

The Ecdysiast

Newsletter of The Crustacean Society

Inside...

TCS Board call for
Nominations for Vacan-
cies (2010-2011).....2

TCS Board Members
for 2009.....3

JCB editorial report for
2008.....4

Growing Communica-
tions Problems Impact
JCB.....5

JCB offers a new ser-
vice.....5

TCS Treasurer's
report.....6

Recent Meetings.....7-11
9CCDM.....7
Crustacean
Phylogenetics.....8-9
SICB.....10-11

Upcoming
Meetings.....12
TCS Japan.....12

New Publications.....13

Become a TCS
Member!.....14-15

Message from the President...

Dear TCS members,

Greetings! You are reading this issue from your computer because the internet has finally caught up with the Ecdysiast! Our Board has wisely decided that starting with volume 28, our newsletter will be produced exclusively in electronic form, and made available (as it has been for several years now) through our website (<http://web.vims.edu/tcs>). This is a long overdue change that will not only make it easier to produce and distribute our newsletter, but also save us some needed money. Every bit counts, and as US Senator for Illinois (1951-1969) Everett McKinley Dirksen once said: "A billion here, and a billion there, and pretty soon you are talking about some real money". No longer will it be necessary to print copies on paper, mail them to Allen Press, and then for Allen Press to insert a copy with each journal issue mailed to members.

As you know, our previous editor, Rachael King, stepped down this past January after serving 6 years (2003-2008) as editor of the Ecdysiast. On behalf of TCS I would like to thank Rachael for her outstanding service and dedication. Rachael followed on the footsteps of three previous newsletter editors: Mary Wicksten (5 years), starting in the early years of TCS when we were known as "The Crustacean Club"; Ray Bauer (10 years); and Tim Stebbins (7 years). Furthermore, the change to electronic production will make it easier to have an editor stationed in just about any place around the world. In fact, I would like to introduce our new Ecdysiast editor, Diego Maruzzo, who is based in Padua, Italy. Diego has been working in Prof Alessandro Minelli's lab since 2002. There he completed his Masters thesis on the segmentation of the antennae in *Asellus aquaticus*, and his Ph.D. on the morphogenesis and evolution of annuli in arthropod appendages. To go with his many skills, Diego has interests in communications and scientific journalism, so serving as our newsletter editor comes to him naturally. Welcome Diego!

JCB continues to do well, increasing in visibility, impact factor, and popularity among crustacean researchers. Good things are also happening in the editorial management of JCB, and I encourage you to read the editor's report further down in this issue.

Our relationship with BioOne continues to flourish and help us financially. According to the latest BioOne Publisher Report, 2008 was an "exceptional" year despite the problems in the economy. BioOne sales increased by 20.4% worldwide in 2008. However, the revenue that TCS received in 2008 reversed a trend of increase in yearly revenue since we began receiving checks from BioOne in 2001 (see Table). The reason for this is a change in accounting methods, the cost of which was actually spread over 2 years (2008 and 2009) so as not to impact drastically societies like ours. That means that we should see a good increase in revenue in 2010 because of the increase in overall subscriptions and sales for BioOne. I would be happy to share this report with any interested TCS member (a PDF file that can easily be sent by e-mail).

At this time many members are surely getting ready to participate in our next annual meeting in Tokyo, Japan, 20-24 September, 2009, which will be held together with the 47th Annual Meeting of the Carcinological Society of Japan. The meetings are shaping up to be extraordinarily diverse, with

continued...

13 special symposia, and one satellite symposium on conservation biology of crayfishes, as well as general contributed and poster sessions. Indeed we will all have to keep our pereopods moving rather quickly in order to move from room to room to attend the many papers and socialize with the numerous colleagues attending. Please check the details of these meetings in our TCS website. I look forward to seeing as many of you as possible at the beautiful venue: the Shinagawa Campus, Tokyo University of Marine Science & Technology.

Table: BioOne Royalty History

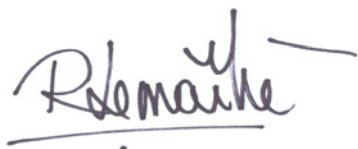
Journal of Crustacean Biology

Year	Total
2001	\$1,098.00
2002	\$7,293.23
2003	\$10,539.98
2004	\$17,680.00
2005	\$18,585.00
2006	\$22,947.00
2007	\$31,872.00
2008	\$24,646.00
Total	\$134,661.21

Last, let me share with you some important news from my Museum. As many of you know, the Smithsonian's National Museum of Natural History initiated last year the move of all the alcoholic collections to a new, modern storage and lab facilities at our complex in Maryland known as the Museum Support Center (MSC). Thus, the entire collections of Crustacea are now housed at MSC. Furthermore, all other resources related to crustaceans, such as the specialized crustacean reprint collections and Smithsonian Library books dealing with Crustacea (or Rathbun Library), are also now conveniently housed at MSC for all scholars to use. Naturally, I have moved my office and lab to MSC as well (please note my new address and phone numbers shown below), as I just could not be 10 miles and a 30-minute shuttle ride away from my crabs. I hope that many of you will visit us at MSC to work on the crustacean collections.

Hasta la próxima, y abrazos a todos,

Rafael Lemaitre
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Board of The Crustacean Society Call for Nominations for Vacancies (2010-2011)

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 a single term, but governors may serve two consecutive terms, and other officers may serve multiple terms. Nominations are now called for the following positions on the Board of The Crustacean Society for the period 2010-2011: **President-Elect, Asian Governor, Latin American Governor, Program Officer.**

The President-Elect serves for 2 years before assuming the role of President, who presides over meetings and represents the Society's interests in external affairs. The Program Officer is responsible for arranging and/or coordinating all symposia, workshops, etc. Regional Governors serve to represent the best interests of the membership, recruit members, and assist the Program Officer by coordinating international meetings in crustacean biology.

