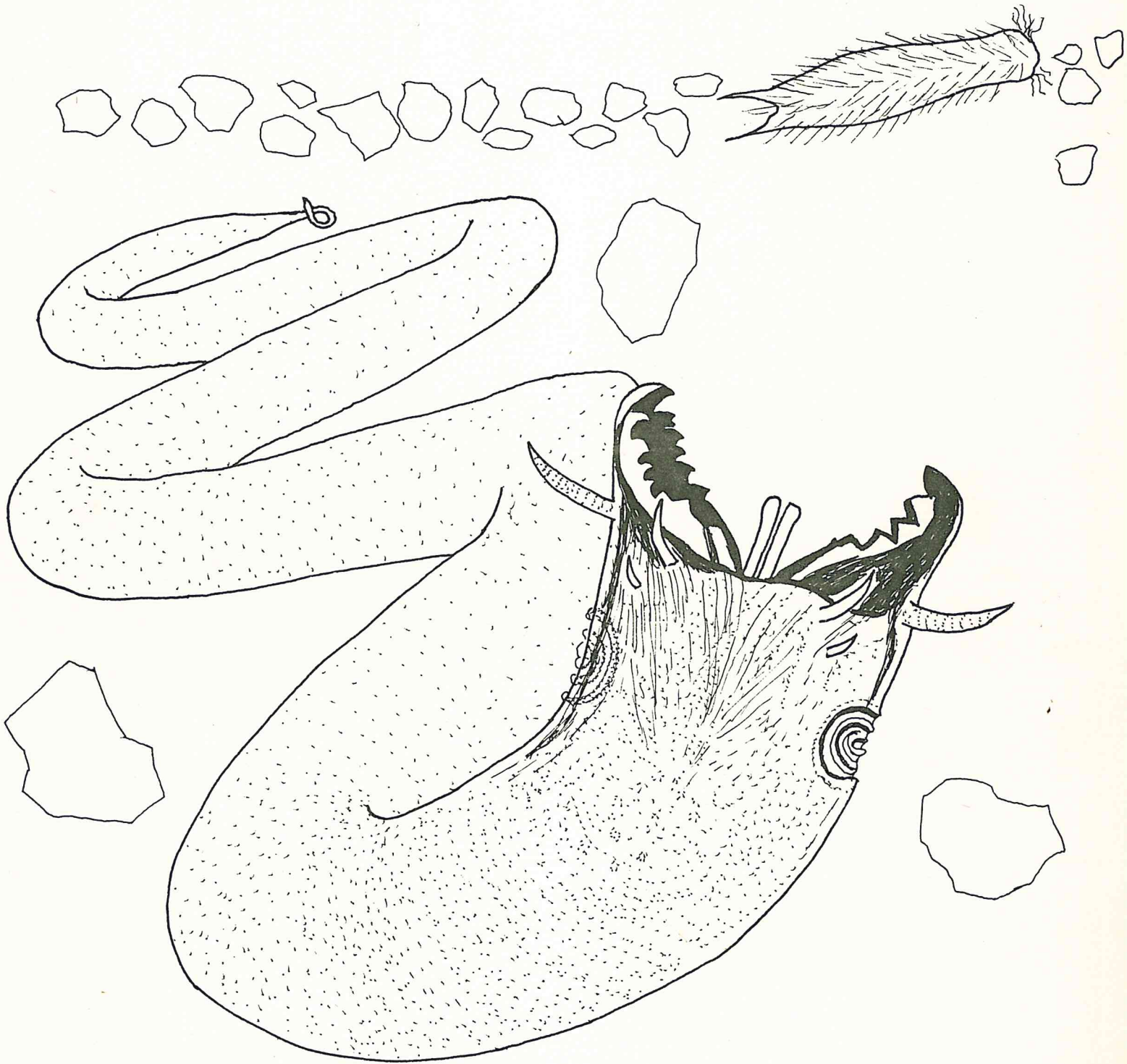


Psammonalia



NEWSLETTER OF THE INTERNATIONAL
ASSOCIATION OF MEIOBENTHOLOGISTS

NUMBER 30
1975

P S A M M O N A L I A

Newsletter of the International Association of Meiobenthologists

Number 30

November 1975

Editor: BRUCE C. COULL, Belle W. Baruch Institute
for Marine Biology and Coastal Research,
University of South Carolina, Columbia,
South Carolina 29208 USA

