With this newsletter, Wim Vader has officially ended his tenure as Editor and now will primarily help with the Bibliography. We are all, I'm sure, very grateful to Wim for initializing this effort and seeing that it continued. I will be the Editor for a while but will need considerable help if the bibliography and news sections are to be informative. Wim has generously offered to continue to send lists of papers with notations, etc., and I would like to ask that all subscribers routinely send copies of their work to either Wim or myself. Also, since I am located at a small field station, there is no way that I will ever see most of the amphipod literature published around the world unless copies are sent to me.

The financial underpinnings of the newsletter are fine at this point. I would like to ask all regional "editors and collectors" to solicit contributions from the members in their regions -- something on the order of $US 5.00 per subscriber will be helpful. If you have sent some funds in the last year, let your regional editor or myself know. As long as the newsletter funds stay healthy, we can let the contribution levels remain loose. Please also remember that extra contributions are always helpful in defraying the costs of sending the newsletter to those colleagues who cannot export currency to the U.S. Persons sending funds from countries outside the U.S. should send an International Postal Money Order in U.S. Dollars if at all possible. The small banks in Maine have much difficulty handling foreign currency.

At the present time, the regional editors - collectors are (my apologies if I have omitted anyone):

United Kingdom: Dr. Michael Thurston, Institute of Oceanographic Studies, Worale, Godalming, Surrey, GU8 5UB.
Canada: Dr. Diana Laubitz, National Museum of Natural Science, Ottawa, K1A 0M8
Japan (and other countries in the east?): Dr. Hiroshi Morino, Ibaraki University, Dept. of Biology, Mito 310, Japan
U.S. West Coast: Dr. John Chapman, E.P.A., Marine Science Center, Newport, OR 97365
Australia - New Zealand: Dr. W. D. Williams, Dept. of Zoology, The University, Adelaide, S. Australia 5001, Australia

My apologies to Roger Lincoln for not acknowledging the use of a plate from his book "British Marine Amphipoda: Gammaridea" for last issue's cover. The cover for this issue is from Jerry and Charline Barnard's treatise on "Freshwater Amphipoda of the World."

Walpole, Maine

Les Watling

Les Watling
NEWS AND ANNOUNCEMENTS

NEXT AMPHIPOD MEETING

Jan Stock has arranged to host the next international amphipod meeting, formally called the "Vth INTERNATIONAL COLLOQUIUM ON AMPHIPOD CRUSTACEANS". It will be held in the village of Ambleteuse, France (between Calais and Boulogne) during the period 28 June to 3 July 1985. Further particulars can be found in the attached announcement. Persons wishing to attend should send in the required materials as soon as possible. **SEE BACK PAGES !! P.S.G - 6**

CURATORIAL ASSISTANT

Rick Brusca, Los Angeles County Museum of Natural History, writes that he is looking for a curatorial assistant to work in the Section of Invertebrates. He would especially like to recruit an amphipod person since the Hancock collection of amphipods will be moving to the LACM. Candidates should have a B.S. or M.S. degree in biology (or equivalent), some training in systematics, and experience working with natural history collections; some experience with computers is desirable. Starting salary is $1540/month. Contact Dr. Rick Brusca, L.A. county Museum of Natural History, 900 Exposition Blvd., Los Angeles, CA 90007 or call him at 213-743-2019.

AMPHIPOD PHYLGENY WORKSHOP

Ed Bousfield very kindly organized and hosted, with the able help of Diana Laubitz and Kathy Conlan, a workshop dealing with "Phyletic Classification of Amphipod Crustaceans" which was held at the Museum in Ottawa, Canada, on 18 August 1984. A summary of the meeting follows on the next page.

NEW SUBSCRIBERS:

- Qaiser Tariq, Dept. of Zoology, Univ. of Kuwait, P.O. Box 5969, Safat, Kuwait
- Hancock Library of Biology and Oceanography, Allan Hancock Foundation, University of Southern California, Los Angeles CA 90089-0371.
- Birgit Dittrich, Iaemergastr. 58, 4300 Essen 1, B.R.D.
- Maria Beatrice Scipione, Stazione Zoologica di Napoli, Laboratorio di Ecologia del Benthos, Punta S. Pietro 1, I-80077, Ischia Porto, Italy
- Mikio Azuma, Biological Laboratory, Faculty of Education, Nagasaki University, 1-14 Bunkyo-Machi 852, Japan
- Kiyoshi Nishi, Institute of Marine Ecology, Co. Ltd, Shibata Bldg, 5-34-2, Bakuro-Chō, Ohasha 541, Japan
- Hiroshi Mukai, Ocean Research Institute, University of Tokyo, 15-1, 1 Chome, Minamidai, Nakano, Tokyo 164, Japan
- Hiroyuki Sudo, Seikai Regional Fisheries Res. Lab., Kokubun-Cho, Nagasaki 850, Japan
- Sara LeCroy, Applied Biology Inc., P.O. Box 974, Jensen Beach, FL 32457
- R.P. Alexeev, Inst. of Biology South Seas, Odesaa Branch, Acad. Sciences USSR, Odesaa 270011, USSR
- Matt Murphy, Sherkin Island Marine Station, Sherkin Island, Co. Cork, Eire
INTRODUCTION

The purpose of the workshop was to lay the groundwork for developing a generally acceptable phyletic classification of the amphipods. Following a reception in the Museum lounge the previous evening, the delegates were welcomed on the Saturday morning by the Director of the National Museum of Natural Sciences, Alan Emery, and the Assistant Director, Chuck Gruchy. The meeting organized by Chuck Gruchy and Ed Bousfield, was ably chaired by Diana Laubitz. Following the workshop, the delegates visited Ed's cottage at Paugh Lake, west of Ottawa, for continued discussions with colleagues and a chance to relax and enjoy the Canadian boreal forest environment. Many delegates extended their stay in Ottawa to examine Museum collections and to attend the antecedent Second International Conference on Copepoda, August 13-17. On behalf of us all I would like to extend warm thanks to Ed and Marg Bousfield for their generous hospitality and able organization of our "Amphipod Retreat".
II DELEGATES

Bousfield, Ed, National Museum of Natural Sciences, Ottawa, Canada
Bowman, Tom, National Museum of Natural History, Washington, USA
Boxshall, Geoff, British Museum (Natural History), London, England
Brunel, Pierre, Département des Sciences biologiques, Université de Montréal, Montréal, Canada
Conlan, Kathleen, National Museum of Natural Sciences, Ottawa, Canada
Dahme, Hans, Universität Oldenburg, Oldenburg, W. Germany
Emery, Alan, National Museum of Natural Sciences, Ottawa, Canada
Gruchy, Chuck, National Museum of Natural Sciences, Ottawa, Canada
Hendrycks, Ed, National Museum of Natural Sciences, Ottawa, Canada
Karaman, Gordan, Biological Institute, Titograd, Yugoslavia
Laubitz, Diana, National Museum of Natural Sciences, Ottawa, Canada
Lincoln, Roger, British Museum (Natural History), London, England
Lowry, Jim, The Australian Museum, Sydney, NSW.
Meisner, Don, University of Toronto, Scarborough, Canada
Morino, Hiroshi, Ibaraki University, Mito, Japan
Oshel, Phil, Memorial University, Canada
Rafi, Fahmia, National Museum of Natural Sciences, Ottawa, Canada
Schminke, Kurt, Universität Oldenburg, Oldenburg, W. Germany
Schminke, Gisela, Universität Oldenburg, Oldenburg, W. Germany
Seig, Jurgen, Universität Osnabrück, Vechta, Germany
Shaw, Pat, University of British Columbia, Vancouver, Canada
Staude, Craig, Friday Harbor Laboratories, Friday Harbor, USA
Steele, Don, Memorial University of Newfoundland, St. John's, Canada
Stock, Jan, Instituut Voor Taxonomische Zoölogie, Amsterdam, Nederland
Vader, Wim, Tromsø Museum, Tromsø, Norway
Watling, Les, University of Maine-Darling Center, Walpole, USA
Wildish, Dave, Fisheries and Environmental Sciences, St. Andrews, Canada
III. INVITED PRESENTATIONS

Watling, Les. The Systematic Position of the Amphipoda within the Malacostraca.

Five monophyletic superorders are recognized: Amphipoda, Isopoda, Brachycarida, Eucarida and Syncarida. The Amphipoda are considered to be most closely related to the Isopoda and Brachycarida. The protoamphipod originated by loss of the second antennal exopod, reduction of the first antennal accessory flagellum, incorporation of peraeopod 1 into the head and modification of a frontal pair into a maxilliped. The Amphipoda are so different from other Peracarida that it is probable that they do not belong in the superorder. The main character that ties the members together, the presence of brood plates, should be tested for homology.