Members of TCS may nominate themselves or another member, provided the nominee agrees in writing to the nomination. Nominations should include name, position, institution and e-mail address, plus a 200-word curriculum vitae, and be addressed to Akira Asakura, TCS President-Elect (asakura@chiba-muse.or.jp). Voting for the election will be done electronically at <http://tcs.allenmm.com>. Ballots can be cast anytime after November 1, 2009. An announcement for the starting the ballots will appear in the November 2009 edition of 'Ecdysiast' and will also be sent through CRUSTSOC to remind people to vote. Voting will close on 25 December 2009.

Akira Asakura, TCS President-Elect



The Crustacean Society Board Members, 2009

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The Ecdysiast is published twice yearly in May and November and it is available in electronic form at <http://www.vims.edu/tcs/ecdyasiast.htm>. All the past issues (from May 1997 to present) are also available from the same web site. Submissions for the May newsletter should be received by mid March, while those for the November newsletter should be received by mid September. All types of crustacean related contributions are encouraged, including announcements of upcoming workshops and meetings, regional updates, meeting summaries (with photos!), new publications and any other crustacean news.

Send all material directly to the editor:

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JCB Editorial Report for volume 28 (2008)

It is time for a report for the *JCB* publication year just concluded: volume 28 (2008), the yellow volume.

We are in very good shape. As reported to you earlier in the Spring of last year, we crossed the 3,000th submission since the journal began operation in 1980; number 3135 was submitted just before the close of the year. Our Impact Factor rose on our output through 2007 to 0.985, up from 0.608 the year before. Our costs per page fell slightly to \$94.84/ page in 2008 from \$96.45/ page in 2007 even though our total pages were up to 768 from 716 in 2007.

In terms of the raw numbers, the AllenTrack on-line submissions saw 161 entries into the system through 2008, but only 139 of these were new, workable submissions that were processed and proceeded to peer review and some kind of decision. [The difference arises from aborted attempts to upload a submission, or withdrawn or duplicate submissions.] In addition to these 139, we had 11 submissions carrying over from 2007, and as of 31 December 2008 we had 37 manuscripts that are still pending either still out for review, or back with the authors undergoing revision and will carry into 2009. Issue 1 will appear in a few weeks, issue 2 has gone to production, and issue 3 is more than half full as of this writing.

Of more interest, is the rate of rejections. Of the 139 active submissions, 40 were either summarily declined by me, or were rejected after peer review. This is about 29%, somewhat higher than in years past. It is my perception that as our Impact Factor has risen we are attracting more submissions, but the quality is not necessarily better.

Volume 28 contained a total of 716 pages. The spread of articles is as follows:

Anatomy & Func. Morph.	5
Behavior	3
Ecology	24
Larvae & Development	10
Paleobiology	4
Physiology	4
Systematics, Evol & Biog	6
α -Taxonomy	10
Conservation	2
Short Communications	9
Commemorative	3
Book Reviews	7

Some of the highlights to me include the first new cephalopod in many years, a new species of North American bathynellacean, another new remipede, a paper on gonad development and another on anatomical anomalies in *Polychaetes* (a taxon not often encountered in the literature), a number of items dealing with phylogeography, and in fact a significant increase papers using molecular sequencing techniques. Physiology papers were low, but there are a number in the pipeline for next year.

When we look at the number of times various countries are represented amongst the authors of these submissions, we see that while the USA appears on 40 items, 78 items bear authors

from countries other than the USA.

Argentina	2
Australia	6
Belgium	1
Brazil	7
Canada	2
Chile	1
China	6
Costa Rica	1
Croatia	1
Czech Republic	1
Germany	5
India	2
Iran	4
Italy	3
Japan	10
Malaysia	1
Mexico	5
New Zealand	4
South Korea	1
Spain	2
Sweden	1
Taiwan	4
Turkey	4
UK	3
USA	40

Finally, we have some new Associate Editors this year. The submission of ecology papers has been so high, I've added Bernard St. Marie of Canada to assist Kari Lavalli and me. Martin Thiel in Chile will be handling peracarid submissions. Ray Bauer has joined us just in time to help with a surge in caridean papers. Antonio Baeza has taken over as Book Review Editor. And Jen Buhay has assumed the task of helping me sort the increasing number of molecular papers. We still retain the services of Shane Ahyong, Keith Crandall, Francesca Gherardi, Mark Grygier, Christopher Rogers, Gerhard Schlotz, Tom Simon, and Sherry Tamone. These folks really deserve a lot of the credit for keeping up the quality of the journal. I can tell from when I was handling everything alone and making decisions myself, that they (experts as they are) are much more hardnosed than I would have been about accepting marginal papers.

What is coming up in the New Year? A new color, certainly. In the pipeline we already have: a really interesting and probably controversial item on bar coding, a kinky barnacle with two penises, some interesting stuff on ostracodes, a new genus of crangonid, some nifty micro-satellite work, new stuff out of caves, at least one review paper, and some theme sections. We are also planning a special item for 29(4).

Respectfully submitted,

Frederick R. Schram
General Editor, *JCB*

Growing Communications Problems Impact *JCB*

I suppose it was inevitable. The mad scramble to sell, sell, sell has finally begun to bring the e-communications of the world to its knees. Although governments have made efforts to find and even jail rogue spammers, the pace at which spam is being sent out across the e-waves is snowballing. I am sure all of us are experiencing this. In the past few weeks, I have received messages from myself, via my University of Washington service, one bit of spam trying to sell me "enhancement aids" and another telling me I need to purchase "super vitamins." Apparently, my University of Washington e-address was pirated from one of my correspondent's computers and is now being used to spam in a way to pass through filters.

