.ac.uk/ibls/icc6/>)

The Sixth International Crustacean Congress will take place at the University of Glasgow, Scotland UK from July 18–22, 2005. The conference is organised on behalf of the International Crustacean Council by The Institute of Biomedical and Life Sciences, University of Glasgow.

The Meeting will also host the 5th European Crustacean Conference, the 4th International Crustacean Larval Conference and the 2005 Summer Meeting of the Crustacean Society. It therefore promises to be a celebration of all things Crustacean!

As a co-sponsor of ICC6, The Crustacean Society will host a "Silver Jubilee" to celebrate its 25th anniversary. This will be a notable event during which there will be a recounting of TCS history by a founding member and a presentation of the society's award for Excellence in Research. TCS will also sponsor the invited keynote speaker, Dr. Ronald A. Jenner, in the special session on 'Arthropod Phylogeny', and will conduct an award competition for the Best Student Oral Presentations and the Best Student Posters.

The Meeting will comprise daily Plenary Lectures, Poster Sessions and the following Symposia:

The Phylogeny of Crustacea. Organiser: Rony Huys. This symposium will include a special session on Arthropod Phylogeny, co-sponsored by TCS.

The Biogeography of Anchialine Cave Faunas. Co-Organisers: Geoff Boxshall & Damia Jaume

The Fourth Crustacean Larval Conference. Organiser: Paul Clark

The Ecophysiology of crustaceans. Co-organisers: Dave Morrirt, John Spicer and Geraint Tarling

Effects of human exploitation on decapod mating systems. Co-organisers: Mark Butler IV and Alison MacDiarmid

Diseases of commercial significance. Co-organisers: Grant Stentiford and Jeff Shields

Invasive Crustacea. Co-organisers: Paul Clark and Liz Cook

Biology of the Anomura II.

With general sessions on Behaviour – including welfare issues, Ecology Biogeography, Development, Commensal relationships

continued...



Upcoming Meetings, Conferences and Workshops...

For further information about the venue and arrangements, visit the ICC6 website. There you can also Register on line and submit Abstracts via a webform. **Registration will open on November 1st 2004.**

ICC6 Website: <http://www.gla.ac.uk/icc6/>

ICC6 Email enquiries: icc6@bio.gla.ac.uk

Glasgow Tourist Board Website:

<http://visitors.seeglasgow.com/>

Meeting of Amphipodologists July 24-27, 2005

(<http://www.gla.ac.uk/ibls/icc6/amphipod.html>)

We are pleased to invite you to Cork, the 'European City of Culture 2005'. Anyone interested in amphipods is invited to attend the meeting, which will be hosted by the National University of Ireland, Cork. It is not intended that papers will be published from the meeting, which will be an informal forum for exchange of ideas and discussions of ongoing research.

Program: The scientific program will consist of presented papers and workshops.

The following workshops are being considered:

Electronic databases for amphipods

- Electronic bibliography (crustacea.net)

- Electronic database of old taxonomic literature (new initiative?)

- Electronic database of amphipod images (new initiative?)

- Catalogue of all new taxa described since Barnard & Karaman, 1991 and Russian caprellid/hyperiid monographs (amphipod website)

- Terminology used in amphipod descriptions

The Amphipod website

- The website, summary of current state

- Challenges and solutions.

- The future?

A demonstration of amphipod illustration techniques is also planned.

For more details, please see the website, or contact Prof. Alan Myers, Department of Zoology, Ecology and Plant Science, National University of Ireland, Cork, Ireland: alanmyers@crustacea.net

Organising Committee for Amphipod Meeting:
Dr. Oliver Coleman (Berlin), oliver.coleman@museum.hu-berlin.de

Dr. Traudl Krapp-Schickel (Bonn), unb71a@mailin.uni-bonn.de,

Prof Alan Myers (Cork), alanmyers@crustacea.net

Prof Wim Vader (Tromsø), wim@mail.tmu.uit.no

International Symposium on Ostracoda (ISO 15 in sight!)

The organizing team would like to invite you to the 15th International Symposium on Ostracoda, which will take place September 12-15, 2005 in Berlin.

The ISO is held once every four years and has a tradition of over 40 years. Shizuoka, Japan, hosted the last ISO in 2001 with 137 participants from 28 countries. A modern, multidisciplinary research topic like ostracodology crucially depends on immediate and constant exchange of information between (ostracod) researchers from different fields of expertise. We therefore hope to contribute to a better understanding and to give a platform for the initiation of fruitful cooperations, according to the motto of ISO 15: Ostracodology - Linking Bio- and Geosciences.

Topics of ISO 15 will be:

Biodiversity, systematics and evolution

Experimental morphology

Morphometric methods

Genetics and molecular biology

The first ostracods in earth history

Ecology and palaeoecology

Recent environmental change

Isotopic and trace element analysis

Stratigraphy and exploration

Apart from the main scientific program, we also offer five field trips with both ecological and stratigraphical content and a mid-symposium excursion with scientific and cultural program.

The abstract volume and field trip guide will be published in the "Berliner Paläobiologische Abhandlungen"; the conference proceedings will form special volumes of "Hydrobiologia", "Palaeogeography, Palaeoclimatology, Palaeoecology" and "Marine Micropalaeontology".

Ostracodologists traditionally welcome any kind of interdisciplinary cooperation and would therefore appreciate meeting YOU next September in Berlin!

If you are interested, please visit our webpage: www.palaeo.de/iso15

See you next year in Berlin, the young and exciting German capital!

The organizing team

Michael Schudack, Steffen Mieschke, Ulla Schudack, Benjamin Sames (all Berlin), Peter Frenzel (Rostock), Renate Matzke-Karasz (Munich) and Finn Viehberg (Greifswald).



Upcoming Meetings, Conferences and Workshops...

The Crustacean Society's 2006 Mid-Year Meeting JUNEAU, ALASKA

Mark your calendars and get your sled dog ready because we're going to Alaska!

Tom Shirley, with assistance from Brad Stevens, has graciously agreed to organize the 2006 mid-year meeting, to be held in Juneau, Alaska. This promises to be an intellectually diverse and stimulating meeting, as Alaska has a rich research tradition in carcinology, and especially crab biology. TCS members can anticipate meeting new colleagues from various universities and agencies based in Alaska, such as the Alaska Department of Fish and Game, National Oceanic and Atmospheric Agency Fisheries, and the Biological Resource Division of the United States Geological Survey.

This will also be an excellent opportunity to visit and experience a spectacular part of North America that is rich in natural beauty and in the culture and art of Native Americans of the Pacific Northwest. Juneau (www.juneau.or/visitors) lies roughly 890 miles northwest of Seattle in the "Alaskan Panhandle" and is the original home of the Tlingit Indian Tribes. Gold was discovered in 1880, and the city (pop. 30, 903) is now the capitol of Alaska. It has a mild maritime climate and abundant rainfall that maintains large sitka spruce and western hemlock coastal forests. Summer temperatures seldom exceed 65°F...perfect for day hikes!

Some local attractions include:

- * A tram to the top of Mt. Roberts above Juneau, where a restaurant and visitor centers has trails onto alpine meadows;
- * Tracy Arm boat trips - an all day excursion to view tide-water glaciers and wildlife in a fjord setting;
- * Whale-watching trips, 1/2 day or whole day;
- * A large number of 1/2 or whole day fishing charters;
- * Bus tours to the Mendenhall Glacier Visitor Center, from which a number of trails lead to waterfalls, lakes and salmon streams;
- * City and state museums;
- * Glacier Bay is nearby and has one-day tours upbay to view tidewater glaciers and wildlife, or visitors might opt to stay several days and kayak or hike trails.
- * Douglas Island Pink & Chum Hatchery, which is an aquarium and visitor center displaying a working salmon hatchery;
- * Helicopter flights to Mendenhall Glacier, where tourists can opt for rides on dog sleds or visit a glacier research center;
- * Float-plane rides to view glaciers, fjords, or remote wilderness sites.

Please watch CRUSTL-L and the TCS website for additional meeting information, which will be forthcoming.



Spotlight on...

CeDAMar and ANDEEP III

The ANDEEP (Antarctic benthic deep-sea biodiversity) project contributes to SCAR-EVOLANTA (Evolution of Antarctic Organisms) as well as to CeDAMar (Census of the Diversity of the Abyssal Marine life), a Census of the Marine Life Project.

CeDAMar is designed to overcome the widely recognized "taxonomic impediment" by means of freely available databases of taxonomists, a series of taxonomic workshops on deep-sea organisms, and an exchange program for taxonomists. As a field project of the Census of Marine Life (CoML), CeDAMar is aimed at providing a broad foundation of knowledge on the biodiversity and distribution of abyssal species. A series of internationally coordinated cruises will help to achieve this goal. The results generated by the CeDAMar program will be made available through a series of open databases linked with the Ocean Biogeographic Information System (OBIS) and the Global Biodiversity Information Facility (GBIF).