Lincoln, Roger. Calceoli as Basis for Phyletic Classification of Gammaridean Amphipods.

The calceolus, which is thought to be a mechanoreceptor, occurs on antenna 1 and/or 2 of 7 gammaridean superfamilies: Phoxocephalidae, Crangonyctoidae, Gammaroidea, Pontoporeioidae, Lysianassoidea, Oedicerotoidea and Eusiroidea. Based on structural similarities in the calceoli, phyletic relationships in these groups suggest the phoxocephalids as the basal group from which the crangonyctids, lysianassids, gammarids and pontoporeids developed separately. The oedicerotids, eusirids, and pontogeneids would have emerged subsequently from one of the generalized types.

Karaman, Gordan. Classification of Gammaridean Amphipoda.

We must spend more time examining suites of characters to avoid the pitfalls of convergence and environmentally induced phenotypic variation. Comprehensive evaluation, phyletic and cladistic analyses are the new methods that must be applied to the classification of amphipods.

Lowry, Jim. Classification of lysianassoids

A review of recent changes in the Lysianassoids as recently published was given. The importance of sensory structures in understanding phylogenetic patterns as discussed.

Vader, Wim. The Taxonomic Distribution of Parasitic and Commensal Amphipoda - Convergence or Phyletic Tool?

Parasitism and commensalism, absent in terrestrial and subterranean amphipods, and rare in freshwater amphipods (with the exception of inhabitants of 25 m year old Lake Baikal), occur in marine benthic amphipods and are most frequent in pelagic groups. Association could be used as a phyletic tool in
hyperiids and cyamids, where incidence is very high. However, the associated habit in the two groups is convergent. In other amphipod groups a commensal or parasitic habit is too recent to be of use as a phyletic tool.

Bousfield, Ed. Phyletic Ordering of Major Character States as a Basis for Classification of Gammaridean Amphipoda.

No amphipod group has a corner on all plesio- or apomorphic characters. It is important to deal with a suite of characters and therefore numerical analytical methods are essential. Body parts that have received next to no attention, such as the lacinia mobilis, pleopods, gills and brood plates may prove to be extremely important in determining phyletic relationships.

IV. DISCUSSION
i. Highlights

Jan Stock: You must illustrate what you're talking about so that everyone else clearly understands you. When determining apo- and plesiomorphic conditions you must be specific on your out-group and show your reasoning for its selection. You must then define your characters as either one or other of the states but not as intermediate. The best out-group for amphipods is an isopod.

Wim Vader and Tom Bowman: Agreed that Siewing's arguments against close relationships of isopods and amphipods still seems valid.

Ed Bousfield: Agrees that mysids make a better phyletic out-group for amphipods from both external and internal morphology. Explains why the intermediate form must be recognized in character analysis -- a fact of amphipod evolution, for all characters yet studied.

Les Watling: Mysids are extremely different. Isopods and the rest of the Brachycarida should be the amphipod out-group. The problem is that we draw conclusions from only a few specimens. So much of the difference is related to life habit, rather than to a fundamental phyletic relationship. You have to look at the basic caridoid features.
V. POSTERS

Conlan, Kathleen. Untangling the Jassa Complex.

The genus is in the process of being revised world-wide and will prove to comprise about 25 species. Many temperate species are polymorphic, the cause of earlier systematic confusion. The life history and behaviour of Jassa is reviewed.


The family is in the process of being revised. Preliminary investigation of the benthic pleustidae suggests that macroevolution is apparent in the mouthpart morphology. In particular, the mandible readily illustrates this evolutionary trend. In general the molar tends to reduction, the incisor and lacinia mobilis to a proliferation of denticles, the blades of the spine row become heavier and the tri-articulate palp shorter and more compact. These characters are proposed to be commensurate with a presumed dietary shift to a carnivorous mode.

Shaw, Pat. Systematics and Evolutionary Patterns in the Eusiroidea.

The Eusiroidea is identifiable only on the basis of a distinctive faces with no invariant characters to permit rigorous diagnosis. Through the use of (modern phylogenetic and mulivariate taxonomic methods the superfamily will be examined for polyphyly, convergence and evolutionary trends.

Staude, Craig. Species diversity, life history and ecology of Paramoera in the northeastern Pacific region.

Field studies on the N. American Pacific coast, especially in Deadman Bay, San Juan Island, have revealed 7 species of the pontogeniid amphipod genus Paramoera. All species are shallow-water and intertidal or estuarine, and some are important in the diet of salmonids and sculpins. In graphical presentation, taxonomic characters of the head region, gnathopods, telson, etc., are correlated with ecological station of the species.

VI. CONCLUSION

The goal of the workshop was to establish agreement on the need to attack the problem of amphipod phyletics cooperatively. Although many widely divergent points of view were presented and major differences of opinion remain unresolved, the general feeling was that the goal had been achieved. It was accepted that all characters need to be properly defined and, where they are used for phyletic studies, their stated apomorphy or plesiomorphy should be supported by reasoned argument. It was agreed that there are many characters that have not yet been investigated of which we need to improve our knowledge. And it was suggested that we should resist looking for readily recognisable characters, as a means to providing identification keys and faunal guides, and concentrate instead on finding characters that can illustrate phyletic relationships.
The appearance of a second major regional amphipod study so soon after the publication of Lincoln's (1979) *British Marine Amphipoda: Gammaridea* is no doubt coincidental. It is, however a sign of increased activity and recent advances within the group, and the increasing demands of ecologists for information that overworked taxonomists are unable to supply.

The present volume was conceived by Sandro Ruffo in 1971, and is the result of cooperation among Ruffo and six other workers, all well known for their studies of the Mediterranean amphipod fauna. Denise Bellan-Santini, Gordon Karaman, Gertraud Krapp-Schickel, Michel Ledoyer, Alan Myers and Ulrich Schiecke are Ruffo's coauthors. The whole work is planned in three parts. The first part, here reviewed, covers part of the Gammaridea. The second part will deal with the remaining gammaridean families together with the Ingolfiellidea and Caprellidea, while part three will provide a synthesis of systematic, faunistic and zoogeographic data and include a bibliography and indexes.

Introductory material is brief. The major previous studies are noted, a rationale for the present work is given, geographical coverage is indicated and supplemented with a map and a list of localities, and the systematic schemes used and organization of data are outlined. Keys to the suborder of the Amphipoda and to the families of the Gammaridea are given.

Within the main text each of the seven authors has assumed responsibility for one or more of the fifteen families covered in this part of the work. Families, genera within families, and species within genera are arranged alphabetically. Families and genera are diagnosed and species described briefly. Synonymies are given at all levels. While not complete, major
references, particularly those relating to the Mediterranean, are given. For each species, the type locality is noted, and localities within the Mediterranean and a summary of extra-Mediterranean distribution are listed, together with a brief account of available ecological and bathymetric data. Within a genus, one species at least has been fully illustrated, the drawings including a habitus sketch and a full complement of mouthparts. Other species, while less fully figured, are usually more than adequately covered.

The avowed intent of this volume is to provide a handbook both for the amphipod specialists and for ecologists with less familiarity with the group. This necessitates, to some degree at least, a dual approach to the content and organization of such a volume. The alphabetical arrangement of taxa and the 'familiar' rather than modern familial concepts, while no doubt offending some specialists, will ease problems for non-specialists. On the other hand, few specialists, particularly European workers, will make much use of the key to families, whereas it may well be of vital importance to non-specialists. This being the case, the lack of any general morphological account, or alternatively a fully illustrated key/glossary will put non-specialists at a disadvantage. Having made this point, it should be stressed that this volume is, all in all, an admirable production. The diagnoses and descriptions are clear and succinct, the keys are precise, and the illustrations are large, abundant and of a high standard. Bearing in mind that seven authors are involved, the consistency, in what to most of them is not their native tongue, is quite remarkable, as, too, is the standard of illustration.

Errors of omission and commission are almost non-existent. The spelling of Amphithoe Leach, 1814 as Amphithoe, while philologically correct, is not permitted by the provision of the International Code of Zoological Nomenclature Article 32(a)(ii) which specifically rules out the emendation of original
incorrect transliteration. I cannot claim to have examined closely every one of the 364 pages in this volume, but the only other errors to become apparent during the working up of a small collection of Mediterranean amphipods were the misspelling of Maera on p313 and p321.