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Cover by Walter B. Sikora, University of South Carolina. A meiobenthic Jaws, "Shark nematode" This fearsome-looking creature is predaceous, existing by devouring nematodes and other small animals. (After N. A. Cobb)

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EDITORIAL

My term as Editor and Chairperson are fini with this, PSAMMONALIA No. 30. I go out on a happy note with an issue generously replete with poems, limericks and associated trivia and generated from the Bermuda workshop "The Meiofauna Species in Time and Space." Whether this is appropo to my tenure - I let the membership decide.

At the Bermuda workshop a decision to postpone the 3rd International Conference on Meiofauna until 1977 was reached. The meeting site and definite time has yet to be determined although it appears likely that it will be held in either Kristenberg, Sweden or Hamburg, Germany. The membership will be informed long before 1977 of the decision.

As outgoing Editor, I should like to express my sincere thanks to a most helpful and cooperative Executive Committee and Board of Correspondents. The Executive Committee (as decided by recent ballot) will continue in force and the new Editor, Jeanne Renaud-Mornant will appoint a new Board of Correspondents. Let us wish Dr. Renaud-Mornant success in her tenure and, I thank you for allowing me to serve.

Bruce C. Coull
Bruce C. Coull, Editor

FINANCIAL REPORT

Credits

Balance on hand (prior to PSAMMONALIA #29)	\$832.95
Dues & contributions received, minus bank charges (7/16/75-10/22/75)	<u>179.00</u>
TOTAL	\$1011.95

Debits

Cost of PSAMMONALIA #29	<u>\$136.45</u>
TOTAL	\$ 136.45

BALANCE ON HAND, 10/22/75	\$ 875.50
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NEWS FROM THE MEMBERS

D. BLOME, Universität Göttingen: I am working on my Ph.D. under the guidance of Prof. P. Ax. I am studying free living marine nematodes; in 1974 I published a short paper on nematodes from the Sandy Beach of Sylt (my M.Sc.). Presently I am identifying specimens collected from the eulittoral zone of List/Sylt, in 1973-74 for my doctoral thesis. The aim of my work is to make exact statements on their life cycles. The emphasis of my research will be as follows: 1. systematic - in which I think I will have to describe about 100 species; 2) ecological (a) distribution of separate species in space and (b) abundance-dynamics and reproductive cycles of the most frequent species - in this part two aspects shall be discussed.

M CREZÉE, University of Florida: At the Marine Laboratory we are conducting the meiofauna portion of a multi-university study of the continental shelf in the eastern Gulf of Mexico. Triplicate 100 cc preserved core samples and single live samples are scheduled to be taken three times over the year at each of 45 stations out to 200 m water depth. The most attention is being given to identification of turbellarians and gastrotrichs, but all meiofaunal groups are treated to some extent. Research groups at other universities are working with sediment structure and granulometry, hydrocarbons, ATP and macrofauna and also doing some water column work. The project began in June 1975 and runs 1 year.

I spent parts of this year and last year at the Marine Laboratory of the Hebrew University of Jerusalem collecting almost 100 species of turbellarians in Gulf of Eilat (Red Sea). This material is still being worked, and results should begin appearing next year. My recently completed dissertation (Univ. North Carolina at Chapel Hill) will be published soon. A monograph of the solenofilomorphids (acoel turbellarians) will appear in IRgH #6 this year and related work on sulfide system turbellarians in IRgH #1 of 1976.

