

October 1977

Again the newsletter is a few months delayed; my excuses are the same as in A.N. 8. I hope the quality has not suffered. Jim Lowrey's contribution on the life and works of Charles Chilton will no doubt be a most welcome aid for many of us, and Mike Thurston has written a thoughtful essay on regional amphipod faunas. There is also further news on the forthcoming Gammarus/Niphargus symposium in Virginia; and the promised updated list of subscribers, as well as the usual columns and bibliography.

The regional editors have been listed in AN 8, and the system functions very well. I am especially grateful to Les Watling for most effective assistance.

The deadline for A.N. 10 will be 1. december 1977.

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May 1978

Due to problems with Zoo-Tax, Wim Vader was unable to get AN 9 printed, so I am having it printed here at the University of Maine. AN 10, and probably future newsletters, will be printed here also. You should continue to send your news, dues, etc. to your regional editor or to Wim directly.

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A BIBLIOGRAPHY AND LIST OF THE AMPHIPOD SPECIES
DESCRIBED BY CHARLES CHILTON (1860 - 1929)

Jim Lowry, The Australian Museum

Charles Chilton was born in Hereford, England, but grew up on a farm in East Eyreton, New Zealand. Probably because he lost a leg at an early stage it was decided that he would not be a farmer like his father. Consequently he attended Canterbury College in Christchurch, New Zealand, where he gained a BA in 1880 and an MA in 1881. In 1886 he received the first New Zealand BSc from Otago University, Dunedin, and in 1893 the first New Zealand DSc. He later took a medical degree at Edinburgh University. From 1910 to 1928 he was Professor of Biology at Canterbury College, and became Rector of the College in 1921. In 1907 he led the Canterbury Philosophical Society Expedition to the New Zealand Subantarctic Islands and edited the two volume expedition results. A more detailed account of his life can be found in the obituary written by his friend and colleague G.M. Thomson (1930, Trans. Proc. N.Z. Inst., 60(4) : 587-589). Recently D.E. Hurley (1975, N.Z. Nat. Her., 3(43) : iii) has written a biographical sketch of his life.

Chilton published about 130 scientific papers during his career. Although this work covered a wide range of Crustacea the majority dealt with amphipods and isopods. He published 71 papers on amphipods of which 24 contain new species descriptions. Nearly half of the 51 new species he described are in the families Gammaridae and Talitridae. More than half of his described species come from the New Zealand area, but he also worked on marine amphipods from the Antarctic, and marine and freshwater species from Australia, India and the Phillipines. Chilton's early taxonomic work is considered sound, but after his stay in the British Isles his taxonomic philosophy changed dramatically and he became a proponent of wide ranging, variable species. During this time, as Hurley (1975, Ibid.) says, "he searches for reasons to avoid describing species". However, regardless of this criticism, Chilton's work forms the basis of New Zealand amphipod systematics, a basis superbly developed by D.E. Hurley and J.L. Barnard. Chilton's books and bound reprint collection of over 50 volumes are housed at the University of Canterbury, Christchurch, New Zealand. The majority of his amphipod collection is deposited at the Canterbury Museum, Christchurch.

List of the new genera and new species described
by Charles Chilton. New genera are listed in
upper case.

<u>New Species</u>	<u>Date</u>	<u>Present Name</u>
Acanthonotozomatidae		
<u>Acanthonotozoma australis</u>	1912a	<u>Bathypanoploea australis</u>
Amphilochidae		
<u>Cyproidia otakensis</u>	1900a	<u>Neocyproidea otakensis</u>
Ceinidae		
<u>Nicea egregia</u>	1883	<u>Ceina egregia</u>
Corophiidae		
<u>Corophium lendenfeldi</u>	1884d	<u>Haplocheira lendenfeldi</u>
<u>Eurystheus persetosus</u>	1921c	<u>Gammaropsis persetosus</u>
<u>Grandidierella gilesi</u>	1921d	
<u>PARANAENIA typica</u>	1884d	<u>Gammaropsis typica</u>
<u>Podoceropsis insignis</u>	1925b	
Dexaminidae		
<u>SYNDEXAMINE carinata</u>	1914	
Eophliantidae		
<u>BIRCEENNA fulvus</u>	1884d	
Eusiridae		
<u>Atyloides calceolata</u>	1912a	<u>Schraderia gracilis</u>
<u>Calliope subterranea</u>	1882b	<u>Paraleptamphopus subterraneus</u>
<u>Eusirus splendidus</u>	1912a	<u>Eusirus perdentatus</u>
<u>Haliragoides australis</u>	1912a	
<u>Moera incerta</u>	1883	<u>Maera incerta</u>
<u>Panoploea translucens</u>	1884d	<u>Apherusa translucens</u>
Gammaridae		
<u>Crangonyx compactus</u>	1882b	<u>Paracrangonyx compactus</u>
<u>Elasmopus bollonsi</u>	1915	
<u>Elasmopus neglectus</u>	1915	
<u>Gammarus barringtonensis</u>	1916c	<u>Paramelita barringtonensis</u>
<u>Gammarus fragilis</u>	1882b	<u>Phreatogammarus fragilis</u>
<u>Moera festiva</u>	1884a	<u>Melita festiva</u>
<u>Neoniphargus westralis</u>	1925c	<u>Uroctena westralis</u>