While appreciating the great gains which will accrue from the publication of such a well-produced handbook as this, there are dangers which should be appreciated. It is all too easy for the non-specialist, and even the expert, to force material into previously recorded taxa. This can be a problem even in small areas which have been intensively sampled. The Mediterranean is neither small, nor, as can be seen from the map, has it been uniformly collected. Ruffo is clearly aware of this, and emphasizes just how uneven has been the collecting effort around the Mediterranean. Although the French, Italian and Yugoslav coasts are reasonably well documented, Spain, Greece, Turkey, Egypt, Libya and Morocco are not. He also points out that of the 197 species recorded in part one of this work, 78, including 66 previously undescribed species are a result of the authors' researches. An indication of the increased effort in the area is that 62 new species have been described in the period 1970-1979. If a handful of workers investigating a relatively small proportion of the total coastline can achieve this, what does the future hold? Specialists and non-specialists beware!

In the introduction, Ruffo lists the five great names connected with the study of Mediterranean amphipods, Chevreux, Costa, Della Valle, Heller and Mayer, and dedicates this study to them. Decades hence, all our taxonomic data will be available, no doubt, on a screen at the touch of a key. Until that time comes, Ruffo et al. (1982) will rightly be the standard reference, just as Chevreux and Fage has been for the past fifty years and more.

Michael H. Thurston.


AFANASEV, N. N., 1981. (Characteristics of macroplankton as basic food of pelagic fishes in the Sea of Okhotak.) Pp. 50-60 in V.P. Shuntov (ed). Dinamika chislennosti i uslaviya vozproizvodstva zhivotnykh dal'nevostochnykh morej. TINRO Valdivostok. (In Russian, not seen)


zool. Mus. Inst. 79: 159-185. (Described and illustrated are Choeropsis decoratus, Euareile flagella n. sp. (6100-8', 57021-1', 3200 m), Eusiroidea stenopleura, Gondogeneis georgiana, Pontogeneile longicornia and Rheocetopoda schallenbergi n. sp. (61029-5', 5603-9'))


BARNARD, J.L. & C.M. BARNARD, 1982. Revision of *Foxipalus* and *Eobrolgus* (Crustacea: Amphipoda: Phoxocephalidae) from American Oceans. Smithson. Contr. Zool. 372: 1-35. (With a key to the species. Deals with *Foxipalus obtusidens*, type (was in *Pontherpinia*), *F. major* n. rank (was *aphid* of *obtusidens*), *F. xixiaeus* n. sp. (S. California), *F. similia* (was in *Paraphoxus*), *F. cognatus* (was in *Paraphoxus*), *F. speche* n. sp. (Gulf of California), *F. golfinus* n. sp. (Gulf of California), *F. eacutae* n. sp. (Panama), and mentions two previously described *Eobrolgus* species.)


BARNARD, J.L. & M.M. DRUMMOND, 1982. Discovery of *Cheirocratus* (Crustacea: Amphipoda) on Australian shores. Proc. R. Soc. Victoria 94: 107-120. (Deals with *Cheirocratus* (*G. bassi* n. sp. from Victoria, and *G. praedens* n. sp. from Tasmania) and two closely related new genera: *Incratilla* n. gen. (type and only species *Cheirocratus inermis* from Madagascar) and *Prooocratus* (type and only species *P. butcheri* n. sp. from Victoria). A key to all species in this complex is provided.)

BARNARD, J.L. & M.M. DRUMMOND, 1982. Gasararidean Amphipoda of Australia, part V: Superfamily Haustoridiacea. Smithson. Contr. Zool. 360: 1-148. (New taxa: Zobrachoidae n. fam. for *Zobracho, Prantinus* n. gen. and *Bumeralius* n. gen. *Bumeralius* monotypic, type *B. buchalolicus* n. sp. (Victoria); *Prantinus* also monotypic, type *P. talanggi* n. sp. (Victoria). The *Urochastoriidae* n. fam. consist of 6 genera, of which 5 are new. *Urochastorius pulce* n. sp., *U. penitus* n. sp., *U. merkantius* n. sp., *U. wingaro* n. sp., *U. parnggius* n. sp., and *U. perkeus* n. sp. all come from Victoria, *U. yurru* n. sp. and *U. urungari* n. sp. from Queensland, and *U. gumni* n. sp. from New South Wales. *Ghegeria garbelius* n. gen. n. sp. (Queensland) and *Warunius tallerkus* n. gen. n. sp. (NSW) represent monotypic new genera, while *Tuiderus* n. gen. has 2 spp., both from Victoria: *T. cangelius* n. sp. (type) and *T. berinicus* n. sp. *Tottungus tungan* n. gen. n. sp. (Victoria) and *Diriusu tarilus* n. gen. n. sp. (Queensland) are again monotypic genera. Also monotypic is the new family Conduklidae, erected for *Conduklia karkan* n. gen. n. sp. from Victoria.)

BARNARD, J.L. & M.M. DRUMMOND, 1982. Redescription of *Exoediceros fassor* (Stimpson, 1856), an Australian marine fossorial amphipod, the type-species of the new family *Exoedicerotidae*. Proc. biol. Soc. Wash. 95: 610-620. (This new family contains as further genera *Exoediceropsis, Bathyporeiapus, Metoediceros, Parhaliaeodon* and *Patuki*. These are all southern 2-eyed (or
blind) genera with apical spination on the rami of uropods 1-2. They are assumed to be more primitive than the Oedicerotidae s. str.)


In the Gammaridae Antagoniothelium n. gen. has Tuleogammarus sinustus as type and only ap.; Neer Mongolia is synonymized with Ceradogammarus, and Netacern Odopturus and Tuleogammarus with Hornellia. Lupiasaera n. gen. (type Neer lupens), Haleriopsis n. gen. (type Eriopsis dentifera), and Tegano n. gen. (type Helita seticornia) are monotypic genera. A key to hadziida and wackelliida is provided, and two new monotypic genera described: Textiweckelia n. gen. (type Textiweckelia insolaris) and Hoisingeriis (type Textiweckelia samacoc).

The new family Paracalliopiidae consists of the two genera Paracalliopia and Indocalliopia n. gen. (type and only ap. Paracalliopiaindic).

In the Phoxocephalidae, the monotypic Feriphippinia n. gen. has Heciphippinia ferenteria as type, and Torridopherpinia n. gen. Proherpinia hurleyi (further sp. Proherpinia tropicalis.)

BARNARD, J.L. & C.N. BARNARD, 1983. Freshwater Amphipoda of the World. 1. Evolutionary patterns. 2. Handbook and bibliography. Hayfield Assoc., Mt. Vernon, 830 pp. (This is a valuable tour de force, and AN will need many different reviewers to cover all its different aspects. The book - in two volumes, and substantially finished July 1979 - deals with the evolutionary history, zoogeographic radiation, taxonomy and distribution of all the world's freshwater amphipods, and it will be a veritable treasure-trove for years to come.

Here only the few formally announced taxonomic changes will be noted. Most higher taxa have only been described in informal terms as the authors feel that the ongoing mosaic-like radiation of freshwater amphipods is next to impossible to formalize within the constraints of Linnean classification. In addition to those mentioned here, a number of other transfers and new synonymizations may have been overlooked by me; for example, are Karasan's earlier sweeping 'lumpings' of a number of genera into Echinoammarus and Sarothroammarus here partly reversed. 'Official changes':

Austrocranionyx n. gen. (Gammarus barringtonensis + 4). Gammarus ignotus is transferred from Heterogammarus to Corophionorphus, and C. bifasciatus and H. tenuis from Heterogammarus to Eurybregammarus. Plicarimnus n. gen. is erected for Gammarus purpureus, Palleioela to n. gen. for Palleioe c demolitoides var. quadripinnos. Nedzhikimnias n. gen. is erected for Sarothroammarus ruficarii (* 1) and Lusigammarus n. gen. for Gammarus guernei (* 2). Zakakiewitschic reinae is transferred to Anopogammarus. Calliope didactyla is a synonym of Ailorchestes novuzelandiae. Nuenu and Cotneas are merged with Gammarus, while Tabatziua is provisionally kept apart.)
BARNARD, J.L. & H.N. DRUMMOND, 1983. Werreyus, a new genus of Exoedicerotidae (Crustacea, Amphipoda) based on Exoediceropsis maculosa Sheard. Proc. R. Soc. Victoria 95: 65-75. (Werreyus n. gen. with type Exoediceropsis maculosa and further species Oedicerus latrans Howell, both from S and SE Australia. A few additional figs of Exoediceropsis fossor are also given.)