You, I, and/or our institutional service providers are setting spam filters at higher and higher levels. We hope to stay in front of this storm-surge of junk mail. All this is beginning to have dire affects on our ability to communicate – and still the spam gets through.

JCB is not immune to these same problems. My Associate Editors and I have noticed in the last year increasing difficulties in getting people to agree to review submitted articles. It is not that potential reviewers are declining to review for the Journal, it is that we the editors are receiving no responses at all to these requests. It is becoming increasingly clear that the heart of the problem is the higher and higher settings on spam filters; our requests to review articles are simply not arriving at the intended in-boxes.

There are a few things that we can do to alleviate the problem. First, most service providers actually do send notices to clients concerning junk mail. These can simply take the form of a periodic notice to check the junk mail folder before the contents are permanently deleted. Another form of notice is a daily message with a listing of the junk mail received in the previous 24 hours with the option to save any individual message rather than junking it. I must confess that for years I simply ignored these routine notices – after all spam is junk, by definition. I reveled in the thought that my spam filters were outsmarting the spammers. However, lately I have indeed been paying attention to these notices and actually looking into the junk mail folders and recovering all sorts of messages that would have been lost. Hence, as far as *JCB* is concerned – PLEASE CHECK YOUR JUNK MAIL FOLDERS REGULARLY.

Second, almost all service providers I am familiar with provide clients the option of building a list of preferred communicants. For example, if you find messages from jcb@whidbey.com or jcb@allentrack.net in your junk mail folder, you can place those on your preferred list. This will then allow future messages from *JCB* to arrive in your in-box directly. PLEASE USE YOUR PREFERRED LISTS TO ALLOW JCB MESSAGES TO GET THOROUGH.

You might think that with all these problems *JCB* should return to paper reviews, but going backward is not the answer. Even with all our difficulties, it is still faster and cheaper to use the on-line system. TCS has been able to save thousands of dollars in postage costs with the AllenTrack system. The editors also save

days of time and tons of paper not having to physically handle hardcopy. And when all goes well, we can shave months off the time from submission to publication with on-line processing.

So, in conclusion, *JCB* asks that you get in the habit of: 1) checking junk mail folders, and 2) placing jcb@whidbey.com and jcb@allentrack.net on your preferred e-mail lists.

Finally, [*and this is a completely separate problem, but I'll take this opportunity to bring it to your attention*] when you agree to review an article for any journal, please do so within days of your acceptance. Sometimes our authors wait months along with your editors while reviewers "forget" to take up their tasks. This is the single weakest link in the chain from submission to publication.

Frederick R. Schram
General Editor, *JCB*
jcb@whidbey.com

JCB offers a new service

Before you submit a manuscript to *JCB*, and if you are not fully fluent or a native speaker of English, we recommend the following. American Journal Experts (AJE) provides professional language editing services to authors around the globe who wish to publish in scientific, technical, medical, and humanities journals. We urge authors who are not well versed in the English language to use this service to improve a paper's English and, therefore, its overall quality. Seeking this assistance is suggested before an article is submitted to *JCB* for peer review and certainly before it is finally accepted for publication.

AJE has over 500 editors from Harvard, Stanford, MIT, Berkeley, and Duke; these editors are native English speakers and subject-matter experts in a wide variety of fields. They will check your manuscripts not only for terminology and language specific to your field but also for proper English usage, grammar, punctuation, spelling, verb tense, and phrasing. In addition, AJE's professional editors will make sure the text reads naturally and the sentences are well constructed. The cost for this service is very reasonable. Visit AJE's website for more information, or to submit a document for their scientific proofreading service use this link: www.JournalExperts.com?rcode=JCB1.

When you are secure about your text, manuscripts then can be submitted on line through the regular link: www.jcb.allentrack2.net.

TCS Treasurer's report

TCS has had a reasonable year based on the market and economic conditions. The market cut our mutual fund investments by half. In December of 2007, we set aside \$28,000.00 in a short term CD, with Wells Fargo so that we would get better interest, but have it available if necessary, and not exposed to the vagaries of the Market for the present. I held off doing that in 2008 to see what would be needed to keep the Society going at its normal rate. We have been able to pay all our bills and have not had to dip into savings. The worst thing is we are still loosing membership. We need to focus on adding membership. BioOne is picking up the slack and produced a very nice check of \$24,646.00 sent to us March 31, 2009. JSTOR is now bringing in a small income on back papers from JCB. With this income and some savings, I could put \$30,000.00 in mid April, in a two year CD with Wells Fargo, giving us just over 2% interest. All of the indications I can find say we should be at the bottom of the recession and possibly recover by the end of 2009. We are sitting in a nice position to enjoy the upward movement of the market and be ready to reinvest some

money there if it gets strong enough. While the market cut our holdings in dollars we have been gaining shares from longevity with the mutual funds. This means we have more shares to go up on than we had when we went down.