New Species	Date	Present Name
<u>Niphargus australiensis</u>	1923c	
<u>Niphargus chilkensis</u>	1921d	<u>Eriopisa chilkensis</u>
<u>Niphargus indicus</u>	1923a	<u>Neoniphargus indicus</u>
<u>Niphargus philippensis</u>	1920c	<u>Eriopisa philippensis</u>
<u>Phreatogammarus helmsii</u>	1918a	
<u>Phreatogammarus propinquus</u>	1907	
Eriidae		
<u>Ischnopus neozealanicus</u>	1897	
Ischyroceridae		
<u>Podocerus frequens</u>	1883	<u>Ventojassa frequens</u>
<u>Podocerus latipes</u>	1884d	<u>Ventojassa frequens</u>
Liljeborgiidae		
<u>Idunella chilkensis</u>	1921d	
Lysianassidae		
<u>Alicella scotiae</u>	1912a	
<u>ENDEVDJRA mirabilis</u>	1921c	
<u>Glycerina affinis</u>	1894a	<u>Amaryllis macrophthalma</u>
<u>Orchomenopsis coatsi</u>	1912a	<u>Pseudorchomene coatsi</u>
Sebidae		
<u>TETRATICUM typicum</u>	1894d	<u>Seba typica</u>
Stegocephalidae		
<u>Cyproidea crassa</u>	1883	<u>Tetradeion crassum</u>
Stenothoidae		
<u>Thaumatelson inermis</u>	1912a	<u>Prothaumatelson nasutum</u>
<u>Thaumatelson walkeri</u>	1912a	<u>Antatelson walkeri</u>
Talitridae		
<u>Hyale grenfelli</u>	1916a	
<u>Hyale saldanha</u>	1912a	
<u>Hyaella mihiwaka</u>	1898	<u>Chiltonia mihiwaka</u>
<u>Orchestia bollonsi</u>	1909a	
<u>Orchestia miranda</u>	1916c	
<u>Parorchestia improvisa</u>	1909a	<u>Orchestia improvisa</u>

New Species	Date	Present Name
<u>Parorchestia insularis</u>	1909a	<u>Orchestia insularis</u>
<u>Parorchestia maynei</u>	1909a	<u>Orchestia maynei</u>
<u>Parorchestia parva</u>	1909a	<u>Orchestia parva</u>
<u>Talorchestia sinensis</u>	1925a	

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_____ 1884c: Moera petriei (G.M. Thomson). New Zealand Journal of Science 2:230-231.

_____ 1884d: Additions to the sessile-eyed Crustacea of New Zealand. Transactions and Proceedings of the New Zealand Institute 16:249-265.

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REVIEW

Guide to the benthic marine amphipods of southern Africa, by Charles Griffiths
Cape Town, Trustees of the South African Museum, 106 pp, 1976.

by Michael H. Thurston

The immense increase in ecological studies in recent years has led to a corresponding increase in the demands made on taxonomists for the identification of specimens. At the same time the low priority or even active antagonism given to teaching and financial support of taxonomy throughout the world has led to a shortage of taxonomists. In a number of "difficult" but commonly occurring groups, of which the Amphipoda are a prime example, many taxonomists receive more requests for assistance than they can cope with. That most taxonomists have other responsibilities-administrative, ecological and so on- only compounds the problem. The increasing number of synecological papers dealing in part or in whole with supra-specific taxa is a reflection of the shortage of taxonomists and taxonomic ability.