BEDFORD, A.P. & P.G. MOORE, 1984. Macrofaunal involvement in the sublittoral decay of kelp debris: the detritivore community and species interactions. Est. coast. Shelf Sci. 10: 97-111. (i.e. on Gammarus locusta)


n. ap. (with key to Mellacoota sp), Parasinemopus echo and P. suenai.)
BERNEM, K.H. van, 1982. Effect of environmental crude oil contamination on abundance, mortality and resettlement of representative mud flat organisms in the mesahaline area of the Elbe estuary. Neth. J. Sea Res. 16: 538-546. (i.e Corophium volutator)
BONSDORFF, E. & W.G. NELSON, 1981. Fate and effect of Ekofisk crude oil in the littoral of a Norwegian fjord. Sarsia 66: 231-240. ('Amphipods showed avoidance responses, but these were often insufficient to prevent significant mortality.)
BONSDORFF, E., 1983. Effects of experimental oil exposure on the fauna associated with Coralline officinalis L. in intertidal rock pools. Sarsia 68: 149-156. (Again, amphipods turned out to be the most sensitive invertebrates.)


This is the first issue of an ambitious venture: a modern amphipod fauna of the very diverse northeastern Pacific region. All species are described and illustrated and keys provided. New taxa: Protorchestia n. gen. (type sp. Orchestia nithida): Traskorchestia n. gen. (type Orchestia traski), further app. O. ochotenais, O. dextrae, O. georgiana); Pacificorchestia n. gen. (type Parorchestia kiwai, further app. O. psyllacei, O. tenuisana); Transorchestia n. gen. (type Orchestia chilensis, 5 further app.) Among the real sandhoppers Platorchestia n. gen. has Orchestia platensis as type and 5 additional species, among them P. chathamensis n. sp. from British Columbia. Megorchestia Brandt, 1851, (type M. californiensis), and 6 additional app., among them M. dexterae n. sp. from Baja California, is revived. Orchestoidae tuberculata, the type species of this genus, is finally fully redescribed. Pseudorochestoidae n. gen. has Orchestoides biolleyi as type, and 4 further app.: Talorchestia brito, Orchestoides meridionalis, O. gracilis and P. mexicana n. sp. from Sinaloa prov., Mexico.)

BOUSFIELD, E.L. & N.L. TZVEKTKOVA, 1982. (Studies on Dogielinotidae (Amphipoda, Talitroidea) from the shallow waters of the North Pacific region.) Issled. Fauny Morei 29(37): 76-94, 7 Plates. (In Russian, with English summary. Unless otherwise mentioned, the following new taxa have Bousfield as sole author. Dogielinotidae n. gen. (monotypic, type Dogielinosus golikovi), Proboscinoitina n. gen. (monotypic, type P. loguax), Haonautoididae magnus n. sp. (Kurile Islands), H. gurjanovae n. sp. (Poesaj Bay, Japan Sea), Echaunitoroididae Bousfield & Tzvetkova n. gen. (type and only sp. Haonautoides japonicus). Also Dogielinosus moxavinti and Allochrestes salliesi are illustrated, and a key to all species provided.)


BOWMAN, T.E., 1984. Stalking the wild crustacean: the significance of sessile and stalked eyes in phylogeny. J. crust. Biol. 4: 7-11. ('Sessile eyes are the primitive state')


BRADSTREET, M.S.W., 1982. Pelagic feeding ecology of Dovskies, Alle alle, in Lancaster Sound and Western Baffin Bay. Arctic 35: 126-140. (Amphipods are very important in diet.)

BUTLER, R.G., W. TRIVELOPIECE & D.S. MILLER, 1982. The effects of oil, dispersant, and emulsions on the survival and behavior of an estuarine...
teleost and an intertidal amphipod. Environa. Res. 27: 266-276. (The amphipod is Gamaserus oceanicus)


CIRONI, R. & S. RUFFO, 1981. (Some considerations about the macroinvertebrate community of the Po River near Cuorse (Piacenza, Italy).) Rev. Idrobiol. 20: 47-82. (In Italian)


COMMITO, J.A., 1982. Importance of predation by infraunal polychaetes in controlling the structure of a soft-bottom community in Maine, USA. Mar. Biol. 68: 77-82. (Nereis virens is an important factor in the regulation of the abundance of Corophium volutator.)

CONLAN, K.E., 1982. Revision of the gammaridean amphipod family Ampithoidae using numerical analytical methods. Can. J. Zool. 60: 2015-2027. (The new genus Pseudopleconexa is erected for Pleconexa leasoniæ from New Zealand. The other genera diagnosed are Ampithoe, Peramphithoe Conlan & Boussfield, 1982 and the revived Pleconexa. Lists of app. and a key to all amphithoid genera are provided, as well as biological data.)


Machairomy muelleri n. gen. n. sp. from SE Bering Sea)


CURTIS, D.J. & J.C. SMYTH, 1982. Variations in density of invertebrate
benthos of the Clyde estuary tidal flats. Chem. Ecol. 1: 57-60. (i.e. Corophium volutator)


DAHL, E. & R.R. HESSLER, 1982. The crustacean lacinia mobilis. A reconsideration of its origin, function and phylogenetic significance. Zool. J. Linn. Soc. 74: 133-146. (‘Doubt is cast upon the unity of the superorder Peracarida mainly because the place of the order Amphipoda within it is regarded as insecure’)


DAUVIN, J.C. & D. BELLAN-SANTINI, 1982. Description of deux nouvelles especes d'Amphela des cotes francaises de l'atlantiques (Crustacea-Amphipoda): Amphela toulemonti n. sp. et Amphela spooneri n. sp. Cah. Biol. mar. 23: 253-268. (A. toulemonti n. sp. from Baie de Douarnenez, A. spooneri n. sp. either Irish Sea or Baie de Douarnenez; the paper is not quite clear in this respect.)


DHOMPS-AREMAS, M., 1981. Ecologie d'une population superficielle de Niphargus rhenorhodanensis (crustace amphipode hypoge). Etude biochimique et histologique en relation avec quelques caracteristiques de l'environnement. These Biol. 3 cycle, Univ. Lyon, 95 pp. (not seen)


DOYLE, R.W., 1983. An approach to the quantitative analysis of domestication selection in aquaculture. Aquacult. 33: 167-185. (Studies on Gammarus lawrencianus: selection for growth as it is influenced by the interaction...
between fertility and development rate in a continuously restocked population.)


DRIVER, E.A., 1981. Calorific values of pond invertebrates eaten by ducks. Freshw. Biol. 11: 579-581. (Hyalella azteca had, at 3682 ± 453 cal./g. dry weigh, the lowest value measured.)


FENWICK, G.D., 1983. Two new sand-dwelling amphipods from Kaikoura, New Zealand (Oedicerotidae and Lysianassidae). (Petukia roperi n. sp. and Hippomedon whoro n. sp.)


Gage, J.D., 1982. An aerated sedimentation column for subsampling large benthic samples from deep-sea sediments. Deep-Sea Res. 29A: 627-630. (Subsampling samples from epibenthic silds)


GORDON, J.C.D., 1983. Some notes on small keel fish collected from Hebrides polychaeta, bulla in the Isle of Cumbrae, Scotland. Ophelia 22: 173-183. (Dominant amphipods are the major component in the diet of Gobiulcus flavescens, Aplodinon microcephalus and Lepisira montagu)


HELLUV, S., 1982. Relations hotes-parasite du trematode Microphallus papillorobustus (Rankin, 1940). I Penetration des cerceaux et rapports des metacercaires avec le tissu nerveux des Gammarus, hotes intermédiaires. Anna Parasitol. 57: 263-270. (The cercariae enter the gills through the branchial cuticle; metacercariae encyst in cerebrul ganglia or ventral nerve chain.)


HERBST, G.M., 1981. The distribution of amphipod crustaceans within Israel. Israel J. Zool. 30: 105-106. (Not seen)

HERBST, G.M., 1982. Effects of leaf type on the consumption rates of aquatic detritivores. Hydrobiologia 89: 77-88. (i.e. *Gammarus pseudolimnaeus*).


HIRAYAMA, A., 1983. Taxonomic studies on the shallow water gammarid Amphipoda of West Kyushu, Japan. 1. Acanthonotozomatidae, Amphelidae, Amphithoidae, Amphilocheidae, Anaxiidae, Argisidae, Atylidae and Colomatidae. Publ. Seto mar. biol. Lab. 28: 75-150. (New taxa: *Cypaiphiraedia mala* n. sp. (Tomioka Bay), *Postodius imperfectus* gen. et sp. nov. (Acanthonotozomatidae), *Ariake Sea*), *Terepeltopes dolichorhinius* gen. et sp. nov. (Amphilocheidae, Shijiki Bay), *Gitenopais japonica* n. sp. (Shijiki Bay), *G. longa* n. sp. (Tomioka Bay), *G. breviculus* n. sp. (Tomioka Bay), *G. robustodentata* n. sp. (Tomioka Bay) and *Paranamixis aberro* n. sp. (Shijiki Bay). Fully illustrated are also *Amphelica cyclopa* yocoensis, *A. fusciger* and *Argiaea hamatipera*).