O. GIERE, Universitat Hamburg: During the first half of this year my studies on marine oligochaetes dealt with experiments on the salinity preference and tolerance of several enchytraeid populations from the North Sea and the Baltic. It turned out to be very difficult to establish a stable salinity gradient (and I would be grateful for suggestions to set up a new salinity "organ"!) Preliminary results of these experiments were reported at the Bermuda Meiofauna Workshop in late September. My stay in Bermuda was the last part of a long trip which started in Dr. Riser's institute at Nahant, Mass., U.S.A. Here, besides giving a course on Invertebrate Zoology, I had the opportunity to study, for 7 weeks, the oligochaete fauna of the North American east coast, north of Cape Cod up to the Canadian boarder, which was a nice continuation of Pierre Lasserre's work in Beaufort, N. C. The littoral fauna in the Bay of Fundy and Maine, turned out to be very interesting.

I spent two weeks visiting the Smithsonian Institution in Washington, D. C., the Duke Marine Lab in Beaufort, and the University of North Carolina, Chapel Hill. After that I left for Bermuda, where I stayed for 3 weeks. I did ecological and systematic studies on marine oligochaetes, joining the research group of Dr. Wieser. Back in Hamburg, I will concentrate on experimental oligochaete studies testing different environmental parameters. Hopefully, I will find the time to work up the results of my stay in the U. S. and Bermuda despite the usual teaching and administration at a university institute.

D. J. HARTZBAND, Va. INST. MARINE SCI.: I am now at the Virginia Institute of Marine Science as of mid-October, 1975 (see change of address section), where I shall be working on a project to establish the biological baseline for determining the impact of off-shore oil drilling. I am planning to take meiofaunal samples from the upper continental slope and shelf in the Baltimore Canyon region of the N. Atlantic. I hope to put together a project on the ecology of the meiofauna in this area, with particular reference to the nematodes and harpacticoids. To this end I recently spent

several days working with Dr. W. Duane Hope at the Smithsonian Institution, Washington, D. C. learning the rudiments of nematode taxonomy.

T. ITÔ, Hokkaido University: While I have been engaged in a taxonomic study of marine harpacticoid copepods in Hokkaido, I am not sure when I will complete this inventory because the Hokkaido harpacticoid fauna is so much richer than initially estimated. Rather than compile a gross list in a hurry without thorough examination, I believe detailed descriptions and full redescriptions are indispensable, and this takes time. So many new or poorly known forms occur not only around Hokkaido but also in the West Pacific. Along this line I am now preparing three papers, one of which deals with a fresh-water species of the genus Harpacticella to compare with congeneric marine forms from the Bonin Islands. Besides these works, I am proceeding with a population study of beach interstitial animals in the Ishikari shore, Hokkaido, and hopefully will publish it in the near future.

In our laboratory, three graduate students are working on marine meiobenthos under the guidance of Professor Dr. M. Yamada: i.e. Mr. K. Kito (Nematodes), Mr. K. Tajika (Turbellarians) and Mr. Sh. Hiruta (Ostracods).

K. JAYASREE, Marine Lab, Aberdeen: As mentioned by A. D. McIntyre in *Psammonalia* 23, I joined the Marine Laboratory, Aberdeen, two years ago, as a Research Student, to work toward a Ph.D. My project (which is part of the prevailing complex meiobenthos project in progress here) involves a detailed study consisting of taxonomy as well as ecology of the nematode fauna of 'Polluted' beaches. A rather polluted sandy beach in the Firth of Clyde on the west coast of Scotland appears to be a very appropriate habitat for this kind of study and hence forms the major site for regular sampling. An even more polluted beach in the Firth of Forth area on the east coast of Scotland has also attracted our attention recently and the study of the nematodes from this beach will also form part of my thesis project. I spent one month in (October) 1973 and three and half months in (January-mid-April) 1975 working with Dr. Richard Warwick in Plymouth, from whom I received guidance in nematode taxonomy. In the Firth of Clyde material, seven new species of nematodes, belonging to the genera Leptolaimus, Cyartonema, Theristus (Theristus), Paramicrolaimus, Chromaspirina, Sabatieria and Rhabdocoma were encountered. A joint paper by me and Warwick containing the descriptions of these new species is in press and will appear in the Journal of Natural History sometime in the near future.

