



THE ECDYSIAST

Newsletter of the Crustacean Society

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May 1999

Message from the President

The past year has seen many new and exciting developments for members of the Society. Not only was the international crustacean congress in Amsterdam (ICC4) a resounding success, but just as importantly we have, with the establishment of a steering committee for future international congresses (see the November 1998 *Ecdysiast*), assured that such meetings will occur in an orderly and regular fashion. Along those lines, it is certainly not too early to be preparing for ICC5, which is being organized by Gary Poore for the year 2001 in Melbourne, Australia, and which promises to be a wonderful meeting. Before then, of course, we have other exciting opportunities to meet: the upcoming 1999 TCS summer meetings in Lafayette, Louisiana; the TCS winter meeting in 2000 (with SICB) in Atlanta, Georgia; the 2000 TCS summer meeting in Puerto Vallarta, Mexico; and the TCS winter meeting in 2001 (with SICB) in Chicago, Illinois. TCS participation in Denver was quite limited, I am told (I was not able to attend). Although it is often financially difficult to attend two (or more) meetings in a given year, I do want us to continue to try to be involved with SICB as much as possible. Let us continue to think seriously about ways to increase our participation at the SICB meetings. Additional crustacean-oriented symposia, workshops, booths, and social events are needed for Atlanta, Chicago, and beyond. Partnership with SICB has much to offer, especially for our job-hunting

students, and costs the Society little for what we get in return.

TCS Fall Elections

Although the overall response to the fall 1998 elections was somewhat light (I know that we, as a society, have more than 82 members who care about the future of TCS!), I am nevertheless extremely pleased with the results. We welcome two new officers. First, Jeff Shields, as incoming TCS Secretary, has already made improvements to our web site and has initiated efforts to compile an updated officers handbook; he is tackling the job of Secretary with enthusiasm and innovation. Second, Paul Clark, long an active member of the Society, joins us as our new European Governor, where he will continue to attract membership and interest

from "across the pond." Alan Harvey will continue his valuable work as our Treasurer, and Gary Poore and Rafael Lemaitre will continue their efforts as our Indo-Pacific and North American Governors (respectively). I know that all of you join me in welcoming (or welcoming back, in the case of Gary and Rafa) these hard-working scientists to the TCS Board. At the same time, I also know that you join me in offering a well-deserved "thank you" to Frank Barnwell and Pierre Noël, both of whom have served the Society so well for so many years. The TCS Officers for 1999, along with their affiliations and e-mail addresses, are listed on page 2 of this newsletter.

New Editor for JCB

Perhaps the most significant change that has occurred over the past year is the identification of a new editor for our prestigious journal. It gives me great pleasure to announce that, after many months of diligent searching and evaluating dossiers and qualifications of several well qualified candidates, the Editorial Search Committee has recommended to the TCS Board the name of the new editor, and the Board has approved their recommendation. The name of the new editor will be announced at the TCS Business Meeting in Lafayette, Louisiana. My sincere thanks to Les Watling, Darryl Felder, and Michael Horst for their effort, dedication, and tenacity. It will be the editor's job, of course, to dictate any changes in how manuscripts are prepared and submitted. But I want all

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members to be aware of the fact that, in order to make the transition as smooth and seamless as possible, I would ask that any manuscript submitted to JCB from this point onward be absolutely correctly formatted, spell-checked, and carefully proofread prior to submission. Manuscripts should continue to be sent to Arthur Humes until further notice. And although I know it goes without saying, I want to say this anyhow: Arthur Humes, THANK YOU so much on behalf of all of us. The reputations that the Journal and the Society currently enjoy are due in large part to your tireless efforts and

incredible dedication to furthering the field of crustacean biology. We are forever in your debt.

Updated Classification of the Crustacea

On a personal note, I have thoroughly enjoyed the many interactions and conversations I have had with TCS members concerning my attempt (with George Davis) to update the classification of the extant Crustacea. The project is nearing completion, and will (we hope) be distributed to other systematists for additional input by the time of the

Lafayette meetings. This rather ambitious project has engendered many comments and criticisms, some very supportive, and some otherwise. I accept all such comments gladly; they are the signs of a field that is of passionate interest to a large number of dedicated workers. I am proud to be your colleague.