The general objective of CeDAMar is to *document actual species diversity of abyssal plains as a basis for global-change research and for a better understanding of historical causes and ecological factors regulating biodiversity*. In order to enhance the interpretability and comparability of results, CeDAMar will focus on the relatively homogeneous, large-scale habitats of the abyssal plains with special attention to latitudinal gradients. To begin this endeavour, the South Atlantic Ocean from the tropics to the Antarctic Ocean was chosen for Germany-based expeditions. American, Japanese and French expeditions to the manganese nodule areas of the central north Pacific Ocean will provide a second focal point. Additionally, the Mediterranean deep-sea basins will be the scope of a joint-venture between German and Greek institutes. In addition to scientific description of 500 common abyssal species, CeDAMar will participate in CoML's DNA Barcoding initiative (see "DNA Barcoding" at website: <http://www.coml.org/comml.htm>.)

Selected major questions CeDAMar seeks to answer are:

- * Based on statistically reasonable estimates, how many species are there in the abyssal deep sea?
- * Are cosmopolitan species common in the deep sea?
- * Are there endemic species in the abyss?
- * Are there latitudinal gradients in species richness?
- * Is the diversity of a given basin similar to the diversity of basins in other oceans at similar latitudes?
- * Is there gene flow between distant abyssal communities of the same species?
- * Are there biogeographic barriers for the distribution of abyssal fauna?

* What factors are correlated with high or low species richness?

* Do organisms of different size classes respond similarly to environmental factors?

To date, two expeditions organized in Germany are part of CeDAMar: ANDEEP I & II (Southern Ocean, RV *Polarstern*, 2002) and DIVA 1 (Angola Basin, RV *Meteor*, 2000).

The expeditions ANDEEP I & II were planned, organized and realized from the Zoological Museum of the University of Hamburg with support from the Alfred-Wegener-Institute for Polar and Marine Research (AWI).

These expeditions took place on board of RV *Polarstern* (ANT XIX 3&4) from January to April 2002 and were joined by scientists from 13 nations, who covered scientific questions ranging from geology/palaeontology to sedimentology to biology. ANDEEP focussed on the distribution and biodiversity of organisms of size classes ranging from meio- to megafauna. A standardized set of gears (CTD, SPI [sediment surface- and profile imaging system], multicorer [MUC], vegematic box corer [GKG], epibenthic sledge [EBS], and Agasiz Trawl [AGT]) was employed at 22 stations (Figure over page).

In general ANDEEP I & II were aimed at conducting the first base-line survey of the deep-water benthic fauna of the Scotia and Weddell Seas, and at the investigation of the evolutionary and ecological processes and oceanographic changes, which have resulted in the present biodiversity and distributional patterns in the Southern Ocean deep sea.

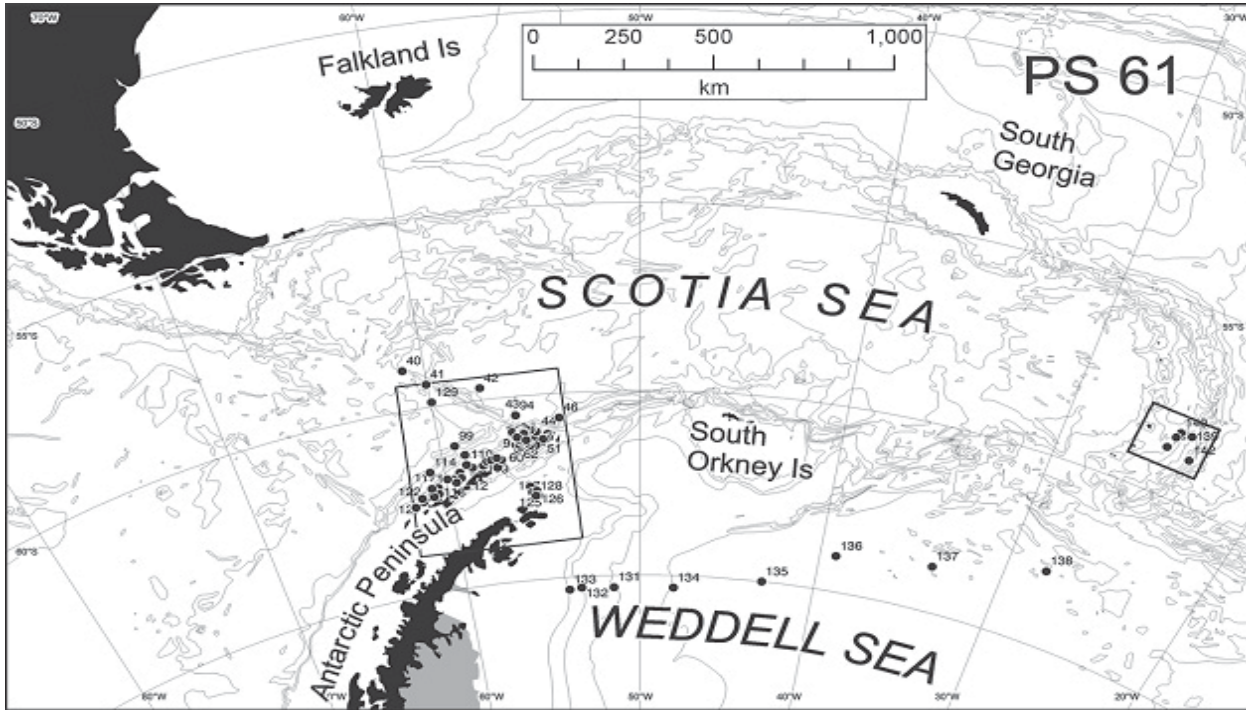
First results were presented during the IBMANT/ANDEEP Workshop in Ushuaia, Argentina (9-14 October, 2003) and are available as extended abstracts in a workshop booklet. Publication of a Deep-Sea Research Special ANDEEP volume, which will be dedicated to the late Howard Sanders, is underway.

ANDEEP is linked to DIVA in as much as the northward flow of Southern Ocean deep water might have a potential impact on the occurrence and distribution of species living north of the Convergence in the Atlantic deep sea.

General aims and the background for the ANDEEP III expedition, demonstrating how ANDEEP III fits into CeDAMar, are summarised in the framework of the ANDEEP expedition and the explanation of how the German proposals are integrated.

With ANDEEP III, the range of the studied area of ANDEEP is extended to the eastern Weddell Sea and the Cape Basin off South Africa. Based on a broader database, ANDEEP III aims at testing hypotheses of ANDEEP I&II. Some of the questions born from the first preliminary results obtained during ANDEEP I & II are:

continued...



ANDEEP expedition stations

* Is there evidence for radiation and speciation processes in the abyssal Southern Ocean in the past and/or present (*Contribution to SCAR/ EVOLANTA*)?

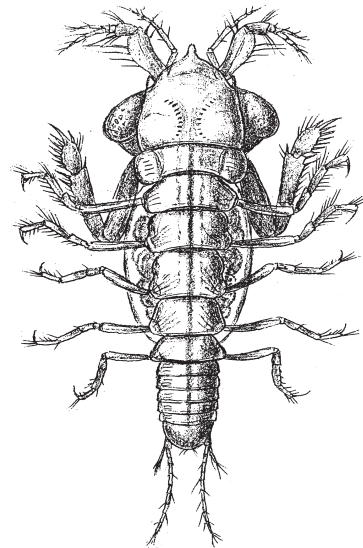
* What can we say about the degree of endemism in the abyssal Southern Ocean?

* Is there a faunal break between slope and abyssal plain, or does the eurybathy observed on the shelf and slope extend to abyssal plains?

* Is there species overlap between the abyssal Southern Ocean and the Cape Basin, and if so, to which extent?

* Are there differences in abyssal biodiversity with latitude from the Cape Basin towards the abyssal Southern Ocean off Kapp Norvegia?

* What can we say about species turnover on a longitudinal gradient in the Weddell Sea?



Submitted by Angelika Brandt, TCS European Governor

Announcement of ANDEEP III will take place from 21 January - 6 April 2005. See <http://www.biologie.uni-hamburg.de/zim/niedere2/andeeep.html> for more details.



Recent Publications...

Branchiopoda

Güher, H. 2004. A study on morphological characters, spatial and seasonal densities, and co-existence of two predatory Cladocera, *Cercopagis pengoi* (Ostroumov, 1891) and *Cornigerius meaticus* (Pengo, 1879) in Lake Terkos, Turkey. *Crustaceana*, Volume 77: 669-682.

Kraus, H., E. Eder, O. S. Møller, and B. Werding. 2004. Cyst deposition behaviour and the functional morphology of the brood pouch in *Streptocephalus torvicornis* (BRANCHIOPODA: ANOSTRACA). *Journal of Crustacean Biology*, Volume 24, Number 3: 393-397.