I would very much appreciate it if the members involved in the taxonomy and/or ecology of freeliving nematodes, whose reprints I have not yet received, could help me by sending their publications of the past, present and in future. I am grateful to all those who after my previous individual requests, have sent and continue to send me their publications on nematodes.

P. LASSERRE, J. RENAUD-MORNANT, and J. CASTEL, Muséum National d'Histoire Naturelle: We have been working on the fish reservoirs of the Arcachon Basin which constitute rich ecosystems of a semi-enclosed lagoon. In these areas, the benthic production of organic matter, bacteria and microflora play a predominant trophic role. We considered production as an energy source of a food chain comprising microfaunal and meiofaunal communities, and detritus-feeding and phytophagous mugilid fishes. The eventual trophic competition between micro-meio-benthic communities and mugilid fishes is considered as follows: 1). the determination of the energy percentages used by the micro- and meiobenthos (biomasses and metabolic activities), 2) the estimation of the compared growth rates of the mugils at the fry, fingerling and adult stages in function of the micro- and meiobenthic density and feeding regimes. We are continuing this work and the preliminary results were presented at the 10th European Symposium on Marine Biology in Ostend, Belgium in September.

ANNOUNCEMENTS

Meeting Report:

THE MEIOFAUNA SPECIES IN TIME AND SPACE, Bermuda, 24-30 September 1974.

This was a very successful meeting attended by representatives of 12 countries, who heard contributions from 32 authors. Of primary concern was the evolution and systematics of various meiobenthic taxa and the adaptive strategies of many of these taxa. Tentative plans were made for publishing the conference proceedings, more details of which will be forthcoming.

The following papers were given:

- S. GERLACH: "In memorium Bertil Swedmark"
 "Considerations on the dispersal of meiobenthos together with suspended sediment during storm periods"
 "Attraction by decaying organisms causes patchy distribution of meiobenthic Nematoda-Comesomatidae"
- T. SCHOPF: "Speciation in the marine environment"
- P. AX: "Problems of speciation in the interstitial fauna of Galapagos"
- R. RIEGER: "'Sibling' versus 'non-sibling' species groups within an identical geographic and ecologic range in marine Turbellaria"
- A. SIGURDSSON: "Colonization of Surtsey, a new volcanic island"
- T. KARLING: "Variability, speciation and geographic distribution of the marine turbellarian genus Austro-rhynchus"
- E. SCHOCKAERT: "Systematics, evolution, and zoogeography of Polycystididae (Turbellaria, Kalyptorhynchia)"
- W. STERRER: "Population analysis in some species of Gnathostomulida"
- E. KIRSTEUEER: "Remarks on taxonomy and zoogeography of the genus Ototyphlonemertes Diesing"
- E. RUPPERT: "Zoogeography and the evolutionary unit in the Gastrotricha"
- B. ÅKESSON: "Crossbreeding and geographic races, experiments with the polychaete genus Ophryotrocha"
 "Parasite-host relationships and speciation studies"
- W. HUMMON: "Introgressive hybridization among two interstitial species of Tetranchy-roderma (Gastrotricha, Thaumastodermatidae)"
 "Evolution of and within the Gastrotricha"
- B. VOLKMANN: "Crossbreeding and geographic races"
- I. BALL: "Biogeography and systematics of freshwater interstitial fauna"
- E. SCHOFFENIELS: "A deterministic approach to speciation and evolution"
 "Biochemical taxonomy and aspects of adaptation"
- W. WIESER: "Strategies of ecophysiological adaptation in meiofauna"
- O. GIÈRE: "Studies on intraspecific differentiation in disjunct oligochaete populations. I. Experiments on salinity preference and tolerance"
- J. TIETJEN: "Influence of temperature, salinity and diet on the reproductive potential and distribution of the nematode, Chromadorina germanica Bütschli"
- P. BOADEN: "Thiobiotic facts and fancies"
- C. HEIP: "The evolution of reproductive potentials in a brackish water meiobenthic community"