HOLMAN, H. & L. WATLING, 1983. A revision of the Stilipedidae (Amphipoda). Crustaceana 44: 27-53. (The family is divided into 3 subfamilies: Stilipedinae (Stilipes, 3 spp), Astyridae n. stat. (Astyrus, 5 spp) and Alexandriaeinae n. subj. (with Alexandria, 4 spp, Astyridae and Bathynoploidea). Redescribed are *Alexandrellia australis*, A. dento (the type-species of Pseudandaniexia), A. subchelata n. sp. (Great Australian
Bight, 1340 m, = A. dentata a. Barnard 1961), Bathypenoploes schellenbergi n. name (a replacement name for Iphimediopsis australis Schellenberg non A. australis Chilton). The genus Astroides is provisionally resurrected, and the authors express skepticism as to the merging of Ecly sia with Epimeriella.)


HOLSINGER, J.R., 1983. Paragastriweckelia, a new genus of subterranean amphipod crustacean (Hadziidae) from northern Mexico. Int. J. Speleol. 12: 37-44 (The monotypic genus is erected to acocmodate Mexicanella particeps from Coahuila, Mexico.)


JAZDZIEWSKI, K., 1981. Amphipod crustaceans in the diet of pygocaecilid penguins of the King George Island, South Shetland Islands, Antarctica. Polish polar Res. 2: 139-144.


JUST, J., 1983. Siphonocaitinae subfam. n. (Crustacea, Amphipoda, Corophiidae) 1: Classification. Stenotracea 9:117-135. (Just recognizes the following genera: Siphonocaitinae, with subgenera S. a. str., Centralocaitinae subgenus nov., (type S. kroyerenus + 4) and Orientocaitinae (type S. orientalis + 1); Buobocorophium (here also S. conchicola); Rhinocaitinae n. gen. (monotypic for
R. robustus ap. nov. from New South Wales, Australia; Australoecetes n. gen. (type S. mellicki; here also S. australis); Cariboeocetes n. gen. (monotypic, for C. barbadosis ap. from Barbados); Concholeastes; and Africoecetes n. gen. (monotypic for Concholeastes ernstelius.) KAFANOV, A.I. & P.A. PEDOTOV, 1982. (Relationships between body length and body weight in some amphipod crustaceans from the shore of Vityaz Bay (Sea of Japan). Biol. Morya (Vladivostok) (0) 4: 12-19. (In Russian, not seen)


KAMENSKAIA, O.E., 1980. (Deep-sea Amphipoda (Amphipoda, Gammaridae) collected from drifting station 'North-Pole 22'.) Pp 241-251 in M.E. VINOGRADOV & I.A. MELNIKOV (eds). Biologiya tsentral'nogo arktichestogo bassea. NAUK, Moskva, 180 pp. (In Russian. Seventeen species in 9 families, of which Halirages caecus n. sp. and Liljeborgia dubia n. sp. (a homonym? (WV) are described as new. The material stems from depths of 2710-3580 m in the Canada basin.)


KARAMAN, G.S., 1980. Cocoherrpinia illieffii, new genus and species from Bermuda, with remarks to other genera and species (fam. Phoxocephalidae) (Contribution to the knowledge of the Amphipoda 103). Studia Marina, Kotor 9-10: 149-175. (C. illieffii n. gen. n. sp. is described from a Bermuda cave. Also Harpinia laevis is redescribed from Norwegian material, and a key provided to the genera of the Harpininae.)


KARAMAN, G.S., 1980. New genus of family Gammaridae from Baikal Lake, Abludogamae, n. gen. with reference to genus Omaatogamae Stebb. Montenigrin Acad. Sci. Arts, Glasnik Sect. nat. Sci. 3: 149-169. (Abludogamae n. gen. has a type and only ap. Gammarus flavus Dybowsky, which is redescribed. Also G. albinus, the type ap. of Omaatogamae, is illustrated.)

KARAMAN, G.S., 1980. Revision of genus Idunella Sara with description of new species, I. aketi n. sp. (fam. Liljeborgiidae). Acta adriat. 21: 409-435. (The genera Idunella and Listriella are united under the former name, while Sextonia is reestablished as a monotypic genus. A key to Idunella is provided and I. aketi n. sp. from Bermuda described.)


KARAMAN, G.S., 1981. Description and distribution of Nipherus longicaudatus Ruffo in Yugoslavia and Italy (fam. Gammaridae) (Contribution to the knowledge of the Amphipoda 115). Biosistematika 7: 39-49. (N. longicaudatus, described as sp of N. kochianus, is given full species rank.)

KARAMAN, G.S., 1981. Redescription of Melita planeterga Kunkal, 1910 from Berauda islands with revision of genera Melita Leach and Abludigeless n. gen. (Contribution to the knowledge of the Amphipoda 119). Poljoprivreda i Sumaratvo 27(1): 29-50. (Abludigeless n. gen., with type species Melita gladiosa and 24 further species, is split off from Melita s. atr. on characters of ax.2 and ur.3. Melita grandisena is removed to Dulichiellia, Crangonyx shimizu to Melita.)

KARAMAN, G.S., 1981. Revision of Bogidiella-group of genera with description of some new taxa (fam. Gammaridae) (Contribution to the knowledge of the Amphipoda 121). Poljoprivreda i Sumaratvo 27(3): 23-44. (With key to genera. The following new taxa are described: Bogidiella (B) chilensis (Chiapas, Mexico), B. (B) mexicana (Chiapas, Mexico), Bogidiella subgen. Eobogidiella n. subgen. (type sp. B. purpuarcessis, further sp. B. brasiliensis), Marinobogidiella n. gen., monotypic, with type sp. B. tyrrenica)


G.S., 1982. Contribution to the knowledge of the Amphipoda 125. First discovery of genera *Niphargus* Chevr. 1922 in Yugoslavia with revision of the genera (fam. Gamaridae). Poljoprivreda i Sumaratzvo 28(2): 87-103. (New material from Serbia show *N. tripinus* to be a junior synonym of *N. kochianus*, so that the genus is monotypic.)

KARAMAN, G.S., 1982. Critical remarks to the recent revisions of *Bogidiella*-group of genera with study of some taxa (fam. Gamaridae) (Contribution to the knowledge of the Amphipoda 126). Poljoprivreda i Sumaratzvo 28(3-4): 31-57. (*Bogidiella* (Guguoliella) arganoides n. sp. (B. arganoi Ruffo & Vigna Taglianti 1977, from well in Oaxaco, Mexico). B. semidenticulate is redescribed from new Serbian material. *Somagidiella* Stock is a junior objective synonymy of Afridiella. B. arganoi is placed in subgen. Guagidiella. *Sobogidiella* is upgraded from subgeneric to generic rank.)


KARAMAN, G.S., 1983. Three poorly known subterranean *Niphargus* species (fam. Gamaridae) from Yugoslavia. (Contribution to the knowledge of the Amphipoda 132). Poljopr. Sumarat. 29: 37-56. (Deals with *N. wolffi* n. rank, *N. minor* n. rank, and *N. labacense* n. rank, all originally described as sp. of *N. kochianus*.)


KITTITSYMA, L.A., 1980. Ecological and physiological characteristics of *Dikerogammarus haemobaphes* in the area in which heated water is discharged from the Tripolye power station. Hydrobiol. J. 16(4): 61-68. (Translated from Russian)


KOLDING, S., 1981. A key for marine and brackish water Gammarus species (Crustacea, Amphipoda). Natura jutland. 19: 57-60. (A Danish study)


KOLUPAEV, B.I., 1982. (Respiratory indices in ecologically different gammarid species.) Ekologiya 0(B): 80-81. (In Russian, not seen. Compares Eulimogammarus verrucosus and Gammarus lacustris.)


KUDRYASHOV, V.A., 1979. (Fauna and ecology of amphipods from the littoral zone of the northern Tatar Strait.) Pp 123-137 in D.G. KUSAKIN (ed). Issledovaniya dalshezhivshikh i donnych organismov dal'nevostochnykh morej. DVMTs AN SSSR, Vladivostok. (In Russian, not seen. Doliolimus golikovi n. sp. is described.)