Thiéry, A. & S. Jean. 2004. *Branchipodopsis buettikeri*, new species (ANOSTRACA, BRANCHIPODIDAE), The first Arabian (Sultanate of Oman) Representative of the genus of freshwater fairy shrimps, with biogeographical remarks. *Journal of Crustacean Biology*, Volume 24, Number 3: 398-408.

Remipedia

Koenemann, S., T.M. Iliffe & J. Yager. 2004. *Kaloketos pilosus*, a new genus and species of Remipedia (Crustacea) from the Turks and Caicos Islands. *Zootaxa* 618: 1-12, 7 plates; 11 references

Cirripedia

Alvarez, F. & A. Celis. 2004. On the occurrence of *Conchoderma virgatum* and *Dosima fascicularis* (Cirripedia, Thoracica) on the sea snake, *Pelamis platurus* (Reptilia, Serpentes) in Jalisco, Mexico. *Crustaceana*, Volume 77: 761-764.

Zardus, J. D. & M. G. Hadfield. 2004. Larval development and complementary males in *Chelonibia testudinaria*, a barnacle commensal with sea turtles. *Journal of Crustacean Biology*, Volume 24, Number 3: 409-421

Copepoda

Dahms, H-U. and P-Y Qian. 2004. Life histories of the Harpacticoida (Copepoda, Crustacea): a comparison with meiofauna and macrofauna. *Journal of Natural History*, Volume 38, Number 14: 1725 - 1734.

Gómez-Erache, M. et al. Recent data on freshwater cyclopoid copepoda (Cyclopoida: Cyclopidae) from Uruguay. *Nauplius*, Vol 11, No. 2: 145-148

Gómez, S., J. W. Fleeger, A. Rocha-Olivares and D. Foltz. 2004. Four new species of *Cletocamptus* Schrankewitsch, 1875, closely related to *Cletocamptus deitersi* (Richard, 1897) (Copepoda: Harpacticoida). *Journal of Natural History*, Volume 38, Number 21: 2669 - 2732.

Ooishi, S. 2004. Female and male *Haplostoma brevicauda* (COPEPODA: CYCLOPOIDA: ASCIDICOLIDAE), living in compound ascidians. *Journal of Crustacean Biology*, Volume 24, Number 3: 422-439.

Santos, C. & T. Björnberg. 2004. *Choniomyzon libiniaae*, sp. n. (Crustacea, Copepoda, Nicothoidae) from São Sebastião, SP, Brazil. *Zootaxa* 603: 1-12, 6 plates; 15 references.

Steinarsdóttir, M. B. & A. Ingólfsson. 2004. *Itunella muelleri* (HARPACTICOIDA: CANTHOCAMPTIDAE): a marine species with preferences for the upper part of the littoral fringe. *Journal of Crustacean Biology*, Volume 24, Number 3: 440-446.

Suárez-Morales, E.. 2004. A new species of *Eucyclops* Claus (Copepoda: Cyclopoida) from Southeast Mexico with a key for the identification of the species recorded in Mexico. *Zootaxa* 617: 1-18, 6 plates; 25 references.

Ostracoda

Matzke-Karas, R., R. J. Smith and M. Homma. 2004. *Cyclocypris diebeli* Absolon, 1973 (Ostracoda, Crustacea), extinct in Europe, extant in Japan. *Journal of Natural History*, Volume 38, Number 13: 1635 - 1663.

Pinto, R. L., C. E. F. Rocha and K. Martens. 2004. On the genus *Penthesilenula* Rossetti and Martens, 1998 (Crustacea, Ostracoda, Darwinulidae) from (semi-) terrestrial habitats in São Paulo State (Brazil), with the description of a new species. *Journal of Natural History*, Volume 38, Number 20: 2567 - 2589.

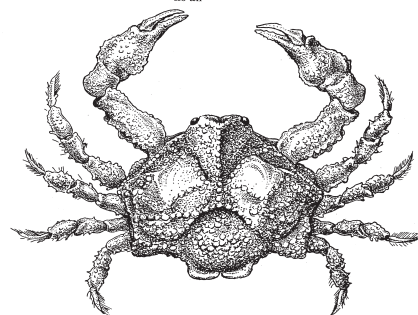
Mysida

Fukuoka, K. and M. Murano. 2004. A new genus for *Acanthomysis schrencki* (Czerniavsky, 1882) (Crustacea: Mysida: Mysidae) with the first description of the male. *Journal of Natural History*, Volume 38, Number 17: 2135 - 2143.

Grabe, S. A., W. W. Price, E. A. A. Abdulqader, R. W. Heard, Jr. 2004. Shallow-water Mysida (Crustacea: Mysidacea) of Bahrain (Arabian Gulf): species composition, abundance and life history characteristics of selected species. *Journal of Natural History*, Volume 38, Number 18: 2315 - 2329.

Hanamura, Y. and T. Kase. 2004. *Heteromysoides* (Crustacea: Mysidacea: Heteromysini) from a submarine cave on Grand Cayman, the Caribbean Sea: descriptions of a new and a rare species. *Journal of Natural History*, Volume 38, Number 17: 2145 - 2152.

Takahashi, K., T. Hirose, N. Azuma & K. Kawaguchi, 2004. Diel and intraspecific variation in vulnerability of the beach mysid, *Archaeomysis kokuboi* Ii, 1964, to fish predators. *Crustaceana*, Volume 77: 717-728.



**Amphipoda**

Berge, J. 2004. The subfamily Andaniopsinae (Crustacea: Amphipoda: Stegocephalidae): description of one new species and redescription of *Steleuthera maremboca*. *Journal of Natural History*, Volume 38, Number 11: 1385 – 1395.

Cowling, J., J. I. Spicer, K. J. Gaston and J. M. Weeks. 2004. Current status of an amphipod invader, *Arcitalitrus dorrieni* (Hunt, 1925), in Britain. *Journal of Natural History*, Volume 38, Number 13: 1665 – 1675.

Freire, P.R. & C.S. Serejo. 2004. The genus *Trischizostoma* (Crustacea: Amphipoda: Trischizostomidae) from the Southwest Atlantic, collected by the REVIZEE Program. *Zootaxa* 645: 1-15, 6 plates; 17 references.

Horton, T. 2004. Revision of the amphipod genus *Valettiopsis* Holmes, 1908 (Crustacea: Lysianassoidea), with the addition of three new species. *Journal of Natural History*, Volume 38, Number 14: 1735 - 1755.

Hou, Z-E. and S. Li. 2004. Three new species of *Gammarus* from Shaanxi, China (Crustacea: Amphipoda: Gammaridae). *Journal of Natural History*, Volume 38, Number 21: 2733 – 2757.

Khalaji-Pirbalouty, V. and A. Sari. 2004. Biogeography of amphipods (Crustacea: Amphipoda: Gammaridae) from the central Zagros Mountains, Iran, with descriptions of two new species. *Journal of Natural History*, Volume 38, Number 19: 2425 - 2445.

King, R. A. and J. M. C. Holmes. 2004. A new species of *Ischyrocerus* (Crustacea: Amphipoda) from Ireland, with a review of *Ischyrocerus anguipes* and *Ischyrocerus minutus* from the North-East Atlantic. *Journal of Natural History*, Volume 38, Number 14: 1757 - 1772.

Kristjánsson, B. K. and J. Svavarsson. 2004. Crymostygidae, a new family of subterranean freshwater gammaridean amphipods (Crustacea) recorded from subarctic Europe. *Journal of Natural History*, Volume 38, Number 15: 1881 – 1894.

Myers, A. A. In press. A new species of amphipod of the genus *Neomegamphopus* (Crustacea, Amphipoda, Neomegamphopidae) from Rodrigues, Indian Ocean. *Journal of Natural History*, Volume 38, Number 23-24: 3137 - 3142.

Myers, A. A. In press. Amphipoda (Crustacea) of the family Aoridae (Corophiidea) from Rodrigues, Indian Ocean. *Journal of Natural History*, Volume 38, Number 23-24: 3123 - 3135.

Satoh, K. 2004. Occurrence of *Phronima sedentaria* (Forskål, 1775) (Amphipoda, Hyperiiidea) in the stomach of the longnose lancetfish, *Alepisaurus ferox* (Lowe, 1833) (Aulopiformes, Alepisauroidae) in the North and tropical Atlantic Ocean. *Crustaceana*, Volume 77: 729-740.

Serejo, C.S. 2004. Talitridae (Amphipoda, Gammaridea) from the Brazilian coastline *Zootaxa* 646: 1-29 (16 September 2004) 13 plates; 38 references.