AFS Volume on North American Crustaceans

Finally, I want to mention that the American Fisheries Society is working toward compiling a list of North American



1999
Crustacean Society
Officers and Board of Governors



President: Dr. Joel W. Martin
Natural History Museum of Los Angeles County
Tel: (213) 763-3440; Fax: (213) 746-2999
E-mail: jmartin@nhm.org

President-Elect: Dr. Jens T. Høeg
University of Copenhagen
Tel: 45 31 39 01 93
E-mail: jthoeg@zi.ku.dk

Past-President: Dr. Elizabeth L. Wenner
South Carolina Marine Resources Research Institute
Tel: (803) 762-5050; Fax: (803) 762-5110
E-mail: wennere@mrd.dnr.state.sc.us

Secretary: Dr. Jeffrey D. Shields
Virginia Institute of Marine Science
Tel: (804) 684-7128; Fax: (804) 684-7186
E-mail: jeff@vims.edu

Treasurer: Dr. Alan W. Harvey
Georgia Southern University
Tel: (912) 681-5784; Fax: (912) 681-0845
E-mail: aharvey@gsaix2.cc.gasou.edu

Program Officer: Dr. Jack O'Brien
University of South Alabama
Tel: (334) 460-7525; Fax: (334) 414-8220
E-mail: jobrien@jaguar1.usouthal.edu

Editor, JCB: Dr. Arthur G. Humes
Boston University
Tel: (508) 548-3705 ext. 208; Fax: (508) 548-7295
E-mail: ahumes@mbl.edu

Asian Governor: Dr. Peter Ng
National University of Singapore
Tel: 65-8746282; Fax: 65-7792486
E-mail: dbsngkl@nus.edu.sg

European Governor: Dr. Paul F. Clark
Natural History Museum, London
Tel: 00 44 (0) 171 938 9295; Fax: 00 44 (0) 171 938 9158
E-mail: p.clark@nhm.ac.uk

Indo-Pacific Governor: Dr. Gary C.B. Poore
Museum of Victoria, Australia
Tel: +61-3-284-2015; Fax: +61-3-416-0475
E-mail: gpoore@mov.vic.gov.au

Latin American Governor: Dr. Elva G. Escobar-Briones
Instituto de Ciencias del Mar y Limnología UNAM
Tel: (525) 622.5835; Fax: (525) 616.0748
E-mail: escobri@mar.icmyl.unam.mx

North American Governor: Dr. Rafael Lemaitre
National Museum of Natural History
Tel: (202) 357-4673; Fax: (202) 357-3043
E-mail: lemaitre.rafael@nsmnh.si.edu

Editor, the Ecdysiast: Dr. Timothy D. Stebbins
City of San Diego Marine Biology Laboratory
Tel: (619) 692-4900; Fax: (619) 692-4902
E-mail: tds@sdcity.sannet.gov

crustacean species names, much as was done earlier for the decapod Crustacea (AFS special publication 17, published in 1989). The 1989 publication, which dealt only with the Decapoda, was compiled by a committee established by The Crustacean Society, and AFS is again asking for our help and input in the next edition. Many TCS members are already involved, and if

you would be interested in working on this list (which will include all species, not just decapods, in marine and freshwaters of North America) either as a contributor or reviewer, please let me know. I will be working toward organizing a TCS "Committee on Names of North American Crustacea" in the next few months, and I would appreciate your help and advice.

Thank you again for the support you have provided during my first year as TCS President. I look forward to seeing you in Lafayette, and wish all of you a successful summer field season.

Jody Martin
TCS President

Message from the Program Officer

Although not officially sponsored by TCS, crustacean physiologists will be interested in the symposium, "Osmoregulation: An Integrated Approach" which will be held at the January, 2000 joint meeting with the Society of Integrative and Comparative Biology (SICB) in Atlanta, Georgia, USA. The symposium which is being organized by David Towle (towle@lfc.edu) and J.D. Ferraris (jdf@helix.nih.gov) will be presented in three sections with the following speakers and topics:

Origin and Evolution of Cellular Osmoregulation

- P. Yancy, "Water stress and proteins from the deep sea to the mammalian kidney and brain: Compatible and counteracting roles of organic osmolytes"
- E. Bremer, "Life under stress: Uptake and synthesis of compatible solutes as microbial responses to high-osmolality environments"
- S.K. Pierce, "A comparative look at volume recovery mediated by taurine efflux: A perspective provided by clam red blood cells"
- C. Morris, "Cell surface area regulation in neurons: A mechanosensitive process"

Control of Osmoregulatory Process: Cell Signaling and Gene Expression

- R. Kinne, "Osmoregulation in the mammalian kidney: The role of organic osmolytes"
- J.D. Ferraris "Osmotically responsive genes in eukaryotes"

- D. Kültz, "Evolution of Osmosensory cell-signaling pathways"
- B. Errede, "MAPK activation cascades mediating stress responses to hyperosmolarity in yeast"

Integration of Osmoregulation at the Organismal Level

- J.C. Cushman, "Osmoregulation in plants: Deciphering the complexity of plant stress tolerance"
- D.W. Towle, "Osmoregulation in gills"
- S. McCormick, "The endocrinology of osmoregulation in fish"
- T.G. Wolcott, "Tricks of the trade: The role of plant and animal 'behavior' in confronting osmotic challenges"

In addition, TCS is officially sponsoring the following two symposia at upcoming meetings.