KULIKOV, A.S., 1980. (On the ecology of two gammarids (Amphipoda, Gammaridae) and a myaid (Mysidae) in the cryopelagic biocoenosis of the Central Arctic basin.) Pp 111-117 in H.E. VINOGRADEV & I.A. HELNIKOV (ed), Biologiya tsentral'nogo arkticheskogo Banskogo NAUKA, Moskva. (In Russian, not seen. Data on Myia polaris, Gammarus wilkitzkii and Apherusa glacialis. Can anyone get me a copy of this paper? WW)


monotypic based on *Icilius punctatus*. The Podoceridae are divided into 4 subfamilies: Podocerinae n. subfam. (with Podocerus (c. 30 spp), *Laematophilus* (7), *Cryptophilus* (2) and *Leipaeupropus* (1); the Xenodocinae n. subfam. (*Xenodice* (1) and *Stylo xenodice* n. gen. (monotypic, for *X. macrophthalmus*), the Neoxenodocinae n. subfam. (monotypic, for *Neoxenodice* (2)), and the Dulichiinae n. subfam. (with *Dulichius* (5), *Dulichiodopsis* (6), *Dyopoeoides* (9) and *Paradulichia* (1)). Diagnoses of and a key to all genera are provided, together with a synoptic key.)


LEDOYER, M., 1962. *Crustacea Amphipodes Gammiens. Famille des Acanthonotozoatidae & Gammaridae*. Faune de Madagascar 52(1): 1-598. (In this monumental work, the first of two volumes, the author sums up his many previous studies on Malagasy marine amphipods and adds a host of new material, including somewhat incongruously a fair number of deep-sea species (2500-4500 m) that happened to be taken near Madagascar. All species are fully described and illustrated, with notes on 'Affinites'. The author also gives diagnostic keys to all taxa (both in French and English, a very polite gesture to a largely monolingual English-speaking world), and synoptic diagnoses to all families. The classification follows mostly Barnard's Handbook, but a number of different proposals are noted. The book contains a large number of new and interesting discoveries, but no spectacular novelties, and only two new genera are created: *Ochlesodius* (an acanthonotozomatid with some ochesid characters) and *Lepechinelopsis* (*Dexaminidae*). Further new taxa and changes in classification: *Ochlesodius* n. gen. (*Acanthonotozoatidae*), monotypic, with *O. spinicornis* n. sp. (Ile de Glorieuses), *Ampelecus nomaibensis* n. sp. (Nosy Be), *Eublidae setosa* n. sp. (3700 m), *Gitanopsis tenuipes* n. sp. (coral reef), *Molgophicoides angustipes* n. sp. (coral reef), *Ophithoe alluaudi* (A. N. Mayer, non N. Edw.), *A. caviarum* (*Cymadusa brevidactyla* Ledoyer 1972, non Chevreux, and A. kerguelenis Rabindranath non Stebbing), *Cymadusa filosa* s.l. (different forms), *Paranamixis madagascarensis* n. sp. (P. bocki Ledoyer, non Schellenberg and P. ? indicus Ledoyer, non Sivaprakasaan), *Colostix brevicornis* n. sp. (Banc Walters), *Aorcho gracilipes* n. sp. (2500 m), *Bonneriella dimorpha* n. sp. (3716 m), *Cheirighotis minima* n. sp. (coral reef), *Gamaropsida atlantica* (forme A & forme B), *G. cheilifer* (of which *Eurythesus semichelatus* is a synonym), *Grandidiella bonnieroides robusta* n. sp. (*Tulear*), *G. longidactylys* n. sp. (coral reef), *Konatus tulearensis* n. sp. (Nosy Ve), *Lemboidea caeca* n. sp. (625 m), *Leptocheirus dufranii* n. sp. (Banc Walters), *? Maragopais obliguianus* n. sp. (Mayotte), *Pseudomegamphopus pseudocheilatus* n. sp. (*P. cheilatus* Ledoyer 1979 non Lebous cheilatus Walker), *Atlyus tulearensis* n. sp. (*A. granulosa* Ledoyer 1979, non Walker), *Guineps (Haustoriopsis) brevispina* n. sp. (*Tulear*), *G. (G) longicornis* n. sp. (Nosy Be), *G. (G) spinicornis* n. sp. (*Tulear*), *Lepechinella madagascarensis* n. sp. (2300-2500 m), *Lepechinella longicornis* n. gen. (*Dexaminidae*), type *L. brevicornis* n. sp. (3716 m), further species *L. inaequicuspis* n. sp. (3450 m), *Paralepechinella longicornis* n. sp. (3716 m), *Sphaerophthalmia caviarum* n. sp. (Nosy Be), *Cheirodes brevispina* n. sp. (2500 m), *Eusiroides dentimerus* n. sp. (Banc Walters), *Eusiroides latirostris* n. sp. (2500 m), *Rhachotropis gloriosae* n. sp. (615-625 m), *Bathycreacoccus stevenseni* (Figure labelled *Benthidius apinosa* n. gen. n. sp.),
Ceradocus tatteraali n. sp. (=C. ? rubromaculatus a. Tatteraal 1922 & Ledoyer 1968, type loc. Tulear), Indocratus n. subgenus of Cheirocratus, type Cheirocratus (I.) inermis, further sp. C (I) unidentatus. Duizura peucisipina n. sp. (Isole Gloriosae) Denteleamopus n. subgen. of Elaeomopus, type E. (D) spinipalpus n. sp. (analgrove, no further loc.), E. walteri n. sp. (Banc Walters), Eriopidae inequicuda n. sp. (Tulear), Gassarua sp. (new to the Indian Ocean, 770-860 m!), Hadzia (Liegocercadus) dentifera n. sp. (Sarodano), Jerbania (recte Jerbaniae) tridentata n. sp. (Banc de la Zelee), Maera gloriosa n. sp. (Isole Gloriosae), H. multispina n. sp. (240 m), H. pacific form A & B, H. pedonculata n. sp. (Banc de la Zelee), H. pseudomarginata n. sp. (Tulear, = H. mastersi Ledoyer, non Haswell), Mallacotta latidactylus n. sp. (450 m), Melita allusoidi n. sp. (Fort Dauphin), Metaceradocbus bidentatus n. sp. (Italy), ? H. inermis n. sp. (Banc Walters) Mexigera inueta n. sp. (Banc Walters) and Parelaeomopus zelci n. sp. (Banc de la Zelee).

LEDOYER, M., 1983. Les Oedicerotidae (Crustacea Amphipoda) de la mer mediterranee. Boll. Mus. Civ. St. Nat. Verona 9: 45-84. (Deals with ?Arphia mediterranea n. sp. (Napoli), Bathyamemon euctifrons, B. banyulensis n. sp. (SE France), B. monoculidiformis n. sp. (Napoli), Halicrenion eugilornine, Monoculodes euctipes n. sp. (Marseille), M. carinatus, M. gibbusus, M. grieaue, M. lepasimana, M. packardi, M. subnudus, Oediceroides pileus n. sp. (Napoli), Oediceropela brevicornia, Perilcopulas longimanus angustipes n. sp. (Marseille), Westwoodella cascule and W. recticristata. Also the genera Pontocrates (2 app.) and Synchilidium (2 app.) are discussed.)


LIPSKAYA, N.Y., 1980. (Intensity of metabolism in some hyperiid species from the southern Pacific Ocean.) Gidrobiol Zh. 16(6): 14-17. (In Russian, not seen)


LON, J. & I. DESPORTES, 1981. Affinites de Paramyx paradoxe Chatton, 1911, parasite de Poecilochaetae gappa (Annélide Polychète) avec les

Gamaarel Scolopostoma Scauainoi is J. J. (here a is Tagua LOWRY, LQPRETTO, LOWRY, LOWRY, 1982. the of The else), recognize roy. Published the n. hirtipalaraa gen., tristaneais Sphaerophthalmus. gaaaarellus. Scplogoatoaa described (Deals * (Snares), J.K, (Hawke gen., kergueleni, aubantarctic conicostomatid to of three groups, gngustg C_. natural n. carteta), aoporema n. (from Antarctic material illustrated: type * S_., Rossii, gen., n. birskeletal (Snares), sp., Snares Isl., Aaphipoda, aubantarctic n. carteta), Acontiostoma, Haera v.z. natural (type * Snares),* species n. carteta), N-Z. species subantarctica n. Carteta), Acontiostoma acutibasalis, Acontiostoma). Tristan 1982. S_., n. Carteta), Acontiostoma 1983. The shallow-water gammaridean Amphipoda of the subantarctic islands of New Zealand and Australia: Melitidae, Hadziidae. J. roy. Soc. N.Z. 13: 201-260. (The following species are described and illustrated: Ceradocopsis carnleyi (transferred from Maera), C. kergueleni, C. macracantha n. ap. (Auckland Isl.), C. peke, C. tristanea (from Tristan da Cunha, the redescribed type material of Maercunya tristanea), Gamarella hybophora n. ap. (Snares), Hoho n. gen. (Melitidae, type Nallacoote marilia app phenotype, further spp. H. hirtipalma n. ap. (Snares Isl., ia Nallacoote marilia Ps. phenotype) and Nallacoote carteta), Maera incerta, Tagua n. gen. (Melitidae) type and only species T. aoporema n. ap. (Snares); Zhadia n. gen. (Hadziidae), type and only species Z. subantarctica n. ap. from Auckland Isl.)