Isopoda

Bruce, N. L. In press. *Hadromastax dinamoraze* sp. nov., the first occurrence of the family Hadromastacidae Bruce and Müller, 1991 (Isopoda, Crustacea, Limnoriidea) in the Indian Ocean. *Journal of Natural History*, Volume 38, Number 23-24: 3113 - 3122.

Bruce, N.L. & R. Wetzer. 2004. *Paradella tiffany* sp. nov., a distinctive sphaeromatid isopod (Crustacea: Isopoda: Sphaeromatidea) from Baja California, Mexico. *Zootaxa* 623: 1-12, 5 plates; 22 references.

Malyutina, M. & A. Brandt. 2004. Acanthocopinae (Crustacea: Isopoda: Munnopsididae) from the Southern Ocean deep sea with the description of *Acanthocope eleganta* sp. nov. *Zootaxa* 550: 1-20, 10 plates, 11 references.

Zeidler, W. 2004. A review of the families and genera of the hyperiidean amphipod superfamily Phronimoidea Bowman & Gruner, 1973 (Crustacea: Amphipoda: Hyperiidea). *Zootaxa* 567: 1-66, 10 plates; 192 references.

Svavarsson, J. and K. Jörundsdóttir. In press. A new gnathiid species (Crustacea, Isopoda, Cymothoidea) from Rodrigues, Mauritius, Indian Ocean. *Journal of Natural History*, Volume 38, Numbers 23-24: 3103 - 3111.

Tanaidacea

Bird, G. J. 2004. The Tanaidacea (Crustacea, Peracarida) of the North-East Atlantic: the shelf and bathyal *Paratyphlotanais* of the 'Atlantic Margin'. *Journal of Natural History*, Volume 38, Number 11: 1359-1384.

Blazewicz-Paszkowycz, M. 2004. A description of a new species of *Typhlotanais* (Crustacea: Tanaidacea) from West Antarctic with a note on the genus. *Zootaxa* 535: 1-12, 4 plates, 17 references.

Decapoda

Aiken, D. E., S. L. Waddy, and S. M. Mercer. 2004. Confirmation of external fertilization in the American lobster, *Homarus americanus*. *Journal of Crustacean Biology*, Volume 24, Number 3: 474-480.

Almeida, A. O. et al. New records of decapod crustaceans (Dendrobranchiata and Brachyura) for the state of Bahia, Brazil. *Nauplius*, Vol 11, No. 2: 129-133

Anker, A. and T. Komai. 2004. Descriptions of two new species of alpheid shrimps from Japan and Australia, with notes on taxonomy of *Automate De Man*, *Coronalpheus* Wicksten and *Bermudacaris* Anker and Iliffe (Crustacea: Decapoda: Caridea). *Journal of Natural History*, Volume 38, Number 15: 1895 - 1914.

Barbaresi, S., G. Santini, E. Tricarico, F. Gherardi . 2004. Ranging behaviour of the invasive crayfish, *Procambarus clarkii* (Girard) *Journal of Natural History*, Volume 38, Number 22: 2821 – 2832.



Recent Publications...

Decapoda...

- Benetti**, A. S. and Negreiros-Fransozo, M. L. Symmetric chelipeds in males of the fiddler crab *Uca burgersi* Holthuis, 1967 (Decapoda, Brachyura, Ocypodidae). *Nauplius*, Vol 11, No. 2: 141-144
- Bertini**, G., A. Fransozo, A. A. Braga. 2004. Ecological distribution and reproductive period of the hermit crab *Loxopagurus loxochelis* (Anomura, Diogenidae) on the northern coast of São Paulo State, Brazil. *Journal of Natural History*, Volume 38, Number 18: 2331 - 2344.
- Bruce**, A.J. 2004. A partial revision of the genus *Periclimenes* Costa, 1884 (Crustacea: Decapoda: Palaemonidae). *Zootaxa* 582: 1-26, 98 references.
- Bortolini-Rosales**, J. L. Histological demonstration of (WSSV) on *L. vannamei* by different staining techniques. *Nauplius*, Vol 11, No. 2: 83-89
- Caruso**, T., L. Falciai & V. Zupo. 2004. Note on a deep population of *Pagurus prideaux* Leach, 1815 (Decapoda, Anomura). *Crustaceana*, Volume 77: 757-760.
- Castro**, P., P.K.L. Ng & S.T. Ah Yong. 2004. Phylogeny and systematics of the Trapeziidae Miers, 1886 (Crustacea: Brachyura), with the description of a new family. *Zootaxa* 643: 1-70, 7 plates; 137 references.
- Consoli**, P., T. Romeo & P. Rinelli. 2004. The sexual regime of deep-water shrimps (Decapoda, Pandalidae) in the S. Tyrrhenian Sea (Central Mediterranean). *Crustaceana*, Volume 77: 751-756.
- Crosnier**, A. & W. Dall. 2004. Redescription of *Hymenopenaeus obliquirostris* (Crustacea, Decapoda, Penaeoidea, Solenoceridae) and descriptions of two new species of *Hymenopenaeus* from the Indo-West Pacific. *Zootaxa* 600: 1-26, 14 plates; 29.
- Echeverría-Sáenz**, S. et al. Diversity of decapods inhabiting the largest mangrove system of Pacific Costa Rica. *Nauplius*, Vol 11, No. 2: 91-97.
- Galindo**, L. A. et al. Lecithotrophic development of the pea crab *Orthotheres barbatus* (Desbonne, 1867) (Decapoda: Brachyura: Pinnotheridae). *Nauplius*, Vol 11, No. 2: 123-128
- Gallardo**, P. et al. Effect of *Artemia* nauplii replacement by an artificial feed containing krill hydrolysate on ingestion rate, oxygen consumption, and energy budget in the mysis of *Litopenaeus vannamei* (Boone, 1931). *Nauplius*, Vol 11, No. 2: 69-81
- González-Gordillo**, J. I., A. Rodríguez, and H. Queiroga. 2004. Characterization of the megalopal premolt stages of the green crab, *Carcinus maenas* (DECAPODA, PORTUNIDAE), from laboratory culture. *Journal of Crustacean Biology*, Volume 24, Number 3: 502-510.
- Ho**, P., P. Ng, T. Chan & D. Lee. 2004. New records of 31 species of brachyuran crabs from the joint Taiwan-France expeditions, 'Taiwan 2000' and 'Taiwan 2001', off deep waters in Taiwan. *Crustaceana*, Volume 77, No. 6: 641-668.
- Jensen**, G. C. 2004. Status of *Eualus pusiolus* in the northeastern Pacific, with a description of a new species of *Eualus* (DECAPODA: HIPPOLYTIDAE). *Journal of Crustacean Biology*, Volume 24, Number 3: 463-469.
- Katagan**, T., A. Kocatas & K. Bakir. 2004. On the occurrence of *Balssia gastii* (Balss, 1921) (Decapoda, Pontoninae) in the Aegean Sea. *Crustaceana*, Volume 77: 765-768.
- Kim**, J. N. and Y. Fujita. 2004. A new species of the genus *Vercoia* from Okinawa Island, Japan (Crustacea, Decapoda, Caridea, Crangonidae), with descriptions of its zoeal stages. *Journal of Natural History*, Volume 38, Number 16: 2013 - 2031.
- Knowlton**, R. & C. Vargo. 2004. The larval morphology of *Palaemon floridanus* Chace, 1942 (Decapoda, Palaemonidae) compared with other species of *Palaemon* and *Palaemonetes*. *Crustaceana*, Volume 77, No. 6: 683-716.
- Martin**, J. W. & M. K. Wicksten. 2004. Review and Redescription of the freshwater atyid shrimp genus *Syncaris* Holmes, 1900, in California. *Journal of Crustacean Biology*, Volume 24, Number 3: 447-462.
- Meireles**, A. L. et al. Gastropod shell availability as a potential resource for the hermit crab infralittoral fauna of Anchieta Island (SP), Brazil. *Nauplius*, Vol 11, No. 2: 99-105.
- Nakata**, K., A. Tanaka, and S. Goshima. 2004. Reproduction of the alien crayfish species *Pacifastacus leniusculus* in Lake Shikaribetsu, Hokkaido, Japan. *Journal of Crustacean Biology*, Volume 24, Number 3: 496-501.
- Ng**, P. K. L. and H.-L. Chen. 2004. On a new genus and new species of xanthid crab (Crustacea, Decapoda, Brachyura, Xanthinae) from the South China Sea, with notes on the genus *Liagore* De Haan, 1833. *Journal of Natural History*, Volume 38, Number 18: 2345 - 2360.
- Ouellet**, P. and F. Plante. 2004. An investigation of the sources of variability in American lobster (*Homarus americanus*) eggs and larvae: female size and reproductive status, and interannual and interpopulation comparisons. *Journal of Crustacean Biology*, Volume 24, Number 3: 481-495.
- Ramachandra Reddy**, P., G. Purna Chandra Nagaraju, and P. Sreenivasula Reddy. 2004. Involvement of methyl farnesoate in the regulation of molting and reproduction in the freshwater crab *Oziotelphusa senex senex*. *Journal of Crustacean Biology*, Volume 24, Number 3: 511-515.
- Sakai**, K., Y. Hirano & M. Saigusa. 2004. A new record of *Upogebia snelli* Ngoc-Ho, 1989 (Thalassinoidea, Upogebiidae) from Iriomote Island, Ryukyus, Japan. *Crustaceana*, Volume 77: 741-750.
- Valadez-Manzano**, L. M. et al. Length and weight distributions of *Panulirus inflatus* and *P. gracilis* (DECAPODA: PALINURIDAE) in the lower portion of Gulf of California. *Nauplius*, Vol 11, No. 2: 107-113



Vasques, R. O'R. et al. A previous list of Dendrobranchiata from shrimp trawlings in Ilhéus, Bahia, Brazil. *Nauplius*, Vol 11, No. 2: 115-121.