For the 2000 Summer Meeting in Puerto Vallarta, Mexico, Karen Lee (ktlee+@pitt.edu) is organizing a symposium on "Crustacean Conservation." The symposium is part of an ongoing effort by TCS to document crustacean extinctions as well as protect endangered species. At the time of this writing, invitations have been sent to approximately 30 potential participants. It is anticipated that topics will include, but will not be limited to, biodiversity losses due to habitat destruction, effects of species introductions, pollution, and overfishing.

For the January, 2001 joint meeting with SICB at Chicago, Illinois, USA Donna Wolcott (dwolcott@ncsu.edu) and Guy Charmantier (charmantier@crit.univ-montp2.fr) are organizing a symposium entitled, "Adaptive Ontogeny

in Aquatic Environments." The program will cover physiological through ecological aspects of adaptations to aquatic environments during the early development of invertebrates (mostly crustaceans). Although not a final list, some of the contributors and contribution titles will be:

- N. Terwilliger, "Ontogeny of crustacean hemocyanin"
- J.I. Spicer, "Development of cardiac function in invertebrates"
- G. Charmantier, "Ontogeny of adaptation to salinity through osmoregulation in crustaceans"
- T.W. Cronin, "Visual metamorphosis in crustaceans: Larval and adult adaptations to different ontogenetic habitats"
- K. Anger, "Life-history adaptations of decapod crustaceans to non-marine conditions"
- R.B. Forward, "Ontogenetic changes in crustacean larval behavior: Contributions to transport and settlement"

I also invite any member of the society who sees a need for a symposium on any aspect of crustacean biology to contact me through any of the following addresses to discuss the possibility of TCS sponsorship.

Jack O'Brien
Department of Biological Sciences
LSB Rm 124
University of South Alabama
Mobile, AL 36688
Phone (334) 460-7525
FAX (334) 414-8220
e-mail: jobrien@jaguar1.usouthal.edu



Message from the Chair of the Awards Committee

At each summer meeting of The Crustacean Society we have been recognizing excellence in student research with an award for the Best Student Oral Presentation. Three years ago we began recognizing the Best Student Poster Presentation as well. The awards are not trivial. Each winner receives a free one-year membership in TCS that includes a subscription to *The Journal of Crustacean Biology* (i.e. a \$75.00 value), a check for \$50.00, and a certificate signed by the president of TCS. As of this writing, 17 speakers and seven poster presenters have indicated that they wish to compete for the awards at the 1999 summer meeting in Lafayette, LA.

At the Fourth International Crustacean Congress (ICC4) that was held in Amsterdam last summer, ten awards were given for best oral and poster student presentations in each of the five subthemes: Biodiversity, Distributions, Ecology and Behavior, Physiology and Biochemistry, and Fisheries and Management. Judging by

the enthusiasm expressed by the audience at the awards ceremony and the emotional response from many of the recipients, the awards are a success.

Some situations became manifest at the ICC4 that I had not anticipated and I am asking for feedback and guidance from the membership. I hope to have a short discussion of the following issues at the business meeting in Lafayette.

1. There were a number of student poster presentations that were exhibited at the congress, even though the student investigator could not attend the meeting due to financial problems. Thus, the question: *Should posters presented by non-attendees be eligible for an award?* Remember that judges are asked to visit the poster when the student is present in order to discuss their research.
2. Unlike past summer meetings, over 40% of the student presentations that

were considered for an award at ICC4 had more than two authors. The breakdown (oral and posters combined) is as follows:

1 author, 15 presentations	(21%)
2 authors, 27	“(38%)
3 authors, 22	“(31%)
4 authors, 4	“(6%)
5 authors, 3	“(4%)

The question is: *Should presentations listing more than two authors be considered for awards?* It is assumed that the two authors would be the student and his or her mentor.

For members who will not be at the Lafayette meeting, please send me your opinion via e-mail prior to the meeting and I will present it at the business meeting.

Jack O'Brien
Chair, TCS Awards Committee
jobrien@jaguar1.usouthal.edu

TCS Summer 2000 Meeting

We are happy to announce the Crustacean Summer Meeting for the year 2000 to take place in Puerto Vallarta, Mexico. The Meeting has as main goal to involve additional to English Speaking Crustacean Specialists all other Latin American scientists. The Meeting looks forward to the inclusion of 2 to 3 special sessions. A first announcement was distributed in the Crustacean list and the *Ecdysiast* in 1998.