Expenses paid	2008	2007
Other officer Expenses	1,999.99	3,881.50
Society Operations	23,579.14	14,759.88
JCB	94,967.77	88,499.14
Editor's Office	2,613.85	2,452.00
Treasurer's Office	6,676.22	10,174.86
Newsletter	938.30	985.30
SICB Contribution	3,830.01	2,081.79
Awards	8,282.90	6,065.73
Summer Meeting	4,131.36	2,000.00
Banking Fees	1,939.44	1,971.16
Tax Preparation	1,675.00	1,675.00
Total Expenses	150,633.98	134,546.87

Financial Standing Dec. 31, 2008 for The Crustacean Society

	2008	2007
Charles Schwab Accounts	Total \$263,039.86	\$410,430.25
GDB Memorial Scholarship Fund (Wellington)	53,391.59	68,710.93
General Endowment Fund (Harbor Fund)	16,851.03	26,802.12
Vanguard Windsor II	159,209.52	251,515.83
Vanguard Index Growth	8,043.52	13,040.78
Investment Funds		
Harbor HY Bond Fund	2,412.34	2,796.08
Navellier Mid Cap Growth	22,706.29	47,139.77
Cash	425.57	424.74
Wells Fargo Savings & Ck & CD	62,187.50	40,901.45
Douglas County BK CD's	68,673.10	66,036.50
Douglas County BK Checking	46,762.42	53,043.01
Editor's office prepaid expenses	935.17	1,549.02
Total TCS Funds Dec. 31, 2008	\$441,598.05	\$571,960.23
JCB Expenses	2008	2007
Editor's Stipend	15,000.00	15,000.00
BioOne Access	0	1,198.50
Allen Track	3,287.50	2,690.00
PDF files purchased	1,118.91	1,352.07
Printing, Distribution	72,833.31	68,258.57
New Computer	0	0
Total	92,239.72	88,499.14

Income For	2008	2007
Money from Meetings	0	2,251.95
Contributions	530.00	2,080.50
General Fund	160.00	1,660.50
Endowment Fund	65.00	95.00
JCB	0	0
D Belk M Sch Fund	305.00	325.00
JCB	70,503.17	68,314.09
JSTOR	2,910.92	146.50
BioOne	31,872.00	23,043.00
Color Plates	2,764.40	1,197.76
Figures	4,151.00	5,324.00
Page Charges	26,823.00	36,316.33
Revisions	1,856.25	1,381.00
Single Issue Sales	100.00	125.00
Tables	0	682.00
Shipping	25.60	185.00
Library Subscriptions	27,259.45	25,470.00
Membership Dues	55,315.00	39,805.00
Membership Label Sales	0	0
Unrealized Loses on Invest.	(147,390.39) Not figured in	19,369.99
Bank and CD interest	3,493.77	2,421.98
Total Income	157,101.39	159,713.51
Minus expenses	150,633.98	134,546.87
Positive difference	\$6,467.41	\$25,166.64

Respectfully Submitted
Mary Schug Belk Treasurer, The Crustacean Society

Recent Meetings...

9CCDM - IX COLLOQUIUM CRUSTACEA DECAPODA MEDITERRANEA TORINO (ITALY), SEPTEMBER 2-6, 2008



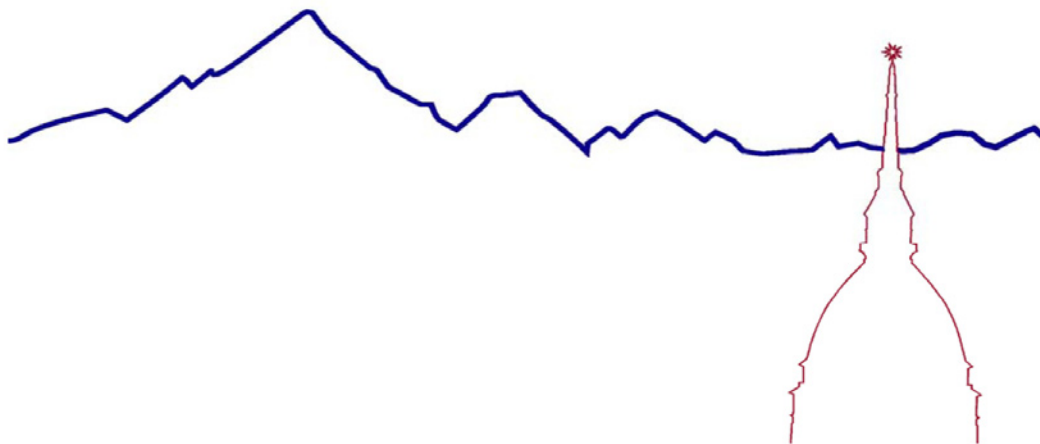
The IX Colloquium Crustacea Decapoda Mediterranea, held in Torino, has been organised by Daniela Pessani (Laboratory of Zoology and Marine Biology, Department of Animal and Human Biology of Torino University) and Carlo Frogliia, with the participation of the Regional Museum of Natural History of Torino.

The Colloquium represented an important opportunity of meeting and cultural exchange among carcinologists since there took part scientists coming besides from Italy, from circum-mediterranean countries (Spain, France, Greece, Israel, Austria, Germany, United Kingdom, Poland, Russia) as well as from Canada, United States, Mexico, Brasil, Venezuela; the participants have been attracted by both the Colloquium topics and the possibility of visiting the city and enjoying its rich artistic heritage.

The choice of Torino as venue of the Colloquium has been due also to the wish of celebrating the centennial of the death of the distinguished carcinologist Giuseppe Nobili; at that purpose, the Regional Museum has prepared a CD-ROM in order to recall the life and the works of the scientist.



The first day has been opened by the *main lecture*, “Post-Linnean Studies on Decapod Crustaceans in Italy” by Carlo Frogliia (Ancona, Italy), who highlighted particularly the figure of G. Nobili. Then, there have been oral presentations relevant to “History and scientific collection”, “Regional faunistic”, and “Fishery”. The second day, the oral presentations relevant to “Taxonomy, Phylogeny, Biogeography” have been prefaced by the *main lecture* “Biogeography and Phylogeny of Anomuran Squat Lobsters” by Enrique Macpherson (Blanes, Spain). Subsequently, the topics “Freshwater decapods” and “Alien decapods” have generated particular interest in an attentive audience; it has been possible to take stock of the situation of the freshwater shrimp *Austropotamobius pallipes*, autochthonous and protected species in Europe, and its allochthonous competitors.