LOWRY, J.K. & H.E. STODDART, 1983. The shallow-water gammaridean Amphipoda of the subantarctic islands of New Zealand and Australia: Lysianassoidea. J. roy. Soc. N.Z. 7: 279-394. (In this important study the authors informally recognize three groups of lyssianasseida in their material (there are more elsewhere), v.z. the conicoomatitida, the lysianassaid and the uritida. The conicoomatid group consists of Acidostaoma, Acontiostoa, Conicooma n. gen. (described in a paper in press), Ocsongo, Photohoma, Scolopostoa n. gen., Shackletonia, Socarnoidea (type sp. only) and Stomacontion. A number of other species with 'conical mouthparts' are considered not to belong to this natural group, but to be convergent. A key to and diagnoses of the conicoomatid genera are provided. The type and only species of Scolopostoa n. gen. is Stomacontion prionoplax. The following spp are described and illustrated: Acontiostoa mariona, A. tuberculata n. ap. (Snares), Stomacontion acutibasalis (transferred from Acontiostoa), S. hurleyi n. ap. (Snares), S. pepini (with S. kergueleni), a synonym based on secondary males, S. pungapunga n. ap. (Campbell Isl.). Enayara iara n. ap. (Snares), Kakarui n. gen. (lyssianassaid group), type ap. K. punui n. ap. (Snares) further species Aemasia integricauda (here also? Parambasia sp. of Bellan-Santini & Ledoyer 1974), Lysianopais tieke n. ap. (Campbell Isl.), Parambasia rosalia (of which Pseudamasia bipartita is the male).
The history of the genus *Parawaldeckia* is discussed and a key to females provided; fully described are *P. debita* n. sp. (*Snarea*), *P. hirata* n. sp. (Campbell Isl.), *P. kidderi* (with reidentification of earlier material published under this name), *P. pulchra* n. sp. (*Snarea*), *P. azzae* n. sp. (Auckland Isl.), *P. thomsoni*, *P. vesca* n. sp. (*Snarea*), *Hippomedon hakei* n. sp. (*Snarea*), *H. manene* n. sp. (*Snarea*), *H. matikuku* n. sp. (*Snarea*), *Orchomene ahu* n. sp. (*Snarea*), *Pseudorchomene coatal*, *Tryphosella serana* n. sp. (*Snarea*) and *Pseudenesiosoides cornutilebrae*. In an appendix on p. 394 *Conicostoma karta* n. ap. (Kangaroo Isl., S. Australia) is typified; it will be described elsewhere.


MATHIEU, J., 1982. Relations entre l’activite locomotrice et le metabolisme respiratoire de *Niphargus rhelohodanensis* (Amphipode hypoge) en fonction


MEYER-ROCHOW, V.B. & K.M. TIANG, 1982. Comparison between temperature-induced changes and effects caused by dark-light adaptation in the eyes of 2


MOORE, P.G., 1981. Marine Amphipoda (Crustacea) new to science from the Tasmanian phytal fauna. J. nat. Hist. 15: 939-964. (Deals with Cypsiophidae edgar i. sp., Austropheneoides splendens n. sp., A. trugenni n. sp., Cyproidea marmorata n. sp., Mesoproboloides cruxlorraine n. sp., and Rausihara judithae n. sp. Keys to the genera Cypsiophiadia, Austropheneoides, Mesoproboloides and Rausihara are provided.)


Haplomeira esccipulate n. sp. also from Anvers Island. The synonymy of Haplomeira barbiana a. I. Ia disentangled and H. pulosa resurrected for the Antarctic material, while cold-temperature specia consiat of 3 subspecies: H.b. barbiana, H.b. typica and H.b. robusta, H. balsi from the Falkland Islands is 'a good species'.)


and compared with *L. furina* and *L. richardii*, with which later sp. it has been confused i.e. by Lincoln (1979)).


MYERS, A.A. & P.G. MOORE, 1983. The New Zealand and South-east Australian species of *Aora* Kroyer (Amphipoda, Gammaridae). Rec. austr. Mus. 35: 167-190. (With key to world *Aora*. Described are *A. typica*, *A. maculata* (Thomson), *A. mortoni* (Haswell), *A. hebea* n. sp. (Sydney, on sponge), *A. hircoa* n. sp. (Tasmania), and *A. adpressa* n. sp. (Victoria).)


NAOMI, T.S., 1979. On a swarm of amphipods Atylus minikoi (Walker) in the shallow waters of the Harver Bay. Indian J. Fish. 26: 227-228. (Not seen)


OBRDLIK, P., 1981. (To the understanding of the zoobenthos of the tributaries Ubit’anka, Ulicka and Stuzicka rivers.) Biologia (Bratislava) 36: 643-647. (In Czech, not seen. Mainly on Gammarus spp)


OCKELMANN, K.W., 1983. Descriptions of mytilid species and definition of the Dacrydinea n. subfam. (Myiilacea-Bivalvia). Ophelia 22: 81-123. (Dr. Anatol Jankowski drew my attention to the fact that on p. 99 the presence of 2 ad. specimens of Metopa c.f. glacialis from the mantle cavity of Musculus koreanus n. am. is recorded.)


Seas-lunar or lunar cycles? Publ. Amakusa mar. Biol. Lab. 6: 105-117. (Not seen)


PESCE, G.L., 1980. (Faunistic researches on phreatic waters of Marche (Central Italy) and review of the existing data on the Italian interstitial fauna.) Riv. Idrobiol. 19: 547-570. (In Italian, not seen)

PESCE, G.L., P. TETE & M. DE SIMONE, 1981. (Research in Africa by the Institute of Zoology of L Aquila. 6. Faunistical researches in phreatic subterranean waters of Maghreb (Tunisia, Algerie, Morocco) and Egypt.) Natura (Milano) 72: 63-98. (In Italian. Mainly a survey of localities prospected.)


PHILLIPS, N.W., 1983. Effects of food quality on food preference, ingestion, growth and survival of the marine detritus-feeding amphipod, Mucrogamaaridae magronotas (Say). Ph.D. Diss., Georgia Univ. Athens (GA), 178 pp. (Not seen)


PINKSTER, S., 1983. The value of morphological characters in the taxonomy of Gammarus. Beaufortia 33: 15-28. (Three morphologically different populations in the Gammarus pulex-group in S. France are shown to belong to a single very variable new species, Gammarus stupendus n. sp. (type area: dept Var, France)


PRICE, L.H. & J. HYLLEBERG, 1982. Algal-faunal interactions in a mat of Ulva fenestrata in Falas Bay, Washington. Ophelia 21: 75-88. (Eogammarus convicicolus consumed 0.21 mg Ulva. mg amphipod -1 day -1, in lab.)


RABALATAIS, S.C., & R. W. FLINT, 1983. IXTOC 1 effects on intertidal and subtidal infauna of south Texas beaches. Contr. mar. Sci. 26: 23-39. (Once again, amphipods, this time haustorials, are shown to be very sensitive to oil pollution).


RUFFO, S., 1982. (Study of amphipod crustacea. 92. New amphipoda of subterranean waters of Somalia.) Monit. zool. ital. Suppl. 17: 97-114. (In Italian. Hadzia pachypoda n. sp. from northern Somalia, the first African record of this genus (with which Ruffo synonymizes Liagoceradocus, Metahadzia, and Metanipharicus, the latter as a subgenus.) Afidiella pectinicauda n. sp. (S. Somalia) is also described.)


SEKIGUCHI, H. & Y. YAMAGUCHI, 1983. Scavenging Gammariidae amphipods from the deep-sea floor. Bull. Fac. Fish., mie Univ. 10: 1-14. (Data from traps at depth from 330-1015 m along Pacific coast of central Japan. Five app. collected, among which Anonyx hayashii n. ap. is new. The others are A. lilljeborgii, Euonyx lagaeus, Schisturella pulchra and Scopolocheirus hopei.)

SEMENOVA, T.N., 1981. (Parapronoe elongate) sp. n. (Crustacea, Hyperiidae) and disucussion of status of the genus Parapronoe Stebbing, 1888). Zool. Zh. 60: 1581-1585. (In Russian. Parapronoe elongate n. ap. is described from off Lord Howe Isl., S.W. Pacific, 1257 m. As the new species is intermediate, Parapronoe is synonymized with Parapronoe.)


