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NEWSLETTER

FROM STELLAN KARLSSON, PRESIDENT IAA

Dear Colleagues,

I hope you all had a pleasant holiday, even if it was darkened by worries and sympathy for our Polish friends and colleagues. Let us hope that 1982 will be a better year, and this wish I extend to all of you!

You have all, some time ago, received the first issue of our *Newsletter*, and I am sure that you all agree that Jim Payne made an excellent job on its production. However, if that standard is to be kept, we need your help with material for publication. Short notices, abstracts, recent publications, comments, etc. - anything regarding astacology is welcomed!

We look forward to hearing from you.

BIOLOGY OF CRUSTACEA

Academic Press has in press and in preparation a 10 volume comprehensive publication, The Biology of Crustacea, encompassing significant findings, including methods, in three broad areas of crustacean research: (1) systematics, morphology, evolution, and the fossil record; (2) physiology, ecology, and behavior; and (3) applied biology, including fisheries, mariculture, and pathology. Four volumes are in press, with publication anticipated during summer 1982, and volumes 6 to 10 are in advanced stages of preparation.

The Crustacean Society will be able to offer a substantial discount, possibly as high as 25%, on volumes ordered by members through the Society. For further information, write to: Business Office, The Crustacean Society, IZ-NHB-W323, Smithsonian Institution, Washington, DC 20560, U.S.A.

NOW IN PRESS:

Vol.1, Systematics, the Fossil Record, and Biogeography.

Vol. 2, Morphology, Embryology, and Genetics.

Vol. 3, Neurobiology: Structure and Function.

Vol. 4, Neural Integration and Behavior.

IN FINAL STAGES OF PREPARATION:

Vols. 6-10, (tentative), Physiological Regulation, Environmental Adaptation, Economic Aspects: Pathobiology, Culture, and Fisheries.

RECENT SCIENTIFIC PAPERS

North American Benthological Society, April, 1981, Brigham Young University:

Seasonal distribution and abundance of *Procambarus clarkii* in a bottomland hardwood swamp. Susan M. Melancon and James E. Pollard, Department of Biological Sciences, University of Nevada, Las Vegas, Nevada 89154.

American Society of Zoologists, December, 1981, Dallas, Texas:

The conflict between respiratory and osmoregulatory functions of hemocyanin in a euryhaline crayfish during hypersaline exposure. M.G. Wheatly and B.R. McMahon, University of Calgary, Alta.

The morphology of regenerated crayfish legs depends on phase of the molt cycle when grafting occurs. J. Mittenthal and W. Trevarrow, Biology, University of Oregon, Eugene.

Distribution and dispersal of crayfish in a second order stream. Robert C. Taylor, University of Georgia, Athens, GA.

Comparison of the Y-organ and cephalic gland in control of molting in crayfish. T.C. Jegla and R. Keller. Kenyon College, Gambier, OH. and Rheinische Freidrich-Wilhelms University, Bonn, FRG.

Changes in hemolymph: tissue ion balance in the crayfish *Orconectes immunis* in response to exposure to selenium. T.M. Short. Colorado State University, Fort Collins, Colorado.

SYMPOSIUM: CRAYFISH DISTRIBUTION PATTERNS

The symposium on crayfish distribution patterns will be held in conjunction with the annual meeting of the American Society of Zoologists in December, 1982, at Louisville, Kentucky, U.S.A. The abstract for this symposium along with the titles of presentations, and names and addresses of presenters are as follow:

ABSTRACT

Because a fossil record of crayfish is lacking, studies and discussions concerning present distribution patterns must be based on other factors. This symposium examines recent advances in our understanding of various factors which influence or determine the distribution of selected taxa of Holarctic crayfishes. Data on the present distribution patterns of epigean and hypogean groups are presented, and viewpoints on various factors which influence these patterns are given. Aspects of interspecific competition, trophic ecology, and breeding behavior are discussed. Physiologic adaptations to specific environments, tolerance to selected environmental variables, and substrate type are analyzed. Man's influence on crayfish distribution patterns through species transplantations and environment modification are considered. Correlation of the distribution of crayfish with their branchiobdellid annelid and entocytherid ostracod symbionts is described. The symposium concludes with a panel discussion on "Interpretation of Crayfish Distribution Patterns" where the major ideas from fourteen presentations are considered and synthesized.

TITLES FOR ASZ SYMPOSIUM

Zoogeography and Evolution of Holarctic Crayfishes

Raymond W. Bouchard
7500 Seaview Avenue
Wildwood Crest, New Jersey 08260

On the Distribution of the Genus *Procambarus*

Horton H. Hobbs, Jr.
IZ NHB Stop 163
Smithsonian Institution
Washington, D.C. 20560

New Data on the Pliocene Tennessee River and Their Bearing on Crawfish Distribution

Joseph F. Fitzpatrick, Jr.
Department of Biological Sciences
University of South Alabama
Mobile, Alabama 36688

Crayfish Production (Yields): A Reflection of Community Energetics?