The well-documented shallow-water amphipod faunas of the North Atlantic and Mediterranean lend themselves to the production of comprehensive regional faunal guides. Such faunal guides enable non-specialists to identify their collections with some accuracy, although it should be emphasised that even in these areas undescribed species and unresolved taxonomic problems still exist. In less well-known areas these difficulties are compounded and the pitfalls of producing and using a faunal guide are greatly increased. There comes a point at which a faunistic compilation for a fragmentarily known fauna can be counter-productive except as a working guide to a specialist. The temptation to publish a regional fauna at too early a stage in the knowledge of that fauna is one which should be resisted despite the pressures of frequent requests for identifications of material by non-specialists. Once a faunal guide has been justified, produced and published, the author can have no direct control over how it is used by non-specialists. As the way in which such a fauna is produced can have a considerable indirect bearing on the quantity and quality of data which it generates, the initiating responsibility is a heavy one.

With these strictures in mind, the recently published "Guide" can be assessed. The introduction begins with a brief justification for producing such a guide, emphasizing the scattered nature of the relevant literature and the problems that this poses. A short account of the historical background to studies within the area is followed by notes on collection, preservation and examination techniques together with,

for the uninitiated, an explanation of how to use the identification keys. The main body of the "Guide" begins with diagnoses of the Amphipoda and the four sub-orders, and diagrams to illustrate amphipod morphology. A key separating those families recorded in the area is accompanied by a warning against its use in other areas. Each family is diagnosed and the relationships with allied families discussed briefly. One or more keys are provided enabling specific identifications to be made. Thumb-nail sketches of the diagnostic characters of most of the 300 or so species gammarids and caprellids considered clarify the keys. Appendices include a check list of recorded species together with taxonomic and geographical data, and a glossary of terms used.

Reference to the five papers by Griffiths which led up to the "Guide" and the brief reference in the "Guide" itself make it clear that the sampling cover is hardly adequate for so great a region. With the exception of the Cape Province area samples are sparse and very patchily distributed. Estuarine and littoral habitats have been more adequately sampled than have sublittoral areas, particularly those beyond the continental shelf. The geographical area nominally covered—southern Africa south of ca. 20° S, littoral to 1000 m—seems over-optimistic. At the present state of knowledge narrower limits, both geographically and bathymetrically, probably would have been more appropriate, and would have prolonged the potential useful life of the "Guide".

The "Guide" is commendably free from errors, and those few which do exist are mostly typographical and unlikely to cause confusion. The J.L. Barnard reference on p. 74 is to the 1962 publication, not 1972 as printed, and on p. 91 the Griffiths (1975) reference deals with material from west of Cape Agulhas. A map of the region covered is provided, and it is a minor irritation that some of the localities mentioned in both text and Appendix are not included on it. This is probably of little concern to local users, but foreign workers will find it something of a nuisance. It is curious, in the section on sexing amphipods that no mention is made of the male genital papillae, surely a useful means of separating the sexes. Storing amphipods particularly caprellids and long-legged or spinous form in tubes with cotton-wool plugs is not to be recommended; plastic or polystyrene tubes, or cotton wool plugs wrapped in tissue paper are more satisfactory. Such closures greatly reduce the likelihood of entanglement and subsequent damage to delicate specimens. The addition of an index would have been advantageous.

These rather minor criticisms do not significantly detract from the value of the "Guide" which will be invaluable to any worker concerned with the

benthic amphipods of South Africa and will surely fulfill the professed aim of stimulating further investigation of the group. At a price equivalent to £ sterling 1.70 (about 3 U.S. dollars) it will be within the price range of most likely purchasers.

FOURTH INTERNATIONAL COLLOQUIUM ON GAMMARUS AND NIPHARGUS
AND SECOND INTERNATIONAL SYMPOSIUM ON GROUNDWATER ECOLOGY
BLACKSBURG, VIRGINIA, U.S.A. --SEPTEMBER 10-16, 1978

June 1977

2nd Circular Letter

Dear Colleagues:

We are happy to inform you that there were 85 responses from 20 countries to our first circular letter regarding the 1978 conference in Blacksburg. The objective of the second circular letter is to bring a number of important items to your attention.

1. In summarizing the responses for the amphipod section of the conference, we noted a strong interest for systematics, ecology, physiology, and ethology and some interest for genetics. An interest also was expressed in having papers in subterranean and/or groundwater related amphipod genera other than Niphargus and Gammarus. Numerous subterranean amphipod genera were mentioned and papers on them are encouraged for the conference (e.g., Cranqonyx, Stygobromus, Bogidiella, Ingolfiella, Hadzia, Synurella, etc.).