Wehrtmann, I. S. and Mena-Castañeda, D. Molt sign description of the Pacific blue crab *Callinectes arcuatus* Ordway, 1863 (Decapoda, Portunidae). *Nauplius*, Vol 11, No. 2: 135-139.

Williams, J. D. and J. J. McDermott 2004. Hermit crab biocoenoses: a worldwide review of the diversity and natural history of hermit crab associates. *Journal of Experimental Marine Biology and Ecology* 305: 1-128.

Zhang, D. & J. Lin. 2004. Fertilization success without anterior pleopods in *Lysmata wurdemanni* (DECAPODA: CARIDEA), a protandric simultaneous hermaphrodite. *Journal of Crustacean Biology*, Volume 24, Number 3: 470-473.

Non taxon specific

Bishop, R. E., B. Kakuk, and J. J. Torres. 2004. Life in the hypoxic and anoxic zones: Metabolism and proximate composition of Caribbean troglobitic crustaceans with observations on the water chemistry of two anchialine caves. *Journal of Crustacean Biology*, Volume 24, Number 3: 379-392.

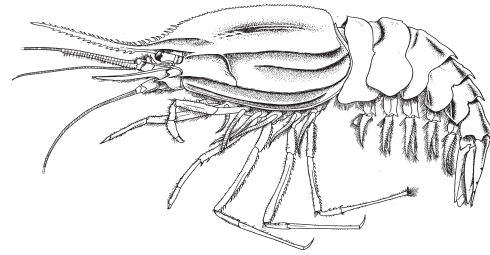
Pagé, M.-P. and Cooper, R.L. (In Press) Novelty stress and reproductive state alters responsiveness to sensory stimuli and 5-HT neuromodulation. *Comparative Biochemistry and Physiology A*.

Shuranova, Z.P. Y.M. Burmistrov and R.L. Cooper. 2003. A hundred years ago and now: A short essay on the study of the crustacean hindgut. (Vor hundert Jahren und nun: Eine kurze Geschichte von die Forschung des Hinterdarmes der Crustaceen). *Crustaceana* 76: 755-760.

Sparks, G. and Cooper, R.L. (2004) 5-HT offsets homeostasis of synaptic transmission during short-term facilitation. *Journal of Applied Physiology* 96:1681-1690.

Sparks, G.M., Dasari, S. and Cooper, R.L. (2004) Actions of MDMA at glutamatergic neuromuscular junctions *Neuroscience Research* 48:431-438.

Recent Publications...



Tropical Deep-sea benthos Volume 23

Edited by Bruce A. Marshall and Bertrand Richer de Forges

Tropical Deep-Sea Benthos, a continuation of Résultats des Campagnes MUSORSTOM, is a series dedicated to inventorying and describing the deep-sea fauna of the world, with special emphasis on the most extensive of its biogeographical regions: the Indo-Pacific. The series depends on an international network of taxonomists fueled by the ongoing sampling program by Muséum national d'Histoire naturelle (MNHN, Paris) and Institut de Recherche pour le Développement (IRD, formerly ORSTOM)

Volume 23 contains nine contributions by experts from Great Britain, Japan, Russia, Spain, Taiwan, The United States and France. These papers cover hexactinellid sponges, pycnogonids, flatfishes, and six decapod crustaceans. 226 species are reported, described and illustrated (36% new species).

Of particular interest in this volume is the review of *Sympagurus* hermit crabs, some of which live in symbiosis with sea anemones or zoantharians that can produce pseudo-shells. Armored deep-sea shrimps of the genus *Glyphocrangon* are revealed to be far more diverse than previously appreciated, with their total number more than doubled as the result of the present study. The examination of galatheids from Fiji and Tonga confirms that south-west Pacific as the center of species richness for these crustaceans. The improbable color patterns of shrimps in the genus *Plesionika*, some of which have brilliant target like markings, are illustrated in color plates.

640 pages, 308 figures, 11 tables, Hardback edition, text in English, CDROM of the edition provided. 99 € (~US\$120).

See <http://www.mnhn.fr/museum/office/science/science/DocScientifique/publications/presentation.xsp> for more details.

Please send announcements of new publications involving crustaceans for inclusion in the Ecdysiast to the Editor:
Rachael King
rachaelking@crustacea.net





Recent Publications...

Crabs of Japan, and the Adjacent Seas

K. Sakai (Ed.)

This ETI CD-ROM monograph reflects the three-volume work by the late Dr. Tane Sakai (1976). For this CD-ROM the section on "true crabs" (Brachyura) has been extensively revised and extended by the distinguished carcinologists Danièle Guinot, Peter Davie, and Michael Türkay. Some 1250 species and subspecies of brachyuran crabs are now recognized. Illustrations are mainly those by De Haan and T. Sakai, or those contributed by various authors of "Résultats des Campagnes MUSORSTOM" (A. Crosnier, Ed.) and other publications.

For this project K. Sakai was financially supported by the Ministry of Education, Culture, Sports, Sciences and Technology, Japan in 1993-1998 and the Japan Society for the Promotion of Sciences, Japan in 1999-2000 (nr. 128098).

The production of the CD-ROM was accomplished with close cooperation between the branch office ETI-Japan and headquarters ETI-Netherlands (e-mail: info@eti.uva.nl; www.eti.uva.nl).

Tanaidáceos (Crustacea: Peracarida) del Mar Caribe Mexicano

(written in Spanish)

Eduardo Suárez-Morales, Richard W. Heard, Socorro García-Madrigal, José J. Oliva & Elva Escobar.

This publication will be the first taxonomically oriented effort focused on the tanaid fauna of the Mexican Caribbean Sea. It will include some 20 species of shallow-water forms collected from different near shore environments (i.e. coral rocks, seagrass beds, sandy bottoms) along the eastern coast of the Yucatan Peninsula, Mexico. These records are complemented by brief diagnoses of the species, distributional maps with comments, an account of the material examined in all cases, and SEM photos and line drawings of most species. Comparative morphological and morphometric data will be presented for many of the species included; the final section will consist of a key for the identification of all the species/taxa recorded.

This small publication (130 pp.) is intended to help students and marine biologists in exploring the taxonomy and distribution of the coastal tanaids in this region of the Tropical Northwestern Atlantic.

This publication is supported by ECOSUR (El Colegio de la Frontera Sur), CONACYT (Mexican Council for Science and Technology), and the Mexican Ministry of Environment and Natural Resources (SEMARNAT).

Publication is expected during early November, 2004. Cost is yet to be determined, but it will be around \$20-25.00 USD.

Please contact Dr. Eduardo Suárez-Morales for more details: esuarez@ecosur-qroo.mx

Marine Decapod Crustacea of Southern Australia: A Guide to Identification

Now available from <http://www.publish.csiro.au/nid/20/pid/3921.htm>

Gary C B Poore, Museum Victoria
1000 Illustrations, 175 Colour photographs
616 pages. Publisher: CSIRO PUBLISHING
Hardback - ISBN: 0643069062 - AU \$180.00

Description

This book is a comprehensive guide to the identification of 800 species of decapod and stomatopod crustaceans from southern Australian marine waters. It is liberally illustrated with more than 1000 line drawings giving good views of many species as well as diagnostic illustrations. Details for each species include the authority, year of description, sometimes a common name, diagnosis, size, geographical distribution, and ecological and depth distribution. The chapter on the Stomatopoda is by Shane Ahyong.

Sections within each chapter are hierarchical, species within genera, within families (often with subfamilies as well). Identification is achieved through the use of dichotomous keys adapted from many originally published in the primary literature, or developed from scratch. Some keys are to all Australian taxa but most are to southern Australian taxa only.

The information in this book derives from over 200 years of collecting in southern Australian environments, from the intertidal to the deep sea, and publications in numerous journals in several languages. More than 800 of these papers and books are cited.