Meeting Report (cont.):

- B. COULL & S. IVESTER: "Niche fractionation studies of two sympatric species of Enhydrosoma (Copepoda, Harpacticoida)"
- B. MARCOTTE: "Grab, crush and poke: methods at a benthic bacchanal, or how harpacticoids feed"
- F. RIEMANN: "Causal aspects of nematode evolution - relations between structure, function, habitat and evolution"
- C. CLAUSEN: "The species problem in Halammohydridae"
- R. HIGGINS. "The first kinorhynch: then and now -- here and there"
- W. WESTHEIDE: "Interstitial Polychaeta-community structure and geographic distribution"
- J. O. CORLISS: "Interstitial ciliates: their nuclear primitiveness and its phylogenetic and systematic implications"
- E. HARTWIG: "Interstitial ciliates: their ecological adaptiveness, distribution, and possible means of dispersal"
- D. HOPE. "Mouthless nematodes from the deep sea"
- S. TYLER. "Ultrastructure and systematics: an example from Turbellarian adhesive organs"

The following compositions also resulted from the Bermuda meeting:

Coconutal Drift
by Carlo Heip

*Hidden in a coconut
There was a nema without gut
It was a sibling species
With fractionated niches
It drifted quite a while
And ended in the Nile
And then by anti-chance
It was found there by Franz
A problem soon arose
And Wolfgang Sterrer froze
This idea had to shift
No chance for continental drift
It was good luck that Gray
Was thousand miles away
This funny distribution
Was not caused by pollution
But then there came Ian Ball
Who had just made a call*

*He looked a long time round
Til finally he found
The phylogenetic tree
Which stood so proud and free
Because Ball was not very wise
Again we lost a paradise
He made an applemorphic sin
And cut the branches thick and thin
He didn't even once relax
And used quite vigourously his Ax
He certainly was eager
For in the tree sat Rieger
Looking for a nut
That might transport the mud
But now the nut fell in the water
And ...
Hidden in the nut
There was a nema, without gut.*

Meeting Report (cont.):

*Meiofauna und Osterreich unter Alles
or Rule Britannia
by Ian Ball*

- I. At this Meiofauna Conference
There has been a great preponderance
Of agonistic Austrians young and old.
One fought as if inspired;
Even yet has not retired.
And now the sordid story must be told.
- II. Some talk of Alexander,
And some of Hercules,
Of Hector and Lysander and such great
names as these
But of all the world's great fighters
There is none that can compare
To a tall, thin, lanky Austrian
Our own Reinhard Rieger.
- III. Reinhard had a little pet
As pure as clean fresh snow
And everywhere that Reinhard went
The pet was sure to go.

This pet he had was not a lamb
but a pet theory;
That all the world is of two parts
Supported by homology.
- IV. Now Reinhard is a diehard
and as stubborn as can be
But the error is of Sterrer
as is plain for all to see.
- V. For they cannot classify properly
They do not know monophyly
And can make a weird and fun-filled
family tree
But there's always Peter Ax
To point out all the facts
Their tree said he is untrue history.
- VI. So Reinhard swore and smote the ground
His nostrils flared his eyes rolled
round
His lower lip hung past his chin
With a terrible roar he did begin.
- VII. "These are the facts" he screamed at us
His hands waved o'er his head.
His face was white, so bloody white
We believed him almost dead.
- VIII. "These are the facts" he screamed
once more
"Or I am going insane,"
And Ian and Tor and Peter,
Agreed, and asked again.
- IX. "If all the world is in two parts
As you claim so frequently
Why cannot you be sensible and
See the same for homology
- X. "Some likenesses are primitive
Some others are derivative
And if you group but on the first..."
We were silenced by an expletive.
- XI. "These are the facts" he screamed again
His lips were all a quiver
He gave a cough, his thought broke off,
And floated down the river.
- XII. "These are the facts you bloody fools,"
and he turned to Olav Giere,
"Can you not convey to them," he asked
"All I want is another Beer."