For the groundwater section of the conference, a number of interesting topics were suggested. Among them were papers on: a) isopods, bathynellids, harpacticoid copepods, thermosbaenaceans, miscellaneous subterranean crustacean groups, water mites, nematodes, etc.; b) pollution, population and community ecology of groundwater ecosystems; c) dispersal and zoogeography; d) phreatic water faunas of different parts of the world; and e) biological ramifications of physico-chemical changes in groundwater habitats.

Some of you also suggested topics for informal evening discussion sessions and these have been condensed into five basic categories: a) Comparison of regional groundwater faunas, such as the Mediterranean-Caribbean areas; b) Strategies for the protection of endangered and threatened groundwater species and ecosystems; c) Revisionary concepts of gammaroidean amphipod taxonomy, with emphasis on ancestral and derived characters, evolutionary patterns, and creation of higher taxa; d) Ecological classification of

groundwater fauna and standardization of groundwater biotope and ecosystem terminology; and e) Sampling techniques for groundwater fauna. Plans are being made for these discussion sessions to be held during the conference.

2. Preliminary Call for Papers: As a convenience to registrants, abstracts of the papers to be presented at the conference will be reproduced (as written), collated and distributed at registration. Abstracts are for information only and will not be considered as formal publication.

Deadline for receipt of both titles and abstracts will be 31 May 1978. Titles without abstracts will not be accepted. Any titles and abstracts received after 31 May 1978 will not be included in the conference.

Rules and regulations for preparation of abstracts must be strictly adhered to and are as follows:

- a) Written in English, French, or German.
- b) Typewritten, double-spaced on one side of a single page corresponding to the example attached. The text of the abstract must be confined to the space and should not exceed approximately 200 words.
- c) Abstracts should be sent to: Dr. Arthur L. Buikema, Jr.

Preparations are being made for publication of papers given at the conference. Details will follow in the 3rd circular letter. Manuscripts to be considered for publication will be due during the week of the conference. Papers not received at this time will not be published in the conference proceedings.

A final proposal has been submitted to the National Science Foundation for partial support of the meeting and money for travel grants to support primarily our eastern European colleagues. The chances for funding appear good to excellent, but we probably will not have final approval for funds until approximately six months prior to the meeting.

4. We would like to bring to your attention the possibility for post-conference field trips and pre-or post-conference visitation to North American museums.

- a) Arrangements for visiting the National Museum of Canada can be made by contacting Dr. E.L. Bousfield, National Museums of Canada, Museum of Natural Sciences, Ottawa, KLAOM8, Canada.

For the Smithsonian Institution, contact Dr. J.L. Barnard or Dr. T.E. Bowman, Department of Invertebrate Zoology, National Museum of Natural History, Smithsonian Institution, Washington, D.C., U.S.A.

- b) Two field trips are being planned as follows:
- (1) A two-three day excursion to see selected caves and karst groundwater habitats in the Powell Valley of southwestern Virginia. This area is about 200 miles west-southwest of Blacksburg. The trip will be led by Drs. D.C. Culver and J.R. Holsinger. For further details please contact Dr. Holsinger.
 - (2) A two to three day excursion to the Great Dismal Swamp and the Coastal Plain of southeastern Virginia. This area is about 300 miles from Blacksburg. This trip will be led by Drs. A.L. Buikema and H.G. Marshall. For further details, please contact Dr. Buikema.

Both areas are near airports with connecting flights to other major points in the U.S.

5. A number of people have requested a letter of invitation to facilitate obtaining permission or a subsidy to attend the conference. If you desire a letter of invitation, please contact Dr. Buikema.

6. A third circular letter will be mailed to you in February 1978. Included will be a final call for papers, information on manuscript format for publication, information on housing and meeting accommodations, and details on travel to Blacksburg.

With best regards,

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ABSTRACTS OF UNPUBLISHED THESES

1. Ecologie et échantillonnage des populations hyperbenthiques d'amphipods gammaridiens d'un écosystème circalittoral de l'estuaire maritime du Saint-Laurent

par

Michel BESNER

Département des sciences biologiques, Faculté des arts et des sciences, Université de Montreal, Canada

Mémoire présenté à la faculté des études supérieures en vue de l'obtention de la maîtrise en sciences biologiques. Septembre 1976.

Mémoire constitué de trois articles autonomes et distincts

Le traineau hyperbenthique macer-giroo: adaptation pour l'échantillonnage quantitatif étage de la petite faune nageuse au voisinage du fond..... 1- 46

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An abstract of the thesis of

2. Weldon S. BOSWORTH, Jr. for the degree of Doctor of Philosophy
in Zoology presented on April 30, 1976

Title: Biology of the Genus Eohaustorius
(Amphipoda: Haustoriidae) on the Oregon Coast

Abstract approved: Jefferson J. Gonor, Ph. D.