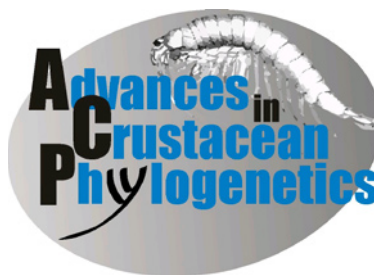
On September 4, the topic “Behaviour” has been prefaced by the *main lecture* “Crayfish as an Almost Perfect Model System for Behavior” by Brian A. Hazlett (Ann Arbour, USA), followed by different paper on “Behaviour and Ecology”. The afternoon session has been dedicated to the examination and discussion of the posters.

On September 5, the *main lecture* “Reproductive Strategies in Temperate Brachyurans” by Richard Hartnoll (Port Erin Marine, Isle of Man, UK) has opened the sessions dedicated to “Life history and reproduction” and “Physiology”. The participants had also the possibility of visiting the Regional Museum of Natural History and its noticeable collection of decapods, where the “typi” described by Nobili are visible.

An excursion to the Alps (Aosta Valley with its mountains and ancient castles) has concluded the Colloquium; during the Colloquium both the city of Torino and its gastronomic and oenological offers have been largely appreciated by all the participants. The appointment for the next Colloquium is in Minorca (Balearic Islands): in 20....?

For the Organising Committee
Daniela Pessani

Recent Meetings...



The First International Symposium on Advances in Crustacean Phylogenetics Rostock, Germany October 7-11, 2008



The Official Conference Group Photo in front of the Zoological Institute building on the Universitaetsplatz

The "Advances in Crustacean Phylogenetics" conference was held at the University of Rostock, 7-11th October 2008. With more than 80 participants from 10 different countries it was a pleasure for Prof. Stefan Richter and his co-organizers Dr. Christian Wirkner and Dr. Ole Møller to welcome everyone in the great Aula of the University of Rostock's main building. 25 high ranking researchers had accepted the invitation to give talks and thus a uniquely broad spectrum of phylogenetic research in Crustacea was covered. Included among the invited speakers were also several dignitaries of the Crustacean Society, e.g., TCS President Rafael Lemaitre and Past Presidents Gary Poore and Jens Høeg. Apart from the invited speakers, 46 posters covering a wide range of subjects were also presented. The extended speaking and discussion time (30/15 minutes respectively) were fully utilized by the contributors and many interesting discussions took place, in a truly positive and constructive spirit.

Among the scientific highlights of the conference was the public lecture by Greg Edgecombe. Preceded by a beautiful piano recital by a recently graduated Pianist from the local music academy, Greg gave all the participants an intriguing insight into his view of the position of Crustacea in the Arthropoda from a fossil perspective.

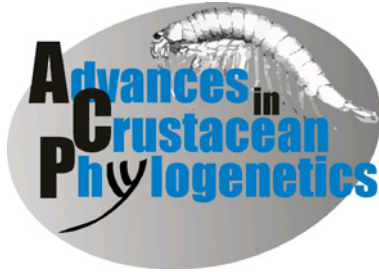
A boat cruise with on-board buffet on the river Warnow from the Rostock city center to the Baltic coast at Warnemünde 12 km away was a very enjoyable evening for all participants, as was the final evening's conference dinner set in the rustic and charming mood of the Restaurant "Zum Alten Fritz" on the harbor front. The post-conference bus-tour to visit the "Ozeaneum" Aquarium in Stralsund was also very popular and nearly all participants had chosen to join. On the way back from Stralsund, a stop-over to watch the flocks of European Cranes as they migrated through the area was arranged, giving the Carcinologists a chance to catch up on their ornithological knowledge. Judging from the feedback received, we think that the conference was a success and we want to thank everyone for contributing to this.



Greg Edgecombe explains about the fossil Arthropods and how to place the Crustacea within the group

On behalf of the Organizers:
Ole Sten Møller, TCS Member

Recent Meetings...



ACP student winners

On behalf of the ACP 2008 organizers, I am happy to report that the following receivers of the “Outstanding Poster” and “Best Poster” awards, sponsored by The Crustacean Society and judged by an independent poster committee headed by TCS President Rafael Lemaitre. The winners received memberships of The Crustacean Society and a sum of US\$ 100.

The Organizers want to thank all the participants in the Poster session as well as the members of the poster committee for their unselfish and accurate work.

Poster awards for “Outstanding Poster” (all rated equally) were won by: **Georg Brenneis** (Humboldt University, Berlin), “Immunohistochemical study and 3D reconstruction of the central nervous system of Mystacocarida (Arthropoda, Crustacea)”; **Tino Pabst** (Humboldt University, Berlin), “Guts and joints - a study on Astacida”; and **Thomas Harvey** (University of Leicester, UK), “The evolution of crustacean feeding complexity: new data from the Early Cambrian fossil record”.

The “Best Poster Award” was won by **Martin Schwentner** (Univ. Rostock) for the contribution “Combining morphological and molecular characters to distinguish spinicaudatan species (Crustacea: Branchiopoda) with special focus on the male claspers”.

Ole Sten Möller, Christian Wirkner & Stefan Richter
“Advances in Crustacean Phylogenetics” hosts.