The abundance of keys to families and genera, and the numerous references to the general world taxonomic and biological literature makes this book of considerable interest to an audience outside Australia.

Contents

1. Introduction
 2. Systematics (classification; key to suborders and infraorders)
 3. Dendrobranchiata – prawns and mid-water shrimps
 4. Caridea – shrimps
 5. Stenopodidea – coral shrimps and Venus shrimps
 6. Polychelida – deep-sea lobsters
 7. Astacidea – scampi and crayfish
 8. Thalassinidea – ghost shrimps and sponge shrimps
 9. Achelata – rock lobsters and bugs
 10. Anomura – hermit crabs, porcelain crabs and squat lobsters
 11. Brachyura – crabs
 12. Stomatopoda – mantis shrimps
- Glossary
Taxonomic index



Research and Expeditions...

SCAR-EBA

(describe the past, understand the present, predict the future)

SCAR-EBA will be a Scientific Research Programme (SRP) of the Life Sciences Scientific Standing Group (LSSSG) entitled *Evolution and Biodiversity in Antarctica (EBA): the response of life to change* and will replace SCAR EVOLANTAR on 1.1.2006. The new SCAR Life Sciences Programme will use a suite of modern techniques and an interdisciplinary approach, will explore the evolutionary history of selected modern Antarctic biota, examine how modern biological diversity in Antarctica influences the way present-day ecosystems function, and thereby predict how the biota may respond to future environmental change. For the first time it will integrate understanding across the major realms of Antarctic biology (marine, terrestrial, freshwater, from molecules to ecosystems) into the cohesive picture that is a prerequisite of Earth System Science. It will advance evolutionary and ecological science using model systems and organisms from the Antarctic, facilitating interdisciplinary investigations of systems responses to change. To achieve these goals the overarching objectives of this programme are to:

- * Link with geosciences to establish more clearly the evolutionary history of the Antarctic biota.

- * Compare evolutionary adaptations to the Antarctic environment in a range of organisms.

- * Explore patterns of gene flow within, into and out from the Antarctic, and determine their consequences for population dynamics.

- * Identify patterns and examine diversity of organisms, ecosystems and habitats in Antarctica, together with the ecological and evolutionary processes that control these.

- * Study the impact of past, current and predicted environmental change on biodiversity and the consequences for Antarctic marine, terrestrial and limnetic ecosystem function.

Key scientific areas to be tackled in the EBA programme will include for example evolutionary radiations and unknown areas.

One of the interesting aspects of the timeline is that during the first year of the International Polar year (IPY) 2007/2008, SCAR-EBA will support a push for the planned Circum Antarctic Census of the Marine Life Project (CircAntCoML).

CIRCUM-ANTARCTIC CENSUS of MARINE LIFE

The International Polar Year (IPY) provides a rare opportunity for national Antarctic programs to cooperate in the conduct of large-scale projects that would not otherwise be possible and that will stand as benchmarks in their fields for many years to come. Australia has proposed that there be an international, centrally coordinated Circum-Antarctic Census of Antarctic Marine Life (CircAntCoML)

conducted during the Antarctic summer 2007/08. This will be a significant contribution to IPY (see above). CircAntCoML will try to gain synoptic sets of multidisciplinary observations to establish the status of the polar environment.

The main objective of CircAntCoML is to describe and define the biodiversity of marine life in the oceans surrounding Antarctica.

More information about CoML is available on www.coml.org/coml.htm.

Submitted by Angelika Brandt, TCS European Governor

Kanami to Mazazini: collecting isopods on the shores of East Africa

Regina Wetzter, Dean Pentcheff and Niel Bruce, have returned from this summer's NSF-funded East African Expedition to Zanzibar (in Tanzania) and Mombasa (in Kenya) with excellent collections. Intensive shore collecting on reef flats and diving on outer reefs, rewarded us with numerous new species and genera for the project. Our greatest efforts were at Murogo Reef, Bawi Island reef, and Ras Nungwi in Zanzibar and on the reef, lagoon, and shores from Ras Iwetine to Mtwapa in Kenya. Sphaeromatid highlights include an unconfirmed range extension of *Pistorius* (living in dead oyster shells on mangroves) at Shimoni and *Neonaesa* from Zanzibar. Several undescribed species and at least three potentially new genera were collected, along with 18 described sphaeromatid species representing 15 genera useful for the molecular aspects of this project.

This was our final major field trip for this project on this round of funding. With our eyes glued to the microscope we are now identifying the taxa collected and grinding up specimens in the molecular lab. We bring your attention to these efforts and request your help obtaining specimens of some of the more elusive genera we have not been able to thus far obtain. We welcome ethanol preserved donations of all sphaeromatid taxa. A "wish list" of genera still desired is posted at <http://isopods.nhm.org>.

Along with the isopods, we collected many other associated crustaceans as well as many other small invertebrates. We are happy to make these available to you, our colleagues. All material has been collected in 95% ethanol and is available for molecular and morphological analyses. If you are interested in some of this material, please contact R. Wetzter at rwetzter@nhm.org to make arrangements to obtain taxa of interest.

Details about the Sphaeromatid Isopod Project, participants, and more are at <http://isopods.nhm.org> RW (Natural History Museum L.A. Co.), NDP (Loyola Marymount University), NLB (NIWA, New Zealand)



Recent Research...

Winners of the flood – Ecology and genetics of Large Branchiopods

Thorid Zierold, Technische Universität Bergakademie Freiberg, Germany.

Branchiopoda or “living fossils” are an ancient group of mostly fresh-water crustaceans, first represented in the Upper Cambrian. They inhabit floodplain water bodies along major rivers, (e.g. Danube, March, Rhine and Rhône) as well as isolated temporary ponds (e.g. New Forest, United Kingdom) and rice fields (Valencia, Spain). Around the world, Branchiopoda are endangered by human activities, such as melioration and agriculture. The conservation of Branchiopoda is restricted by the lack of information about their ecology and genetics.

This study focuses on the developmental plasticity of the Conchostraca *Limnadia lenticularis*. Furthermore the results of microsatellite isolation for *Triops cancriformis* and *L. lenticularis* will be published for the first time. Microsatellites are a special class of repetitive DNA, consisting of no more than six base pairs. They are being used more and more often in population genetics e.g. for distinguishing populations of one species.

The ephemeral character of the populated habitats has lead to two material collection strategies: live animals sampling and sediment sampling. Live animals were sampled from fishery ponds (Germany), a puddle in South Forest (United Kingdom), a pond in the Banyoles karstic area (NE Iberian Peninsula) and from a pond near Arandis (Namibia). The live individuals were preserved in 96% ethanol and transported in to the laboratory. During the dry season sediment samples were taken from floodplains (Rhine, Danube, March) with known or suggested large branchiopod occurrences. To study the life cycles of these large branchiopods, hatching experiments were performed in 5 litre aquaria filled with distilled water, under varying environmental conditions (pH, lighting period, water temperature, water quality).

These laboratory studies on hatching demonstrated that lighting period and water temperature affects ontogeny (Fig. 1).