This study has identified several ecological and physiological differences between four species of the genus Eohaustorius inhabiting the sandy beaches on the central Oregon coast. This study has also documented several population characteristics which not only contribute to the successful maintenance of populations in a rigorous environment but also may act in concert with the ecological and physiological differences to reduce competition between them. In addition, this study has identified several adaptations that serve to separate the niches of Eohaustorius spp. from the other abundant malacostracans.

The four species, Eohaustorius washingtonianus, E. brevicuspis, E. sawyeri and E. estuarius, although found in close proximity throughout most of their geographic range have their maximum abundances in different portions of the sandy beach habitat. E. estuarius is most abundant in brackish water habitats; E. brevicuspis in the high and mid intertidal regions on exposed beaches; E. washingtonianus in the low intertidal and shallow subtidal in both exposed and sheltered habitat, and E. sawyeri in the shallow subtidal on exposed coasts.

The principal differences between the four species included adult size; brood size and total fecundity; timing of the reproductive cycle; density; intraspecific dispersion; salinity and temperature tolerance; and predators.

It was also determined that subtle distributional characteristics within E. brevicuspis probably act to both increase reproductive potential by decreasing the probability of interspecific matings, and to also maximize the protection of brooding females. Results of this study also suggest that the peak reproductive period of these species coincides with the time of greatest habitat instability when potential for dispersal to new habitats is greatest. During this time productivity is also at its highest and newly released juveniles would have the advantage of having a readily available and abundant food supply.

Lastly, this study has verified that these four congeners warrant species rank not only because of their morphological differences but also because of their reproductive isolation.

3. The Origin and Distribution of Shallow Water Gammaridean Amphipoda in the Gulf of Mexico and Caribbean Sea with Notes on Their Ecology.

Larry Don MCKINNEY, Biology Department, Texas A&M University, College Station, Texas 77843 ((713) 845-6133 ext. 62), USA.

Present study details the occurrence, distribution and origins of shallow water marine gammarideans in the Gulf of Mexico and Caribbean Sea. One hundred and forty species are diagnosed or discussed and keys to the families, genera and species are provided to further distinguish them. Twenty three new species are described and fully illustrated. They include species of the following genera: Amphilochus (2 species), Ampithoe, Alpheus, Ceradocus, Corophium, Eriopisa, Eusiroides, Gammaropsis, Gitanopsis, Lejobergia, Listriella (3 species), Maera, Megaluropus, Netamelita, Parameiopella, Photis (2 species), Platvischnopus, Polycheria, and Seba.

The emphasis of study was the ecological grouping of epiphytic amphipods generally associated with either of two series of habitats (biotopes): (1) general soft bottom areas dominated by the physical substrate, or (2) special habitats dominated by a complex biological community on hard substrate or a biological substrate. The first series included: bays, lagoons, intertidal zones, and subtidal areas. The second series included: coral, serpulid and oyster reefs, tropical and temperate grass flats, submerged offshore banks, and offshore artificial substrates. 430 pages, 3 figures, and 48 plates.

Limited number of copies (20) will be available after July 1, 1977. The copies will cost \$25 each (includes handling and postage). Prepayment required. (See address, etc. above.)

Summary of my Doctoral in Biology Thesis, presented at the Biology Institute of Bucarest, S.R. of Roumania, last November 1976, with Prof. Traian Bacescu as tutor.

Manolo ORTIZ

Contribution to the knowledge of the Gammaridean Amphipods of the Western Cuban Platform.

The scientific results obtained during 1972-1975 regarding the Benthic Gammaridean Amphipods of the Western Cuban Platform are pointed out. They include original determination keys and figures for the 25 families,

41 genera and 73 amphipod species found (one new genus, Pseudoamphithoides, and five new species, Tropichelura gomezi, Pseudoamphithoides bacescui, Nuuanu(.....)muelleri, Mallacoota carausui, and Heterophlias seticoxa. A quantitative analysis of the amphipod biomass was made using Brillouin's diversity index and the test "T" of Student, supplemented with the analysis of the inter-specific relationships of the amphipods, the symbiotic amphipods, the wood boring amphipods, the amphipods as stomacal contents of several Cuban fishes, the benthic amphipod distribution according to the most important Cuban biotopes, and a zoogeographical discussion of the most important found species. Finally, a summary of the history of amphipod research all over the world, and in the Caribbean and the Gulf of Mexico is also given.