Combining morphological and molecular characters to distinguish spinicaudatan species (Crustacea: Branchiopoda) with special focus on the male claspers

Schwentner, M.¹, B.V. Timms², R. Bastrop¹ & S. Richter¹ (¹University of Rostock, Rostock, Germany & ²Australian Museum, Sydney, Australia)
da_schwaentna@hotmail.com

The Spinicaudata (Crustacea: Branchiopoda) fauna of Australia was only poorly studied in the past. Only recently several new species were discovered, all of these inhabiting temporal pools. They survive dry periods with resting eggs in the sediment, which are also their mean of dispersal. All male spinicaudatans have 2 pairs of claspers (modified first 2 pairs of thoracopods), which are used for holding the female’s carapax during mating. The claspers comprise a movable finger opposing an unmovable hand and two palps. Morphological characters of the claspers are used for discriminating different taxa but rarely for discriminating species. The aim of this study was to gain molecular and further morphological support for these newly discovered species focusing on two spinicaudatan genera: *Limnadopsis* (endemic to Australia) and *Eocycticus* (newly reported for Australia). This was necessary since all species show great morphological variability with overlap in many characters between species and are therefore hard to distinguish. The sequences of COI, 16S, ITS-1 and ITS-2 were analysed and compared with SEM results focusing on structures on the tip of the movable finger. Molecular and morphological data were consistent and validated the studied species and revealed further unrecognized species. The structures on the tip of the movable finger proved reliable to distinguish these species and could most likely be used for other spinicaudatan species as well.



The Best and Outstanding poster awards winners with TCS dignitaries. Left to right: Gary Poore (Past President TCS), Tino Pabst (Outstanding Poster Award), Jens T. Høeg (Past-past President, TCS), Rafael Lemaitre (TCS President), Georg Brenneis (Outstanding Poster Award), Thomas Harvey (Outstanding Poster Award) and Martin Schwentner (Best Poster Award)

Recent Meetings...

Symposium on the Biology of the Parasitic Crustacea SICB (Boston) January, 2009

A gathering of 16 leading crustacean biologists and parasitologists from eight different countries (and four continents) was held in Boston, Massachusetts, in early January 2009 to participate in a symposium titled "Biology of the Parasitic Crustacea" as part of the Society of Integrative and Comparative Biology (SICB) annual meeting. Jeff Shields and Christopher Boyko organized the symposium and its associated "spin-off" session with generous support from The Crustacean Society and the Society of Integrative and Comparative Biology (Division of Invertebrate Zoology). This symposium is likely the first of its kind in its specific focus on crustaceans as parasites, a topic of much interest to taxonomists, ecologists, and aquaculturists, among others. The presenters and the titles of their talks were as follows:

Christopher B. Boyko: Parasites as Phylogenetic Indicators in Decapod Evolution

Ju-Shey Ho: The Five Wonders of the Parasitic Copepoda

Geoff A. Boxshall: The Comparative Biology of Copepoda Parasitic on Three Host Taxa: Fishes, Polychaetes and Crustaceans

Mark Costello: Progress in Understanding the Ecology of Sea Lice, Copepod Parasites of Wild and Farmed Salmonids

Peter A. Heuch: Salmon Lice Infection of Farmed and Wild Salmonids in Norway: an Overview

Gregory Kolbasov: Parasitic Microcrustaceans of the Class Tantulocarida, External and Internal Morphology, Development and Life Cycle

Ole S. Møller: Branchiura — Parasitic Crustaceans with a Sting
Jianmei An: A Review of Bopyrid Isopods Infesting Crabs from China

Rony Huys: What can 18S rDNA do for Copepod Phylogeny and Classification?

Katsuhiko Tanaka: Life History of Gnathiid Isopods: a Brief Overview

Robin M. Overstreet: Parasitic Crustaceans as Vectors of Viruses

Jeffrey D. Shields: A First Look at the Phylogeny of the Entoniscidae

Akira Asakura: Occurrence of the Rhizocephalan and Isopod Parasites on Three Intertidal Hermit Crabs in Japan

Jack J. O'Brien: Factors Affecting the Distribution and Infection Success of Two North American Sacculinids (Rhizocephala)

Jason D. Williams: First Report of *Orthione griffenis* Markham, 2004 (Isopoda: Bopyridae: Pseudioninae) from China and Comparison with Type Specimens and Collections from the West Coast of the United States

John J. McDermott: Hypersymbioses in the Pinnotherid Crabs (Decapoda: Brachyura: Pinnotheridae): a Review

The symposium and its ancillary session were well attended. Moreover, it was quite enjoyable for the participants, many who met face to face for the first time. This meeting will provide a springboard for new areas of research and new collaborations in this diverse and important ecological role filled by so many crustaceans. Select papers will be published in the journal *Integrative & Comparative Biology*.

Christopher B. Boyko
Jeffrey D. Shields



Recent Meetings...

SICB student winners

The Crustacean Society (TCS) is pleased to announce the winners of the Best Student Paper and Poster Competition held during annual meeting of the Society for Integrative and Comparative Biology, January 3-7, 2009, in Boston, Massachusetts. There were 40 high quality competitors. The Best Student Oral Presentation Award was presented to **Lilah Glazer** (Ben-Gurion University of the Negev, Israel) for her talk entitled, "A novel molt-related protein with a possible role in the formation of crayfish calcium storage deposits" (with co-authors A. Shechter, A. Berman, S. Weil, E. D. Aflalo, Y. Yudkovski, M. Tom, & A. Sagi). The Best Student Poster Award was presented to **Erica Chao** (Colorado State University, USA) for her poster entitled "Troponin-C cloning and tissue expression in the American lobster, *Homarus americanus*" (with co-authors H.-W. Kim, M. D. Thompson, & D. L. Mykles). Each award consists of a certificate, US\$100 cash, and a one-year membership in The Crustacean Society, including subscription to *The Journal of Crustacean Biology*. TCS thanks those members who served as judges and all student participants.