Limericks

by Robert P. Higgins

- A Yankee turned Scott named Hummon
new gastrotrichs from Lock Ewe did summon
They were very frisky
so he preserved them in whisky
while singing "Through the Rye I am Commin'".
- A gnathostomulid has bitten Wolf Sterrer
A worm with such jaws is not fairer
So we gave him a prescription
for a species description
and a story to create public terror

"More swizzle!" the nematologist cried
The next morning t'was rumoured he'd died
But as his colleagues suspected
he was soon resurrected
and came back on the next morning's tide.

Meeting Report (cont.):

Limericks
by P.J.S. Boaden

There was a fellow called Ian
Who believed in things Hennigean
He described all his worms
In the complexest of terms
Like homologo-syn-aporean.

There was a distinguished Innsbrucker
Who was really quite a good looker
Please birds on the beach
Keep out of the reach
Of his ecophysiological cooker.

Ed and Bill went out for some hikes
But crashed into three men on their bikes
Each swallowed three wheels
Now they've learnt how it feels
To be tender with gasterotrikes.

No good source should be left out to waste
But in rather small boxes encased
For if anyone can
Sebastian's the man
To tell us how nematodes taste.

Duane should have learnt from his own
microscope
That at swizzles he just couldn't cope
For if you haven't a gut
You're bound to go fut
And then you'll be left without Hope.

ENVOI TO BRIGITTE

There are no rhymes for Tisbe
Which makes me rather sad
For I always thought crossbreeding
Meant doing it like mad.

New Newsletter: A new newsletter, "TANAIDACEA NEWS" has been initiated. Number 1 was published in September 1975. Those interested in receiving the Newsletter should contact the Editor:

Dr. Jürgen Sieg
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Joint Committee for Systematic Resources in Invertebrate Zoology

The American Society of Zoologists has been awarded a grant from the National Science Foundation to support the Joint Committee for Systematic Resources in Invertebrate Zoology (not including entomology and protozoology). Members of the Committee are: Welton L. Lee (Chairman), Dennis M. Devaney, William K. Emerson, Virginia R. Ferris, Charles W. Hart, Jr., Eugene N. Kozloff, Frederic H. Nichols, David L. Pawson, Dorothy F. Soule, and Robert M. Woollacott.

The goals of the Committee are the following: (1) to determine the nature of the resources in systematic invertebrate zoology in the U.S.A., (2) to identify problem areas in both resource management and collection utilization, (3) to summarize the state of current resources in systematic invertebrate zoology, and (4) to prepare and publish a report which will include recommendations for the effective use of the resources in the fulfillment of scientific and societal goals, as well as consider support for systematic programs in an organized framework. The Committee's final report will include an outline for a National Plan for Resource Utilization and Management. To this end, a questionnaire is being sent to known systematists, those who use invertebrate collections in their work, and those concerned with curatorial duties.

The Committee recognizes that its ability to determine who is working on what groups-particularly among students and relatively new investigators-is limited. Similarly, it will be difficult to determine the extent and location of the many small but important collections.

If you do not receive a questionnaire, and are working with the systematics of any invertebrate group, except protozoans and insects, or know of any collections that may not be widely known, please write to:

Dr. Welton L. Lee, Chairman
Dept. of Invertebrate Zoology
California Academy of Sciences
San Francisco, California 94118

RECENT LITERATURE

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