REQUESTS FOR INFORMATION etc.

Cheluridae

I should like to correspond and/or exchange material with interested workers in the Florida Keys, Bahamas, and Caribbean area. I would also like to have a series of Tropichelura, Chelura, and Nippocheilura from anyone who can spare some specimens. I have found an apparently new species of Tropichelura in the Florida Keys which I believe has recently been described as T. gomezi by Ortiz working in Cuba. I feel the initial description was not completely adequate and am planning a redescription if I can obtain the typematerial on loan.

James D. THOMAS

NEWS FROM COLLEAGUES

- Ferry L. BARNARD: I have recently visited Australia and Africa before returning to the Smithsonian Institution in mid-December 1976. My three month stay with Margaret Drummond at Victorian Fisheries in Melbourne was most productive. She has discovered the occurrence of Cheirocratus- like genera (3) in Tasmania and we are planning to work these up very soon. We worked up most of the taxa in the Urohaustorius group (16 so far) and made plans to cover many more segments of her vast collections in the next two years of study; the primitive Oedicerotids, Paracalliope and relatives, the remaining gammarid groups.
- Edon S. BOSWORTH, Jr: My Ph.D. dissertation entitled "Biology of the genus Eohaustorius (Amphipoda: Haustoriidae) on the Oregon coast" was completed and defended at Oregon State University last April (see abstract on p. 17). Presumably it will be available through University Microfilms in the near future.
- Thomas E. BOWMAN: Work in progress- 1. Revision of genus Prinno (Hyperiidia: Phrosinidae). Now considered monotypic, but actually contains at least 3 species. 2. Description of new terrestrial Orchestia from Galapagos islands.
- Gerre BRUNEL: He is presently enjoying a "semi-sabbatical", and hopes to complete a number of papers for publication. Of his students, Michel Besner completed his Master's Thesis; this consists of three papers, which are available on loan (See p. 16).
- Arthur L. BUIKEMA Jr: My students and I are currently working on an isolated spring form population of Gammarus minus minus. In this population the maximum size is 9 mm with an average adult size class of 6 mm. Reproduction occurs all year. All adult females have male genital papillae. By scanning EM and serial sections we are investigating the possibility that this population may be protandrous. Depending on the apparent sex of the animal, it appears that the papillae also may function both as oviduct and vas deferens.
- Kenneth H. BYNUM: I have finished a multivariate analysis of ecotypic variation in Caprella penantis in North Carolina. Principal variation is in size and robustness of the body and seems to be related to degree of wave exposure. In the future I hope to extend this study over broader geographic area, and perhaps also to look at life history variation along the east coast of the United States.

Edsel CAINE is studying the reproduction, dispersion and community interaction in caprellids.

James R. CHESS: Our major effort during '72-'75 concerned trophic relationships of organisms (assemblages) and their fish predators. Analysis of these data continues and we hope to have the ms completed by spring 1978. Our field work is now centered on the subtidal communities off Northern California. I visualize many interesting problems with amphipods from this area.

William J. COOKE: I am a graduate student at the University of Hawaii, in the Zoology Dept, and also a taxonomist at the Marine Environmental Management Office of the Naval Ocean. Systems Command of the U.S. Navy. In the course of our studies, we accumulate a large amount of amphipod material, including at least one new species recently. I would very much like to hear of any European workers on Indo-Pacific amphipods.

Robert A. CROKER: Research of myself and students includes: RAC-1) Long-term studies of structure and dynamics of marine sand communities, particularly dominant haustoriid amphipod components 2) Autecological studies on Melita nitida 3) Differentiation of spatially separated populations of Gammarus species. Richard HAGER.- Completion of Ph.D. thesis on Amphiporeia virginiana, including life history, behaviour and pelagic occurrence, and distribution related to physical factors. Manaf BEHBEHANI (from Kuwait) - Ph.D. thesis work on Orchestia platensis, including life history and ecology, development, and structure of associated wrack community. Clare McBANE - Ph.D. thesis work on Hyale nilssoni, including life history and ecology, fine structure of selected sensory structure, and amphipod-algal associations.

H.J. DADSWELL: I am currently working on the fauna of Passamaquoddy Bay (Bay of Fundy), with special interest in amphipods and mysids.

John DICKINSON has just completed his Ph.D. thesis on the distribution of gammarid amphipods in abyssal waters off Oregon. He is presently working on seasonal fluctuations and depth zonation of gammarids on the outer shelf of the Beaufort Sea.