A first special session within this Summer Meeting has been submitted by Dr. Michel E. Hendrickx, ICML-Mazatlan, who will host the “Second Colloquium on Macro-crustaceans of the Eastern Tropical Pacific.” This Colloquium will cover topics similar to those treated during the first one (held in Mazatlan, March 1990), but on this occasion will include both pelagic and benthic species. This is due to the tremendous lack of information related to taxonomy,

biogeography and ecology of pelagic macro-crustaceans south of the California Current and Gulf of California areas. Any topic related to marine or brackish water macro-crustaceans in either natural or disturbed habitats will be considered (e.g., distribution, taxonomy, behaviour, biology, feeding, ecology, etc ...). However, the Colloquium will not cover topics related to aquaculture or other aspects (e.g., physiology, genetics) directly connected to production of macro-crustaceans. A first announcement and “call for papers” will be distributed during the first months of 1999. People interested in receiving this information should contact Dr. Hendrickx via one of the following e-mail addresses, michel@mar.icmyl.unam.mx or michel@ola.icmyl.unam.mx, or by fax at (69)826133.

A second special symposium is scheduled on the “Freshwater Crabs of the World,” and is being organized by Dr.

Fernando Alvarez. Participation in this symposium will include an oral presentation reviewing general aspects of the systematics, evolution or ecology of freshwater crabs. The goal of this symposium is to bring together for the first time experts from around the world to review the state of knowledge of this highly diversified group. In addition to the oral presentation, participants are encouraged to present a written contribution for a special volume to be edited after the Meeting. Interested individuals should contact Dr. Alvarez at falvarez@servidor.unam.mx for further details, including a preliminary list of participants and their topics.

People interested in chairing an additional special session should contact Dr. Elva Escobar via e-mail at escobri@mar.icmyl.unam.mx or by fax at (525) 616.0748.

Contributed by Elva Escobar

Conservation Committee

1999 Summer Meeting

At the Annual Meeting in Lafayette, the TCS Conservation Committee will hold an organizational meeting for any members interested in conservation issues. If you are interested please contact Karen Lee (ktlee@imap.pitt.edu) or simply show up for the organizational meeting. We are planning an event in Lafayette as a prelude to a symposium for Puerto Vallarta (see below).

2000 Summer Meeting

The TCS Conservation Committee is planning a symposium on habitat loss and crustacean biodiversity for the 2000 summer meeting in Puerto Vallarta, Mexico. Given the worldwide losses of wetlands and the impact of these losses on invertebrate biodiversity, the timing seems right for a symposium. The tentative focus of the symposium is "Threats to Crustacean Biodiversity Due to Habitat Destruction." If you are interested in helping to plan or wish to participate in the symposium please contact Karen Lee at ktlee@imap.pitt.edu, for more information.

contributed by Karen T. Lee
TCS Conservation Committee Co-chair

E-Mail Directory

The TCS E-mail Directory was first published in the May 1996 issue of the *Ecdysiast* (Vol. 15, No. 1), although it included only those members that had responded to previous queries. Since then, changes and additions have been printed in subsequent issues of the newsletter. If your address or contact numbers have changed or you have not been included previously in the directory, please send the appropriate information to Tim Stebbins, *Ecdysiast* Editor.

Dalens, Henri
Route des Crêtes
31320 Mervilla FRANCE
BS: (33).05.61.73.15.36
FX: (33).05.61.73.10.31
E-MAIL: dalens@cict.fr

Foster, John M.
Marine Education Associates
2100 West Beach Drive, Unit Y203
Panama City, Florida 32401 USA
BS: (850) 769-8426; FX: (850) 233-5193
E-MAIL: beachbugs@aol.com or
fosterjrm@mail.bay.k12.fl.us

Wang, Shiao Y.
Department of Biological Sciences
University of Southern Mississippi
Hattiesburg, MS 39406-5018 USA
BS: (601) 266-6795; FX: (601) 266-5797
E-MAIL: shiao.wang@usm.edu

TCS Home Page

The TCS home page has been recently updated. Although the site is still being maintained by the Natural History Museum of Los Angeles County, the page is now being managed by Jeff Shields of the Virginia Institute of Marine Science. Please address all comments regarding the site to Dr. Shields at jeff@vims.edu. Check out the site for periodic updates of TCS activities, meetings, and related crustacean links. The address is:

<http://www.lam.mus.ca.us/~tcs/>

This and future issues of the *Ecdysiast* should also be available on the TCS web site as downloadable pdf files.