Walter T. Momot
c/o James Avault
Ag Center
Louisiana State University
Baton Rouge, LA 70803

Physiological Adaptations of Crayfish to Subterranean Habitats

Gary W. Dickson
Ciba-Geigy
Agricultural Division
P. O. Box 11422
Greensboro, N.C. 27409

Demographic Patterns in North Florida Cave Crayfishes

Richard Franz
Florida State Museum
University of Florida
Gainesville, Florida 32611

Thermal Tolerance and Oxygen Requirements of *Procambarus clarkii* and *Procambarus acutus*

Jay V. Huner
Department of Biology
Southern University
Baton Rouge, LA 70813

Effects of Gastropod Prey Distributions on Crayfish Foraging Areas

Alan P. Covich
Department of Zoology
The University of Oklahoma
Norman, Oklahoma 73019

Crayfish Distribution Patterns in Wisconsin: Recent Changes and Controlling Mechanisms

Gregory M. Capelli
Department of Biology
College of William and Mary
Williamsburg, Virginia 23185

Competition Among Crayfish: Mechanisms and Distribution Effects

Mark J. Bulter and Roy A. Stein
Department of Zoology
The Ohio State University
Columbus, Ohio 43210

Lotic Crayfishes of Ohio Brush Creek, Ohio: A Case Study of Competitive Exclusion?

Michael F. Flynn and H. H. Hobbs, III
Department of Biology
Wittenberg University
Springfield, Ohio 45501

The Distribution of *Orconectes rusticus* in Relation to Substrate Type

James Lorman
516 Wingra Street
Madison, WI 53715

Aspects of the Distribution of Entocytherid Ostracods and Their Crayfish Hosts

C. W. Hart, Jr.
IZ NHB Stop 163
Smithsonian Institution
Washington, D.C. 20560

Crayfishes and Their Branchiobdellid Symbionts: A Non-Correlation?

Perry C. Holt, Professor Emeritus
1308 Crestview Drive
Blacksburg, VA 24060

SELECTED REFERENCES FOR THIS SYMPOSIUM ARE:

Bouchard, R. W. 1978. Taxonomy, distribution, and general ecology of the genera of North American crayfishes. Fisheries. 3:11-19.

Canie, Edsel A. 1978. Comparative ecology of epigean and hypogean crayfish (Crustacea: Cambaridae) from northwestern Florida. The American Midland Naturalist. 99:315-329.

Crocker, D. 1979. The crayfishes of New England. Proceedings of the Biological Society of Washington. 92:225-252.

Franz, R. and L. M. Franz 1979. Distribution, habitat preference and status of populations of the Black Creek Crayfish, *Procambarus (Ortmannicus) pictus* (Decapoda: Cambaridae). Florida Scientist. 42:13-17.

Franz, R. and L. Lee. Distribution and evolution of Florida cave crayfishes. International Journal of Speleology. (in press)

Fitzpatrick, J. F., Jr. 1979. A new crawfish of the genus *Hobbseus* from northeast Mississippi, with notes on the origins of the genus. Proceedings of the Biological Society of Washington. 90:367-374.

Gowing, H. and W. T. Momot. 1979. Impact of brook trout (*Salvelinus fontinalis*) predation on the crayfish *Orconectes virilis* in three Michigan lakes. 1979. Journal of the Fisheries Research Board of Canada. 36:1191-1196.

Hobbs, H. H., Jr., H. H. Hobbs II and M. A. Daniel. 1977. A review of the troglobitic decapod crustaceans of the Americas. Smithsonian Contributions to Zoology. number 244, 183p.

Hobbs, H. H. Jr. Crayfishes of Georgia. Smithsonian Contributions to Zoology. (in press).

For copies of abstracts of these presentations, please contact the authors at the addresses given.

PACIFASTACUS LENIUSCULUS IN POLAND

Jozef Kossakowski has provided the following account of his recent attempts to introduce the crayfish *Pacifastacus leniusculus* Dana into the waters of Poland:

Juveniles were introduced into a 42.5 ha lake and a gravel pit of about 2.0 ha. Both bodies of water were inhabited by *Orconectes limosus* (Raf.). A large number of small crayfishes were introduced (about 600 indiv./ha, over a period of years into the lake, and about 2400 indiv./ha into the artificial water body). Intensive control catches indicated that both introductions were unsuccessful. It is possible that the native crayfish populations liquidated individuals of the newly introduced species. P. J. Laurent observed this to be the situation in one French lake. In lake Zeller (Zellersee), Austria, which was inhabited by two local crayfish species, introduction of *Pacifastacus leniusculus* was not successful. In selecting these two water bodies it was considered whether the presence of other crayfish species would not be a shortcoming. However, the two reservoirs seemed most suitable with respect to other environmental features. Moreover, it is very difficult to find in Poland reservoirs which are totally devoid of *Orconectes limosus*. Distribution of the latter crayfish species in Polish waters was described in Freshwater Crayfish 2, 1974.

These preliminary observations and conclusions must be supported by additional research before final conclusions are formulated. However, they should be taken into account in selecting European water bodies for introductions of *Pacifastacus leniusculus*.

CRAYFISH BIOLOGISTS IN EAST EUROPEAN COUNTRIES

Professor Kossakowski has provided the following list of names of individuals from East European countries. Each of these individuals receives the Association's *Newsletter*.

ANWAND K., Institut fur Binnenfischerei, Muggelseedamm 310
1162 Berlin, GDR

BRODSKIJ S.J., Gorkogo 48/35, 252005 Kiev, USSR

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CUKERZIS J.M., Zirmunu 26/76, 232051 Vilnius, Lithuanian SSR

DOROSHENKO J., Verkiu 57/1, Vilnius, Lithuanian SSR

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MICKENIENE L., Krokuvos 44/7, Vilnius, Lithuanian SSR

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