Mary W. DICKSON: Papers in press 1. The importance of cave mud sediments in food preference, growth and mortality of the troglobitic amphipod crustacean Cranonyx antennatus Packard (Crustacea) 2. (J.R. Holsinger & S.W. Dickson) Burrowing as a means of survival in the troglobitic amphipod crustacean Cranonyx antennatus 3. MS thesis (see A.N.8.p.15)

- raida I GREZE: In 1977 I'll begin preparing for the press another monograph "A key to the amphipods of the Ukrainian SSR".
- rzysztof JAZDŻEWSKI: Paper in press (with Ewa Brzezińska-Braszczyk): Reproductive cycle of Gammarus fossarum Koch in Panzer (Crustacea, Amphipoda) in different thermic conditions. Papers in preparation: 1. a paper on the respiration of some antarctic Amphipoda, i.a. Parathemisto gaudichaudii, Eusirus perdentatus, Byblis securiger (with K.W. Opalinski) 2. A paper on the amphipods collected by 3 recent Polish antarctic expeditions (with Cl. De Broyer).
- am S. JOHNSON: The chapter "Crustacea Peracarida" for the series "Reproduction in Marine Invertebrates" (A.C. Giese & J.S. Pearse, eds, Academic Press) is complete and will hopefully go to press in 1977.
- R. LAUBITZ: My Dulichia paper is in press, and I am hoping to get something written on a small collection of Beaufort sea gammarids. I also try to find time for a collection of subantarctic caprellids, of much interest to me.
- y LEWIS: I began graduate work with John Holsinger in fall 1976 and plan to do thesis research on the systematics of the cave species of Crangonyx in the interior low plateau region of the United States.
- MAURER: Results of an ocean outfall survey in Delaware coastal waters showed the nearshore waters to be dominated by Acanthohaustorius millsii and A. intermedius, and the midshore habitat by the above two species plus Parahaustorius attenuatus, P. holmesi, P. longimerus and Protohaustorius wigleyi. P. longimerus was the dominant species in shoal environments.
- are MCBANE (see also sub CROKER): I am currently studying the ecology of Hyale nilssoni on New Hampshire open coastal and estuarine shores. In addition, the coexistence of this species with H. plumulosa at Nobska Beach, Massachusetts is being investigated.
3. RHODES: I have recently collected some specimens of Ingolfiella sp. from 4-5 m depth just off the east coast of Florida (Hutchinson Island, 27° 20' N, 80° 12' W). I would like some help in identifying them as they are probably a new species. They were collected from a shell hash and sand bottom with a Shipek grab.
- ilip B. ROBERTSON: I have recently become involved in studies in the systematics and ecology of haustoriid amphipods in the Gulf of Mexico.

- Herman O. SANDERS: I am interested in amphipod culturing in the laboratory, particularly Gammarus.
- Craig STAUDE has just completed a two year survey of 5 Puget Sound beaches and is now working on a baseline survey (intertidal- 10 m) of the Strait of Juan de Fuca (seaward of Puget Sound).
- Les WATLING: My work on the peracarids of the continental shelf off the state of New Jersey is coming along well. Thus far I have identified over 70 species of amphipods, of which there are 13 new species and 1 new genus. Good sediment and other ecological data are being taken by the Virginia Institute of Marine Science and this will be available. Beginning this spring I will be handling the amphipods from a similar study in the George's Bank region, all of which will improve our understanding of amphipod distribution along the east coast of the U.S. considerably.
- D.J. WILDISH: From 1st August, 1977, for approximately 1 year, I will be on sabbatical leave in the University of Aberdeen. The address is:
- University of Aberdeen
c/o Department of Microbiology,
Marischal College,
Aberdeen, AB9 1AS
Scotland

The purpose of the visit is to conduct joint experimental work with Dr. N.J. Poole on the ecology of the sediment/water interface and for me to learn some microbial techniques. Of particular interest to us is the "sparing effect" macrofauna have on the development of anoxic conditions in sediments. Important in the Bay of Fundy for this are Pontoporeia femorata and Casco bigelowi.

Not much of my recent work has been concerned with amphipods, although a recent review, now available (Wildish, D.J. "Biased sex ratios in invertebrates", to be published in "Advances in invertebrate reproduction" with other contributions given at the International Symposium on Invertebrate Reproduction held in Kerala, India, 1975 (1977)), and bibliography (Wildish, D.J. "A selected bibliography of invertebrate sex ratio data" Fish. Mar. Serv. Res. Dev. Tech. Rep. 630, 1976, 37 p.), owe their existence to my graduate work interest in sex ratio of Orchestia (Talitridae). The review attempts to encourage an experimental interest in the dynamics and demography of sex ratio. Amphipods are excellent subjects for such an attempt and I would welcome correspondence from anyone embarking on such a venture.