Excellence in Research Award to Geoffrey A. Boxshall

One of the highlights of my first year as TCS President was when, during the ICC4 meetings in Amsterdam, I had the honor of presenting The Crustacean Society's Excellence in Research Award to Dr. Geoff Boxshall. Although mentioned briefly in the last *Ecdysiast*, I wanted to say more about that here. The Excellence in Research Award is presented by the Society at infrequent intervals to honor a person whose contributions to the field of crustacean biology have influenced the entire field and have set a benchmark for future workers. This is undeniably true of Geoff's program at the Natural History Museum in London, which today can justifiably be called the world's center for copepod research thanks to his efforts. Geoff's impressive body of publication includes works on taxonomy, systematics, functional morphology, and ecology, specializing in the copepods, branchiurans, and tantulocaridans. Among Geoff's many notable accomplishments are the establishment of a new order of copepod crustaceans, the Mormonilloida, and the

recognition of the Tantulocarida, one of the most novel and fascinating crustacean revelations in recent history. In 1991, Geoff and Rony Huys published the immediately classic tome *Copepod Evolution* (Ray Society, London), which has gone a long way toward providing stability for this incredibly diverse assemblage of crustaceans. Arthur Humes, who originally nominated Geoff for the Award, is preparing a more detailed account for an upcoming issue of the *Journal of Crustacean Biology*. Thanks to Fred Schram, organizer of ICC4, the Award was presented during one of the morning plenary sessions of the Congress in the beautiful and storied University Aula of the University of Amsterdam, such that all persons attending the Congress could be present. The setting was perfect, and for me it was a real honor to be able to present this award to a good friend and excellent scientist. Congratulations, Geoff, for receiving this well-deserved recognition!

Contributed by Jody Martin



Crustacean News

CRUST-L

The CRUST-L mailing list is an informal forum for those interested in Crustacea. Topics range from crustacean biology, ecology, systematics, taxonomy, fisheries, physiology, cell biology, culture, etc. You can subscribe to the list by sending SUBSCRIBE CRUST-L as the message body to:

MAJORDOMO@VIMS.EDU

After subscribing use the following address to post items to the list:

CRUST-L@VIMS.EDU

Archives are occasionally posted at <http://www.vims.edu/~jeff/archive.htm>.

CRUST-L is an unmoderated, open list. Discussions are kept to subjects pertaining to marine and freshwater crustaceans or related taxa/subjects. The goal of the forum is to encourage communication between members. Unrelated items of interest (e.g., virus notices, humor, etc.) should not be sent to the list. Unprofessional behavior like spams, unrelated product adverts, flames, etc. are not tolerated. As a modest anti-spamming measure, only those subscribed to the list can post to the list.

CRUST-L is supported by the Virginia Institute of Marine Science (VIMS). The list is administered by Jeffrey Shields, P.O. Box 1346, Department of Environmental Sciences, VIMS, Gloucester Point, VA, 23062, USA, (804) 642-7128, fax: (804) 684-7186. Please report any problems or comments to jeff@vims.edu.

There is another list devoted to the Crustacea of Latin America. You can subscribe to it by sending the message INSCRIPTION CRUSTACEA YOUR.EMAIL.ADDRESS to:

MAJORDOMOAA@SERVIDOR.

DGSCA.UNAM.MX

You then send messages directly to: CRUSTACEA@SERVIDOR.UNAM.MX

contributed by Jeff Shields
jeff@vims.edu

Meeting of German Carcinologists

There is no national society of carcinologists in Germany, but this does not in any way prohibit our German colleagues from maintaining an active meeting agenda. Thus, the 9th Meeting of German Carcinologists (9. Crustacelogen Tagung) was recently held in Berlin from 25-28 February, 1999 under the auspices of Prof. Gerhard Scholz of the Humboldt University with more than 75 attendees. Although these meetings are intended as informal gatherings, this certainly did not reflect on the quality of the many oral and poster presentations during the two full day of sessions. As part of the welcome reception, the meeting was opened by a "behind the doors" tour of the adjacent Museum für Naturkunde. As this was an evening tour, one experienced the still far from adequate lighting conditions in this marvelous building. However, this only made a large sauropod (which I still call "Brachiosaurus") appear even more impressive. Fortunately, there was no need for parallel sessions for the oral presentations, and all posters were on display for the duration, so active discussion could take place around them during the breaks. On the second evening, Prof. Horst Kurt Schminke of the University of Oldenburg gave a most entertaining talk on "Crustacean diversity: spectacular or modest." This took place in a very old amphitheatre which made for a better lecture hall than many modern facilities. This was followed by a buffet which extended into the late evening. After the official two days ended by a symposium dinner, the meeting concluded Saturday morning with a tour of one of Berlin's two zoos, the Tierpark Friedrichsfelde, enabling us to get a glimpse behind the scenes. Prof. Scholz and the many colleagues assisting him made a tremendous effort to make this a very smoothly run meeting. Naturally the language of the talks and most posters were in German. But attendees from adjacent countries were also present and very welcome, and