Christopher B. Boyko
Program Officer

A novel molt-related protein with a possible role in the formation of crayfish calcium storage deposits

Glazer, L.^{1,2}, A. Shechter^{1,2}, A. Berman^{2,3}, S. Weil¹, E.D. Aflalo^{1,2}, Y. Yudkovski⁴, M. Tom⁴ & A. Sagi^{1,2} (¹Department of Life Sciences, ²National Institute of Biotechnology in the Negev and ³Department of Biotechnology Engineering, Ben-Gurion University of the Negev, Israel; ⁴Israel Oceanographic and Limnological Research, Haifa, Israel)
lilahg@bgu.ac.il

During premolt, the crayfish *Cherax quadricarinatus* transports and stores calcium in a pair of transient deposits termed gastroliths. Gastroliths, formed in a cavity between the cardiac stomach wall and the columnar gastrolith epithelial tissue, are composed of chitinous organic matrix with associated proteins, and of amorphous calcium carbonate. Initiation of premolt and gastrolith formation is achieved by administration of the molting hormone ecdysone. In search for molt-related proteins involved in gastrolith formation we have isolated several novel proteins, termed gastrolith proteins (GAP), from the extracellular matrix of the gastrolith, and fully sequenced their transcripts. The deduced protein of a gene called *GAP 10* has a molecular weight of 10kDa, is glycine-rich and has an acidic pI. It contains two predicted features; signal sequence and phosphorylation sites. *GAP 10*, was found to be highly up-regulated during premolt vs. intermolt in a multigenic search for expression patterns of gastrolith forming tissue specifically expressed genes, conducted using a *C. quadricarinatus* cDNA microarray chip. The chip was assembled from a gastrolith forming tissue cDNA suppression-subtractive hybridization (SSH) library and three additional SSH libraries of other tissues, all from ecdysone-induced premolt individuals. Due to its prominent up-regula-

tion, *GAP 10* was chosen as a target for functional genomic investigation, for the elucidation of its role in gastrolith formation.

Troponin-C cloning and tissue expression in the American lobster, *Homarus americanus*

Chao, E., H.-W. Kim, M.D. Thompson & D. L. Mykles (Colorado State University, Fort Collins, CO, USA)
echao@lamar.colostate.edu

Troponin-C (Tn-C) regulates muscle contraction by binding calcium. Three Tn-C isoforms have been identified in lobster (Tn-C₁, Tn-C_{2a} and Tn-C_{2b}) and have previously been sequenced at the amino acid (aa) level. We cloned the full-length nucleotide (nt) sequence of Tn-C₁ (679 kb, 150 aa, 17.0 kDa), a partial sequence coding for Tn-C_{2a}, and four full-length nucleotide sequences coding for novel lobster Tn-C isoforms designated Tn-C₃ (1128 kb, 150 aa, 16.9 kDa), Tn-C₄ (733 kb, 108 aa, 12.1 kDa), Tn-C₅ (2884 kb, 149 aa, 17.3 kDa) and Tn-C_x (2242 kb, 154 aa, 16.9 kDa). The former four sequences were found via RT- and RACE-PCR; the latter two were ESTs sequenced via RT-PCR. The translated aa sequence of Tn-C₄ was N-terminally truncated (38 aa). Tn-C_x was highly divergent from the other lobster Tn-C sequences. Its translated aa sequence had a 71 aa N-terminal truncation and a C-terminal 76 aa proline-rich extension. Expression of the six Tn-C sequences across a range of tissue types in lobster will use endpoint RT-PCR. Fiber-type-specific expression will be quantified by real-time PCR. Further work will determine the relationship between Tn-C isoform expression patterns and: muscle functional properties; molt cycle; and expression of myostatin, which is thought to inhibit muscle growth prior to molting. Supported by NSF (IBN-0618203).

The Crustacean Society Website

The Crustacean Society website, <http://www.vims.edu/tcs>, provides our members with information on meetings, society news, business, instructions for the Journal of Crustacean Biology, the Ecdysiast, and other helpful links. Features include: (1) membership applications and benefits to members; (2) society poster and page for recruitment (great pics!); (3) fliers and official info for upcoming meetings; (4) downloads such as an official copy of Martin & Davis (2001) Classification of the Crustacea; and of course (5) the manuscript tracking page for JCB submissions (updated monthly). This website is designed to serve you and your 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; step up if you're interested!

Upcoming Meetings...

The Crustacean Society Summer Meeting in Tokyo, Japan. September 20-24, 2009

Tokyo University of Marine Science and Technology, Shinagawa, Tokyo.

Planning for TCS Tokyo Meeting in September 2009 is now well underway. Now is a last chance to register, prepare an abstract for your paper or poster, book your accommodation, and book your flight. **Late abstracts will be accepted until mid-May 2009.** The cost for full registration before 1 May 2009 is JPY 27,000 (approximately US\$270) plus the banquet at JPY 6,000 (approximately US\$60). A reduced registration of JPY 13,000 (approximately US\$130) as well as the banquet (JPY 5,000, approximately US\$50) are offered for students.

Please register at <http://wwwsoc.nii.ac.jp/csj4/TCSFirstPage1.html>.

Please check back this site often, as it will be updated regularly.