MAJOR AMPHIPOD COLLECTIONS

The Amphipod collection of the Zoological Museum Hamburg-Zoologisches Museum der Universität Hamburg—mainly consists of Gammaridea. During the Second World War the whole collection of the Zoological Museum was stored outside. In that way the collection of Amphipoda has been damaged and decimated, too. Today the collection of gammaridean Amphipoda includes 31 families with 369 species. Typematerial is present of 102 species and 11 subspecies.

The species are spread among the following families: Acanthonotozomatidae (8 species), Ampeliscidae (22), Amphilochidae (1), Ampithoidae (5), Atylidae (6), Calliopiidae (9), Cheluridae (1), Corophiidae (47), Dexaminidae (5), Eusiridae (25), Gammaridae (68), Haustoriidae (12), Hyalellidae (3), Hyalidae (6), Hyperiopsideae (1), Ischyroceridae (8), Leucotoidae (2), Liljeborgiidae (4), Lysianassidae (37), Melphidippidae (1), Oedicerotidae (24), Paramphithoidae (4), Pardaliscidae (4), Phoxocephalidae (10), Pleustidae (9), Podoceridae (9), Sebidae (1), Stegocephalidae (8), Stenothoidae (11), Synopiidae (1), Talitridae (17). This list is based on nomenclature and systematics according to BARNARD (1958, 1969, 1973), BAZIKALOVA (1945), BULYCHEVA (1957), and GURJANOVA (1951).

The collection of Gammaridea predominantly includes material of European and adjacent seas, the Atlantic, and Lake Baikal. The Material encloses the collections of DYBOWSKY (Lake Baikal 1871), "I. Deutschen Polarstation 1882/1883" (South Georgia), KUKENTHAL (Spitzbergen), MICHAELSEN (Westcoast of Africa, Subantarctic), and last but not least a part of the "Typensammlung G.O.Sars". Furthermore the collection includes material sampled by captains (e.g. HUPFER, KOPHAMEL, and PAESSLER). Reviser of the collection was above all SCHELLENBERG.

A paper "Verzeichnis der Typen aus der Sammlung Crustacea der Zoologischen Instituts und Zoologischen Museums der Universität Hamburg. Amphipoda, Gammaridea" (by ANDRES & LOTT) is in press.

LIST OF SUBSCRIBERS

I hope the addresses in this list are reasonably correct; if not, it is mostly your own fault, as I have copied earlier addresses in all cases where I did not receive corrections. Danièle Dumay and Mr. Fearn-Wannan are omitted from the new list, as they are apparently no longer working on amphipods.

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The review of Tzvetkova's book has to be postponed once more. Mike Thurston's review of Charles Griffith's book on S.African amphipods appears elsewhere in this issue.

Claude De Broyer and Jan Stock have again assisted by sending references, and, starting from this issue, Iraida Greze has sent lists of recent Russian papers, a very welcome addition. I am still waiting for offers to help me with "subterranean literature", Japanese and South American national journals, and the C.R. Acad. Sci. Paris, all of which are of difficult access to me.

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LAST MINUTE ADDITIONS

News from colleagues

Jim LOWRY: I have had a good response for Cerapus material and am getting on with the job. The New Zealand paper will be ready for submission soon and the Australian material is next on the list. No species appears to overlap between the two areas.

We are also getting quite a lot of work done on Zealand and Subantarctic amphipods now in my lab and should be submitting some work from that project soon.

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must present the following qualities. 1 Tmax=22°C (for a short time 25°C), 2. p O₂min.= 50 mm Hg, 3. V/optimal= about 5 cm/sec.; v must never be 0 cm/sec.).

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LAST SECOND ADDITIONS

New subscriber

Dr. K.K. SASIDHARAN
 Research Scholar
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 India

Dr. Sasidharan is working on marine Gammaridean Amphipoda, and envisages a taxonomic survey of marine Gammaridean Amphipoda along the southern coast of India.

Change of address

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A NEW SOCIETY FOR MARINE BIOLOGISTS

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A Society to promote interest in the ecology and distribution of marine fauna and flora in the N E Atlantic. Its name is derived from the surveying vessel "Porcupine" engaged in 1869 and 1870 on scientific expeditions in the N E Atlantic and Mediterranean, and which gave its name the Pocupine Bank west of Ireland.

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