anyone with the slightest grasp of German was able to benefit from this event as languages mixed easily during the breaks. The 10th such meeting will be hosted by Prof. Angelika Brandt of the Hamburg University and I am confident that carcinologists in Northern Europe will all look forward to this event.

Contributed by Jens T. Høeg
jthoeg@zi.ku.dk

The Crustacea Enlarged with Millions of Species?

L'origine des Hexapodes. Les Insectes sont-ils des Crustacés adaptés à la vie terrestre? (The origin of the hexapods. Are the insects crustaceans adapted to a terrestrial life?) 8-9 January 1999, Paris.

This important meeting was held at the Museum National d'Histoire Naturelle in Paris. The meeting was convened by Dr. Thierry Deuve of the MNHN and sponsored by the *Société entomologique de France* and the *Société zoologique de France*. The purpose was to focus on a series of invited talks on the origin and diversification of the Hexapoda in light of recent developments in the fields of both morphology and molecular studies. Two full days of talks contributed to giving the attendees a feeling of the very rapid developments that have taken place recently. All speakers seemed to agree on the monophyly of the arthropods and on the application of cladistic methods and the polyphyletic theories of the late Sidney Manton were rejected. Moreover, impressive evidence was presented from both morphology, evo/devo, and molecular sequence studies that the closest relatives of the Hexapods should be found within the Crustacea. However, this view supported by e.g. Prof. D. Tautz (Bonn), J. Deutsch (Paris), and W. Dohle (Berlin), was opposed by O. Krauss (Hamburg) in favour of a monophyletic grouping of Hexapods and

the myriapodous taxa into a monophyletic Mandibulata. F.R. Schram (Amsterdam) reviewed the possible sister groups of the Hexapoda within Crustacea, while N.P. Kristensen (Copenhagen) summarized the two days. On listing all arguments put forward he concluded that the evidence available at present speaks in favour of a Hexapod-Crustacean relationship. Prof. Kristensen also warned that while an impressive list of apomorphies unite the Insecta ("Thysanurans" + Pterygotes), the monophyly of the Hexapoda (Diplura + Protura + Collembola + Insecta) rests on much weaker evidence, and naturally any relegation of the hexapods to within "our crusties" leaves the myriapodous taxa "blowing in the wind." Obviously, we are not out of the woods yet. The meeting had many non-speaking members in the audience. Orals were in both English and French and every effort was made by the organisers to make language no barrier to the exchange of views. It was a very well run and important event, not least because the marvelous symposium dinner was held within the recently opened "Grande Galerie de l'Evolution" of the MNHN.

Contributed by Jens T. Høeg
jthoeg@zi.ku.dk

Decapoda & Stomatopoda of French Polynesia

A new crustacean website that should be of interest to carcinologists is available at:

http://www.ecole-navale.fr/www.loen/crust/crustacea_polynesia.html

The site includes an illustrated list of the Crustacea Decapoda and Stomatopoda of French Polynesia.

contributed by Joseph Poupin
poupin@ecole-navale.fr

Latin American Carcinologists

A directory of almost all the latin american carcinologists (and others who also work in Latin America) can be found at:

[http:// tierradelfuego.ml.org/alca](http://tierradelfuego.ml.org/alca)

To be included, please send an e-mail with your affiliation, address, etc. to centolla@tierradelfuego.ml.org.

contributed by Gustavo Lovrich
lovrich@satlink.com

Lobster Recipe

The following recipe was printed previously in *The Lobster Newsletter* (Vol. 10, No. 1, October 1997) under the heading "Florida Woman Wins Worst Lobster Recipe Contest."

Lobster and Scrambled Eggs

Put 4 fresh eggs and a live lobster into a cast iron skillet. Cover TIGHTLY and place on a hot barbecue grill. Cook 15 minutes. The lobster will scramble the eggs. Add fruit cocktail.

Submitted by Ray Manning

Biology of Shrimps

Darling Marine Center

University of Maine

August 2-6, 1999

A summer short course, "Biology of Shrimps," will be taught by Dr. Ray Bauer at the University of Maine's Darling Marine Center from August 2-6, 1999. The course description is given below.