Symposia planned:

1. Life history migrations of freshwater shrimps: ecological and adaptive significance
2. Integrative biology: crustaceans as model systems
3. Reproductive behavior of decapod crustaceans
4. Phylogeography and population genetics in decapod Crustacea
5. Speciation and biogeography in non-decapod crustaceans
6. The new perspective on barnacle research
7. Crustacean chemoreception: identification of cues and their applications
8. Ecology and behavior of peracarids: progress and prospects
9. Current status of fisheries and biological knowledge of snow and Tanner crabs genus *Chionoecetes* in the world
10. Symbiosis in crustaceans: diversity and evolutionary trends
11. Diversity and ecology of thalassinidean shrimps
12. Impacts of human exploitation on large decapod resources
13. Biology of Anomura III
14. Conservation biology of freshwater crayfishes - new challenge starting from Japan, eastern asia

For further information, see the meeting web-site
<<http://wwwsoc.nii.ac.jp/csj4/TCSFirstPage1.html>> or contact:

Akira Asakura, Secretary General, The Crustacean Society
Summer Meeting

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Organizing Committee: Keiji Baba (Chair, Professor Emeritus, Kumamoto University), Akira Asakura (Secretary General, Natural History Museum and Institute, Chiba), Katsuyuki Hamasaki (Tokyo University of Marine Science and Technology, Tokyo), Keiji Wada (Nara Women's University), Michio Imafuku (Kyoto University), Kooichi Konishi (National Research Institute of Aquaculture, Fisheries Research Agency), Seiichi Watanabe (Tokyo University of Marine Science and Technology, Tokyo).

Local Host Organization: Carcinological Society of Japan [Web-site: <http://wwwsoc.nii.ac.jp/csj4/Eng/index-e.html>]

Respectfully submitted

Akira Asakura

Organizing Committee of TCS Tokyo Meeting and President-Elect, TCS

The Denton Belk 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).

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: (marybelk@att.net)

New Publications...

Decapod Crustacean Phylogenetics

Editors:

Joel W. Martin (Natural History Museum of L.A. County, Los Angeles, CA, USA)

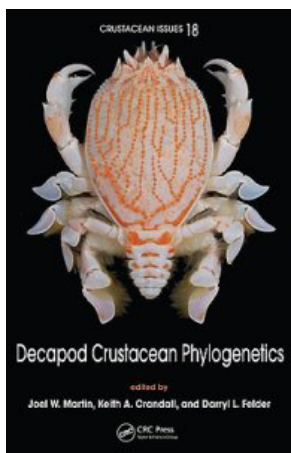
Keith A. Crandall (Brigham Young University, Provo, Utah, USA)

Darryl L. Felder (University of Louisiana, Lafayette, Louisiana, USA)

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CRUSTACEAN ISSUES SERIES

Series editor: Stefan Koenemann (University of Veterinary Medicine, Hannover, Germany)

KEY FEATURES:

Presents methodological updates for research on the diversity and relationships (phylogeny) of the decapods

Provides an overview of our understanding of the systematics within select major decapod assemblages

Takes steps toward assembling and coding molecular and morphological characters toward overall decapod phylogeny

Includes contributions from experts under the guidance of an internationally renowned editorial team

ABOUT THE BOOK:

Although there is no shortage of publications reflecting the wide variety of ideas and hypotheses concerning decapod phylogeny, until now, the world's leading decapodologists had never before assembled with the sole purpose of elucidating these relationships. These experts present methodological updates for research on the diversity and relationships of the decapods, provide an overview of current understanding of the systematics within select major decapod assemblages, and take steps toward assembling and coding molecular and morphological characters toward an overall decapod phylogeny. They provide a synopsis of current understanding of this vast and important group of animals.

CONTENTS:

Overviews of Decapod Phylogeny

On the Origin of Decapoda, F.R. Schram

Decapod Phylogenetics and Molecular Evolution, A. Toon, M. Finley, J. Staples, and K.A. Crandall

Development, Genes, and Decapod Evolution, G. Scholtz, A. Abzhonov, F. Alwes, C. Biffis, and J. Pint

Mitochondrial DNA and Decapod Phylogenies: The Importance of Pseudogenes and Primer Optimization, C.D. Schubart
Phylogenetic Inference Using Molecular Data, F. Palero and K.A. Crandall

Decapod Phylogeny: What Can Protein-Coding Genes Tell Us?, K.H. Chu, L.M. Tsang, K.Y. Ma, T.-Y. Chan, and P.K.L. Ng

Spermatozoal Morphology and its Bearing On Decapod Phylogeny, C. Tudge

Evolution of Mating Systems in Decapod Crustaceans, A. Asakura

A Shrimp's Eye View of Evolution: How Useful are Visual Characters in Decapod Phylogenetics?, M.L. Porter and T.W. Cronin

Crustacean Parasites as Phylogenetic Indicators in Decapod Evolution, C.C. Boyko and J.D. Williams

The Bearing of Larval Morphology on Brachyuran Phylogeny, P.F. Clark

Advances in our Knowledge of Shrimp-like Decapods
Evolution and Radiation of Shrimp-like Decapods: An Overview, C.H.J.M. Fransen and S. De Grave

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There are many benefits to being a member in The Crustacean Society:

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Members receive biannual mailings of the society's newsletter, the Ecdysiast.

Members receive breaking news on CRUST-SOC, a members-only list for the society.

Student members are eligible for two different fellowships for research or travel.

Students are also eligible for Best Student Paper and Poster awards at several scientific meetings (e.g., SICB, TCS, ECC, ICC).

Students receive the journal at an excellent price, below cost!

But best of all, members enjoy the camaraderie of their fellow crustaceophiles!

If you are a NPR listener, you know the bi-annual pledge drive drill. Just like supporters of NPR, you'd be surprised how many of our crustacean colleagues are not members. In your lab, are your crustacean colleagues members of this venerable society? Are the students? How about your crusty colleagues outside your institution? Encourage them to become a member today. Print out the membership form (<http://www.vims.edu/tcs/form.html>) and leave it on their chair.

If you don't need another copy of JCB in your lab, sign up for membership without the journal – only \$35 – and such a bargain.

Regina Wetzer

TCS North American Governor

rwetzer@nhm.org

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

The Crustacean Society has an email list server that is only open to members of the society. This list server is designed 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.