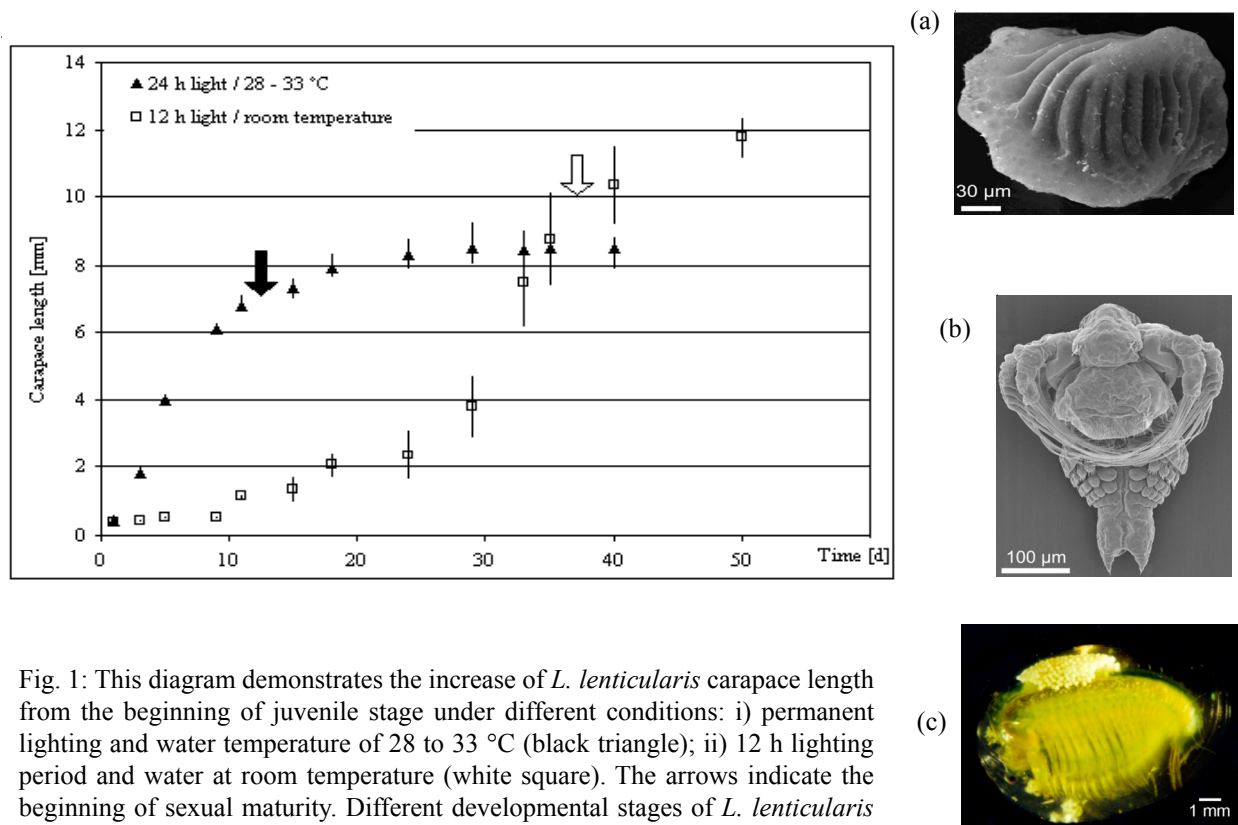


Fig. 1: This diagram demonstrates the increase of *L. lenticularis* carapace length from the beginning of juvenile stage under different conditions: i) permanent lighting and water temperature of 28 to 33 °C (black triangle); ii) 12 h lighting period and water at room temperature (white square). The arrows indicate the beginning of sexual maturity. Different developmental stages of *L. lenticularis* shown on the right hand side: (a) cyst, (b) nauplius, (c) adult individual with new dorsal packet of cysts (Zierold 2002). [Picture: Zierold 2002, SEM-photo supported by COBICE]



Recent Research...

The hatched individuals were conserved in 96% Ethanol for morphological analysis and DNA-extraction.

To study patterns of genetic variation across populations (more or less isolated by distance), a high resolution method the microsatellite analyses was applied. As there have been no other microsatellite investigations on these organisms, they had to be detected and isolated first. I used a method based on Glenn et al. (2000) with some modifications. The principle of the isolation strategy is based on hybridization of individual DNA with biotin labelled microsatellite probes ((ca)₁₀, (ga)₁₀) and to fish off hybridized product with streptavidin coated magnetic beads. The obtained microsatellite enriched DNA-fragments were ligated into pBluescriptII (KS+) and transformed into electro-competent cells of *Escherichia coli* according to the manufacture's protocol. Colony lifts were screened using the biotinylated probe ((ca)₁₀, (ga)₁₀ in separate reactions) and the Photope chemiluminescent detection system (Roche). Colonies that showed strong hybridization signal were sequenced using a sequencing kit (fermentas) according to the manufacture's protocol. Sequences were aligned and contigs created using DNASTAR (Lasergene, version 1999).

Primers were designed for 13 repeat regions using Primer3 web based software (http://frodo.wi.mit.edu/cgi-bin/primer3/primer3_www.cgi/) and DNASTAR (Lasergene). About one or two phyllopodial limbs of each individual were used as a source of DNA, via extraction based on Machery & Nagel (NucleoSpin @Tissue, protocol 4).

Amplification conditions for each primer were optimized using DNA extracted from German *Triops cancriformis* and Plasmid-DNA according to the microsatellite motif (basis DNA for microsatellite primer). More information about PCR reactions for annealing temperature, MgCl₂ and BSA optimization, and all subsequent genotyping reactions will be published soon at NCBI GeneBank.

The sequenced microsatellite motifs from German populations of *L. lenticularis* and *T. cancriformis* are briefly described in table 1. Additional microsatellite motifs with repeats less than three and more than 21 could have been isolated, however, they were not appropriate for microsatellite analysis. The genotyping products scored using a 5.2 % denaturing polyacrylamid gel by vertical electrophoresis at 35mA for 4.5 h on a LI-COR-Sequencer.

Microsatellite motifs	Microsatellite sequence and number of repeats
Simple and perfect	(gt) ₁₃
	(gt) ₁₅
	(ac) ₆
	(ca) ₂₁
	(ca) ₁₈
Compound and imperfect	(ac) ₂ a(ac) ₂ (ca) ₃
	(ga) ₁₀ ttaa(ga) ₁₇
	(ac) ₁₁ t(ac) ₃ cc(ac) ₃ agt(ac) ₇ tct(ac) ₄

Table 1: Isolated microsatellite motifs of *L. lenticularis* and *T. cancriformis*.

The genotyping results of this analysis show a kinship of German fishery pond populations and Austrian populations (namely of Danube flood plain), which we believe is most likely due to fishery management techniques. A remaining question is the genetic relationship between and within populations of Namibia, United Kingdom and Spain.

Acknowledgements

This work has been supported since 2002 by the German Environmental Foundation Deutsche Bundesstiftung Umwelt (grant no. 20002/243) and the Freiberg Technical University of Coaling and Mining.

References

- Glenn, T., Cary, T., Dust, M., Hauswaldt, S., Prince, K., Ramsdell, C. & Shute, I. (2000) Msat Easy Isolation 2000. http://www.uga.edu/srel/DNA_Lab/protocols.htm, 06.05.03.
- Zierold, T. (2002) Developmental plasticity of Conchostraca. Verh. Ges. Ökol. 166.



IMPORTANT ANNOUNCEMENT

The Crustacean Society Board is pleased to solicit applications by graduate students for The following monetary fellowships:

- **The Denton Belk Memorial Scholarship in Graduate Studies** (\$1500);
- **The Crustacean Society Fellowship in Graduate Studies** (3 awards of \$1000 each in the areas of (1) crustacean ecology and/or behavior; (2) crustacean population genetics and/or physiology; and (3) crustacean systematics, biogeography, and/or evolution.

All fellowships/scholarships will support the awardee's research program, including, but limited to: supplies, travel for research, participation in off-campus research experience or training, or a specialized course of study to advance the awardee's knowledge and skills. Selection of the awardee is based on the relevance of the request ("candidate's statement") to the applicant's educational and research goals and a letter of support/recommendation from the applicant's major professor or mentor. Scholarships are awarded annually and may be received only once per awardee.

Please note: applicants for The Denton Belk Memorial Scholarship in Graduate Studies must be conducting or proposing research that specifically targets large branchiopod crustaceans (e.g., Anostraca, Notostraca, Conchostraca).

Currently enrolled graduate students working on either a MS or PhD degree may apply by completing and sending the appropriate application form and required documentation (CV, letter of support, and candidate's statement) to:

Dr. Trisha Spears
Crustacean Society Awards Committee
Department of Biological Science
Florida State University
Tallahassee, Florida 32306-1100 USA

For questions: spears@bio.fsu.edu

DEADLINE FOR SUBMISSION: February 15th, 2005

Please note: The applicant and his/her major professor or mentor must both be current members of The Crustacean Society at the time of application.



THE CRUSTACEAN SOCIETY
FELLOWSHIP IN GRADUATE STUDIES



2005 APPLICATION

The Crustacean Society (TCS) annually awards one \$1500 Denton Belk Memorial Scholarship in Graduate Studies (focusing on large branchiopod research) and up to three \$1000 fellowships in graduate studies on crustaceans, one each in the areas of (1) population genetics and physiology, (2) ecology and behavior, and (3) systematics, biogeography, and evolution.

DEADLINE FOR APPLICATION: 15 FEBRUARY, 2005

Please return completed application and supporting materials to:

Dr. Trisha Spears
The Crustacean Society Awards Committee
Department of Biological Science
Florida State University
Tallahassee, FL 32306-1100

Name: _____

Mailing address: _____

E-mail: _____ FAX: _____

Home phone: _____ Lab/work phone: _____

Type of degree currently pursuing (please check one): _____ Master's _____ PhD

Current year of graduate study: _____ Expected date of degree: _____

I am applying for (please check one):

_____ The Denton Belk Memorial Scholarship in Graduate Studies

_____ The TCS Graduate Studies Fellowship (population genetics and/or physiology)

_____ The TCS Graduate Studies Fellowship (ecology and/or behavior)

_____ The TCS Graduate Studies Fellowship (systematics, biogeography, and/or evolution)

*** PLEASE ATTACH A COPY OF YOUR CV AND A SUPPORTING LETTER FROM EITHER YOUR MAJOR PROFESSOR OR ANOTHER MENTOR IN YOUR FIELD OF RESEARCH.