Course Synopsis

The biology of decapod shrimps, ecologically and commercially important crustaceans in the world's oceans, will be covered through lecture, laboratory examination of living and preserved specimens, with field trips to local habitats. Lecture topics will include basic systematics, form and function, evolutionary origins, reproductive biology, and life history patterns, with the relation of the latter two to fisheries and aquaculture. In the laboratory, the morphology and basic taxonomy of caridean and penaeoidean shrimp families will be covered, with detailed examination and identification of specimens collected from various locales, from tropical to higher latitudes.

The deadline for registration is June 15. For additional information, please contact Dr. Bauer via email at rtbauer@usl.edu (or the address below), or Tim Miller (Lab Manager, Darling Marine Center) at temiller@maine.edu. To get a feel for "shrimp biology," try out Dr. Bauer's research website at: <http://www.ucs.usl.edu/~rtb6933>.

Raymond T. Bauer
Department of Biology
University of Southwestern Louisiana
Lafayette, Louisiana 70504-2451 USA
Tel: 318-482-6435; Fax: 318-482-5834



Publication News

Fairy Shrimps

Denton Belk announces publication of the following new book on the fairy shrimps (Anostraca) of California.

Fairy Shrimps of California's Puddles, Pools, and Playas, by Clyde Eriksen & Denton Belk. 1999 (expected). Mad River Press. 196 pp. ISBN 0-916422-83-6

This new book is a MUST for environmental workers, invertebrate biologists, or anyone else interested in life's smaller creatures! Anostracans, or "fairy shrimps" by common name, ethereal "symbols of rainpools" to some, and "sea monkeys" to others, are brought to life in this first comprehensive volume on their biology and natural history. Included are sections and/or discussions of the following: relationships of fairy shrimps; biology, anatomy, physiology; ecology; distribution in California, with range maps; natural history and habitats; status; keys to California species; collecting, hatching, and rearing of fairy shrimps; beautiful figures of whole animals and details useful in identification; glossary; literature cited.

Although their book is biologically accurate and contains many references to the literature, Drs. Eriksen's and Belk's writing style is light, enthusiastic, personal, and fun. The authors have attempted to take the threads of their vast experiences in "fairy shrimp country" and weave into the fabric of this small, relatively non-technical volume a presentation that will introduce fairy shrimps to anyone with a casual, vested, or scientific interest in these creatures, that is by the general reader, landowners who may serve as landlords for some fairy-shrimp tenants, young and budding naturalists who have been turned on to the world of life about them, and also those already skilled in natural history and ecology.

"Fairy Shrimps of California" is available from Mad River Press at a special prepublication offer of \$26.50 US (includes \$5.00 shipping and \$1.50 sales tax) through June 1, 1999. Payment must

be included when ordering in order to receive this special rate. Payment may be in the form of a personal check made payable to Mad River Press (CREDIT CARDS NOT ACCEPTED). Make sure to include your full mailing address, plus e-mail address if possible, when ordering.

Please note that the prepublication offer of \$26.50 is good for only a limited time. After June 1, 1999, the price will be \$34.50 (includes \$7.00 shipping and \$2.00 sales tax). Address all orders to:

Mad River Press
141 Carter Lane
Eureka, CA 95503-9549 USA



Crustacean Issues

Fred Schram sends notice that most volumes of Crustacean Issues (Nos. 1-11) are now available from A.A. Balkema Publishers at new reduced prices. Order now and TCS members may take an additional 20% discount. Please see page 10 of this newsletter for details and an order form.

Shrimp Farming

Shrimp News International announces the publication of **World Shrimp Farming 1998**, featuring country-by-country reports on shrimp farming in the eastern and western hemispheres and a series of first person reports from shrimp farming experts around the world. It also contains: updates on El Niño, Brine Shrimp, and Vannamei's name change; names and addresses of industry experts; reviews of publications on shrimp farming; a report on shrimp farming in the United States; and an article on the basics of shrimp farming.

Published in December 1998 by Shrimp News International, **World Shrimp Farming 1998** sells for \$75.00 (shipping and handling included). Make checks payable to Shrimp News International in USA funds drawn on a USA bank, or use Visa or MasterCard, providing name on the card, the card number and expiration date. Fax your order to 619-271-0324 or mail to:

Shrimp News International
9450 Mira Mesa Blvd., Suite B-562
San Diego, CA 92126 USA

Bob Rosenberry
Editor/Publisher

Brazilian Crustaceans

Catalogue of Crustacea of Brazil, ed. by P.S. Young. 1999. Rio de Janeiro, Museu Nacional. 718pp. (Serie Livros n. 6).

This volume is intended as a reference for students of Brazilian Crustacea, including general biologists, ecologists, limnologists, marine biologists, and taxonomists. It provides detailed information about the diversity of the region's crustacean fauna, with the titles organized according to the general classification of Bowman and Abele (1982).

Each chapter includes the species found in the marine, freshwater, and terrestrial ecosystems of Brazil. The following information is provided for each species: synonymy, description and diagnosis, references, geographic distribution, and comments.

To purchase a volume, send a check for US\$50.00 payable to "Fundacao Universitaria Jose Bonifacio" to: Ms. Alzinete Rego Albuquerque, Museu Nacional, Biblioteca, Quinta da Boa Vista 20940-040, Rio de Janeiro, RJ Brazil. Postage is included for surface mail. For air mail, add US\$15.00 to the amount.

Paulo Young
psyoun@acd.ufrj.br

Upcoming Meetings & Symposia

TCS Summer 1999 (Lafayette, Louisiana)

The 1999 Summer Meeting will be held from May 26-30, 1999 in Lafayette, LA. The local contact for the meeting is Darryl Felder. A detailed information and reservation packet was published in the November 1998 issue of the *Ecdysiast*. For additional information and full updates, please check out the Meeting web site at:

<http://www.usl.edu/Departments/Biology/TCS/>

TCS Winter 2000 (Atlanta, Georgia)

The 2000 Winter (January) Meeting of TCS will be held in Atlanta, GA in conjunction with SICB.

TCS Summer 2000 (Puerto Vallarta, Mexico)

The 2000 Summer Meeting will be held in Puerto Vallarta, Mexico. The meeting will be hosted by Elva Escobar-Briones of the Universidad Nacional Autonoma de Mexico (UNAM). See page 4 for additional information.

TCS Winter 2001 (Chicago, Illinois)

The 2001 Winter (January) Meeting of TCS will be held in Chicago, IL in conjunction with SICB.

TCS Summer 2001 (Melbourne, Australia)

The 2001 Summer Meeting will be held in Melbourne, Australia. The meeting will be hosted by Gary Poore of the Museum of Victoria.



Second International Symposium on Krill August 23-27, 1999 (Santa Cruz, California)

The Second International Symposium on Krill will be held from 23-27 August 1999 on the campus of the University of California Santa Cruz.

The purpose of this symposium is to review current knowledge of krill biology, to highlight gaps and future areas for research, and to show how the study of a range species of krill can illuminate more general problems (for example krill flux, recruitment, swarming behavior, age and growth).

For further information, check out the web site at:

http://www2.ucsc.edu/people/msmangel/Krill_Symposium.html

or contact Marc Mangel by email at msmangel@cats.ucsc.edu.



7th Colloquium Crustacea Decapoda Mediterranea (7CCDM) September 6-9, 1999 (Lisbon, Portugal)

The 7CCDM will be hosted by the Faculty of Sciences of the University of Lisbon. Contributions in all aspects of decapod crustacean research will be welcome, including systematics, phylogeny, biogeography, ecology, ethology, reproduction, physiology, fisheries and culture. A number of parallel events will also take place, including the 2nd Crustacean Larval Conference.

7ccdm@fc.ul.pt

Contributions to the *Ecdysiast*

The *Ecdysiast* is published twice a year and mailed with the May and November issues of the *Journal of Crustacean Biology* (published and mailed by Allen Press, Lawrence, KS). In addition, beginning with this issue, the *Ecdysiast* will also be available as a pdf file from the TCS web site (<http://www.lam.mus.ca.us/~tcs/>).

Submissions for the spring (May) newsletter should be in by mid-March, while those for the fall (November) newsletter should be in by mid-September. This allows the editor to compile, produce, print and ship the newsletters to Allen Press in time to meet the *JCB* mailing deadlines.

Anything of interest to the TCS membership is welcome, including notices of upcoming meetings and symposia, regional updates, research and job opportunities, important research findings, new publications, other related societies, and basically all things crustacean. Although contributions may be submitted in any form, electronic submissions via e-mail are preferred and strongly encouraged. This saves the editor an enormous amount of time and minimizes transcription errors in the process. Graphic images should be submitted on disk or camera-ready copy by mail. Camera-ready graphics will be scanned into the final document. The newsletter is prepared using PageMaker 6.5 for the Mac; graphics are scanned and then modified using either Deskpaint or Photoshop. Submit all materials directly to the editor via e-mail (tds@sdcity.sannet.gov) or at the address listed at the bottom of page 1 of this newsletter (Tim Stebbins, *Ecdysiast* Editor).



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