*** PLEASE NOTE: BOTH THE APPLICANT AND THE MAJOR PROFESSOR (OR MENTOR) MUST BE CURRENT MEMBERS OF THE CRUSTACEAN SOCIETY AT THE TIME OF APPLICATION.

CANDIDATE'S STATEMENT:

Attach a brief statement (no more than two single-spaced typed pages) summarizing your research objectives and program and specifically describing how this fellowship will contribute to your research and to your ultimate career goals. A short description of the budget for which this fellowship will be used must be included within the two-page statement.

Please also attach an official description or announcement of the course, field experience, workshop or training program if the fellowship will be used (either in total or in part) for this type of activity.



TCS Board Elections, 2004

The Crustacean Society officers and governors serve for two-year terms, half being elected each year. The term of the President and President-Elect is limited to two years but other officers and governors may serve multiple terms. Six offices are now open for the period 2005-2006, the positions of Secretary, Treasurer, European Governor, Indo-Pacific Governor, North American Governor and Program Officer. No nominees were found for the position of Program Officer (**See page 26**) and so a special election will be held, either in the next Ecdysiast, or through Crust-SOC. Brief biographies of the nominee or nominees for each office are given below. You may vote either by email or by the ballot attached at the end of this newsletter. Email is the preferred method as it expedites the process. Please take the time to vote for the candidates nominated or you may write-in a candidate of your choice. Voting will close on **31 December 2004**.

To vote by email, please type "The Crustacean Society 2004 Ballot" in the subject field and send your votes to Jeff Shields at jeff@vims.edu. Please limit the message field to:

Secretary: Chris Tudge (unopposed)

Treasurer: Mary Belk (incumbent)

European Governor: Angelika Brandt (incumbent)

Indo-Pacific Governor: Colin McLay (incumbent)

North American Governor: Michael J. Childress (unopposed)

To vote by regular mail, please mark your ballots and return them to: TCS 2004 Elections, Care of: Dr. Jeff Shields, President-Elect, The Crustacean Society, Environmental Science Department, Virginia Institute of Marine Science Gloucester Pt., VA 23062.

Secretary

Chris Tudge (incumbent)

Biology Department, American University and NMNH, Washington DC, USA

Primarily a reproductive biologist, Chris has particular interests in the reproductive biology of invertebrates. His research focuses on the reproductive cells and associated structures, evolutionary mechanisms, and reproductive behaviors of marine decapod crustaceans, although he also has experience dealing with other invertebrate and vertebrate groups. Using computer aided cladistic methodologies, the data gleaned from investigations of reproductive structures and molecular sequences, he reconstructs ancestral conditions and behaviors and proposes trees of relationship among various taxa. He has additional interests in the taxonomy, systematics, and biogeography of marine crustaceans, with emphasis on anomuran crabs (hermit crabs and their relatives), and the evolution of deep sea hydrothermal vent faunas.

Treasurer

Mary Shug Belk (incumbent)

San Antonio, Texas, USA

Mary Shug Belk received her Bachelor's Degree in Biology and Education from the University of Texas at Austin (1969) and her Master's Degree in Biology from the University of Guam (1971). Her thesis research was on the ecology of *Pomacentrus lividus* and *Pomacentrus albofasciatus* (Pisces: Pomacentridae) in Tumon Bay, Guam. She has worked as a science educator, a research assistant, a laboratory supervisor, and co-owner and vice president of a private corporation. She also has extensive knowledge of the financial history of TCS. Her current research interests are large branchiopods, and she teaches a course (with C.D. Rogers and R. Hill) on the identification of California fairy shrimp. Recent work includes a taxonomic survey of large branchiopods of Aruba (with K.A.L. Reading).



European Governor

Angelika Brandt (incumbent)

Zoological Institute and Museum, Hamburg, Germany

Angelika Brandt studied Education, Biology and English at the University of Oldenburg, where she also passed a Research Diver's examination in 1986. Her dissertation thesis was on the origin of Antarctic Isopoda. In 1992, she received a post-doctoral position at the Institute for Polar Ecology in Kiel, Germany, and studied community patterns and particle flux in a special research project entitled 'Environmental changes in the northern North Atlantic'. She continued to work on peracarid crustaceans but her focus shifted from systematic, phylogenetic and zoogeographic analyses towards ecological approaches. Angelika joined roughly 10 expeditions to the Arctic and Antarctic, including an Antarctic diving expedition in 1989/90 on King George Island (South Shetland Islands). In December 1995, Angelika became a professor for Special Zoology at the University of Hamburg and the curator of the crustacean and polychaete collection of the Zoological Institute and Zoological Museum, also in Hamburg. She has acted as the senior scientist during the ANDEEP I and ANDEEP II projects. Her major interests are the systematics, evolution, ecology and biogeography of peracarid crustaceans.

Indo-Pacific Governor

Colin McLay

University of Canterbury, Christchurch, New Zealand

Colin McLay lives and works in Christchurch, New Zealand in the Zoology Department, Canterbury University. His interest in crustaceans began with work on the ecology of temporary pool ostracods in Canada, then masking behaviour of New Zealand spider crabs and population ecology of several shallow water species. Ecology and camouflage behaviour of Australian sponge crabs lead to work on the systematics of two podotreme families (Dromiidae and Dynomenidae). More recently, work has focused on mating strategies of New Zealand crabs and a contribution to the revision of the Parthenopidae. Colin owns a complete set of JCB's, which are not for sale! He has also been known to frequent the halls of MNHN, Paris and NUS, Singapore from time to time. He has been a member of TCS since 1980 and is the incumbent Indo-Pacific Governor.

North American Governor

Michael J. Childress

Clemson University, South Carolina, USA

Michael Childress is an Adjunct Assistant Professor at the Department of Biological Sciences, Clemson University, Clemson, SC, USA. He received his M.S. in zoology in 1990 from the University of California at Berkeley, working with Dr. Roy L. Caldwell, and his Ph.D. in biology in 1995 from Florida State University, working with Dr. William F. Herrnkind. Since then he has been on the faculty at Reed College (Portland, OR), Idaho State University (Pocatello, ID), and Clemson University (Clemson, SC). His major research emphasis is on the ecology and evolution of crustacean behavior. He is particularly interested in the mechanisms of individual recognition, the formation of dominance hierarchies, adaptive significance of aggregation, and the evolution of non-kin cooperation. Currently funded research projects include a comparative study of the gregarious nature of Caribbean and spotted spiny lobsters in the Florida Keys, the mechanisms of individual and status recognition in dominance hierarchy formation in crayfish, and the development of a spatially-explicit, individual-based model for blue crab populations in South Carolina. He has published 18 peer-reviewed journal articles and made oral presentations at 23 national or international meetings. He is also a member of the Ecological Society of America and the Animal Behavior Society.

Program Officer

The Crustacean Society is looking for a dedicated member to perform the role of Program Officer. The Society's Program Officer is an Officer of the Board of Governors whose role is to be "responsible for arranging and/or coordinating all symposia, workshops, conferences and similar activities in which the Society takes part." He or she also coordinates the Awards Committee, which judges student's prizes at conferences. The term of the officer is two years, commencing 2004, and can be renewed.

If you are interested in helping The Crustacean Society in this way contact Dr. Jeff Shields at jeff@vims.edu. Because part of the responsibilities of the Program Officer revolves around the Society's interaction with meetings of SICB (Society of Integrative and Comparative Biology), a person in North America would be preferred.



BALLOT
The Crustacean Society Elections, 2004

Deadline for return of ballots is
December 31, 2004

Please indicate your choice of candidate for each of the TCS offices listed below. Fold, staple, affix a stamp, and mail this ballot to Dr. Jeff Shields at the address on the reverse. If you prefer, you may vote via email by placing “**The Crustacean Society 2004 Ballot**” in the Subject line and sending your selections to Dr. Shields at jeff@vims.edu. See pages 25-26 of this *Ecdysiast* for detailed email voting instructions and for brief biographies of the candidates.

THANKS FOR TAKING THE TIME TO VOTE!!!

- Secretary**
 - Chris Tudge (incumbent, unopposed)
 - Other: _____
- Treasurer**
 - Mary Belk (incumbent, unopposed)
 - Other: _____
- European Governor**
 - Angelika Brandt (incumbent, unopposed)
 - Other: _____
- Indo-Pacific Governor**
 - Colin McLay (incumbent, unopposed)
 - Other: _____
- North American Govenor**
 - Michael J. Childress (unopposed)
 - Other: _____

Please detach, fold, staple, stamp and mail your ballot.



Fold 2

Place
stamp here

TCS 2004 Elections

Care of: Dr. Jeff Shields
President-Elect, The Crustacean Society
Environmental Science Department
Virginia Institute of Marine Science
Gloucester Pt., VA 23062

Fold 1