SHAPOVALOVA, I.N. & V.N. KUZNICH, 1981. (Role of the lake sandhopper in bioproductivity and nutrition of fish in Lakes Ivan and Arkhilei, Russian SFSR, USSR.) Gidrobiol. Zh. 17(15): 44-47. (In Russian, not seen. Which species is this?)


SKET, B., 1981. (Distribution, ecological character and phylogenetic importance of *Niphargus vaalichius* (Amphipoda, Gammaridae s.l.)). Biol. vestn. 29: 87-103. (In Slovenian with English summary. Deals also with N. hrabei, found near Zagreb)


SKOPTSOV, V.G., 1981. (Growth and metabolism of *Gammarus lacustris* at different temperatures.) Ekologiya 0(2): 97-98. (In Russian, not seen)


SORBE, J.C., 1982. (Observations preliminaires du suprabentho dans un transect bathysomatique de la plateforme continentale equitaine). Oecol. aquat. 6: 8-17. (In Spanish, not seen)


SOYEZ, D., 1980. (Demonstration of an action of glucocere and seotonin on the


STOCK, J.H., 1981. The taxonomy and zoogeography of the family Bogidiellidae (Crustacea, Amphipoda), with emphasis on the West Indian taxa. Bijd. Dierk. 51: 345-374. (A monographic review, in which the group is split up into the following supraspecific taxa: Arteela (1 sp), Spelaeogammarus (1), Somagidiella n. gen. (for Bogidiella somala), Parasbigidiella (1), Bogidiella, with 7 subgenera: Bogidiella a.e. (at least 8), Medigiella n. subgen. (for B. chappuisi + 4), Orchestigidiella n. subgen. (for B. orcheostipes), Stygogiidiella n. subgen. (for B. bredini + 1), Mexigidiella n. subgen. (for B. tabacencens + 1), Guagiidiella n. subgen. (for B. holangiери + 1) and Antillogidiella n. subgen. (for B. martina). Furthermore Actogidiella n. gen. (for A. cultifera n. sp.), Marigidiella n. gen. (type B. brasiliensis, further species H. brasiliensis n. sp.), Dermegidiola (1), Bollegidia (2, as Bogidiella cootai is here transferred to Bollegidia), Duasartiella (1) and Paeugonofidiella (2). A. cultifera n. sp., M. brasiliensis n. sp. and Bogidiella (Stygogiidiella) virginalis n. sp. were all found on the island of Tortola (West Indies), Bogidiella (?Stygogiidiella) perla n. sp. from Isla de Margarita, Venezuela. Bogidiella (S.) bredini is redescribed.)

STOCK, J.H., 1982. Amsterdams (the Netherlands) expeditions to the West Indian

STOCK, J.H., 1982. The influence of hadziid Amphipoda on the occurrence and distribution of Theroamphitta and cyclopoid Copepoda in the West Indies. Pol. Arch. Hydrobiol. 29: 275-282. (‘It is considered most likely that Hadziida predate on smaller Crustacea’)


STOCK, J.H. & J.J. VERMEULEN, 1982. A representative of the mainly abyssal family Pardalicidae (Crustacea, Amphipoda) in cave waters of the Caicos Island. Bijdr. Dierk. 52: 3-12. (Speleonomphale nov. gen. n. sp. from the Caicos Island N. of Haiti. Nicippe buchi from Lanzarote is also transferred to Speleonomphale)

STOCK, J.H., 1983. Discovery of a bogidiellid amphipod crustacean in inland waters of the East Indian archipelago: Bogidiella (Nedigidiella) aurwescens n. sp. Crustaceaana 44: 198-204. (type locality: caves in Sarawak, Borneo)


STOCKTON, W.L., 1982. Scavenging amphipods from under the Ross Ice shelf, Antarctica. Deep-Sea Res. 29: 819-835. (A study of an undescribed Orchestinae sp., trapped from below 700 m's of ice many hundreds of kilometers from the ice edge. A few other amphipods were also caught.)


and the distribution of amphipoda in Commencement Bay, Washington, USA.


(T.a. *Corophium salomonis*)


TURNER, R.D., 1981. (Wood islands and thermal vents as centers of diverse communities in the deep sea.) Biol. Morya (Vladiv.) O(1): 3-10. (In Russian, not seen)


THOMAS, J.D. & J.L. BARNARD, 1983. Transformation of the Leucothoidae morph to the Anamixia morph (Amphipoda), J. crust. Biol. 3: 154-157. (In one of the most amazing surprises in amphipod history, Anamixia spp turn out to be the fully-grown males of Leucothoidae. Leucothoidae is therefore a junior synonym of Anamixia, and L. potai of A. hanseni. The family Leucothoidae is redefined to exclude Leucothoidae, and the Anamixidae to include this morph.)


TIMMS, B.V., 1983. A study of benthic communities in some shallow saline lakes of western Victoria, Australia. Hydrobiologia 105: 165-177. (i.e. Austrochitonina aubtenauis)


VASILEMKO, S.V., 1982. (Two new species of the family Paracercopidae from the north-western Pacific.) Issled. Fauni Morei 29(37): 95- . (In Russian. New taxa: Cercocephalinae n. sp. and Pseudocercuspis pubescens n. sp., both from the Kurile Islands. The Paracercopidae should not, as done by Bousfield, be united with the Phthisiidae.)


Hrovogo Okeana.) 492 pp. (In Russian. A very important monograph on the world's hyperiidea, which I hope somebody will offer to review for the Amphipod Newsletter. New taxa: Laxohyperia vealuriformis Vinogradov & Volkov n. gen. n. sp. (Hyperiidae), Lycaea lilja Volkov n. sp. and Amphithorus muratus Volkov n. sp.)


WATERS, T.F., 1982. Annual production by a stream brook char (Salvelinus fontinalis) population and by its principal invertebrate food. Environa. Biol. Fishes 7: 165-170. (In this Minnesota study Gammarus pseudowilsoni is the main invertebrate prey.)

WATLING, L., 1981. Amphipoda from the northwestern Atlantic: the genera Jerbernania, Epimeria and Harginia. Sarsia 66: 203-211. (With descriptions of Jerbernania americana n. sp., Epimeria obtusa n. sp. and Harginia clivicola n. sp., all from the outer continental shelf of the NE USA, and a key to female Harginia)


(Watling recognizes the following superorders: Syncarida (with Anaspidacea, Bathynellacea and Paleocaridacea), Brachydace (with Thaosaobeniaceae, Spelaeogriphaceae, Tanaidaceae and Cuaceae), Isopoda (with 9 orders), Amphipoda (with the customary 4 orders) and Eucarida (with 6 orders.)


WESTINGA, E. & P.C. HOETJES, 1981. The intrasponge fauna of *Sphagiapectia vespersia* (Porifera, Demospongea) at Curacao and Bonaire. Mar. Biol. 62: 139-150. (Amphipods not identified, except Leucothoe spinciperca, the most common species.)


WICKSTEN, N.K., 1982. Crustaceans from baited traps and gill nets off Southern California. Calif. Fish & Game 68: 244-248. (Caprella unguina from *Parelolimia multispina*, *Parelepuesta communis* from *Paralithodes californiensis*. Both hosts are lithodids.)


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Hydrobiologia 97: 105-118.
ZANDER, C.D. & E. HARTWIG, 1982. On the biology and food of small-sized fish from North and Baltic Sea areas. 4. Investigations on a eulittoral mud flat at Sylt Island. Helgol. Meeresunters. 25: 47-63. (‘The most prominent fish component by biomass was gammarids in all investigated fish’).
ZAUKE, G-P., 1982. ditto II. Seasonal variation and correlation to temperature and other environmental variables. Water Res. 16: 785-792.
ZERBIB, C. & J.J. HEUSY, 1983. Electron microscopic observations of the subepidermal fat-body changes following ovarietomy in Orchestia
F I R S T  A N N O U N C E M E N T  /  P R E M I E R  A V I S

Vlth INTERNATIONAL Colloquium on AMPHIPOD CRUSTACEANS - organized by
the University of Amsterdam, 28 June - 3 July 1985

VIe COLOQUIUM INTERNATIONAL SUR LES CRUSTACES AMPSIPHODES - organisé par
l'Université d'Amsterdam, du 28 juin au 3 juillet 1985

During the "Workshop on Phylectic Classification of Amphipod Crustaceans" (Ottawa, 17-19 August 1984), the University of Amsterdam has been elected for the organisation of the Vlth Amphipod Colloquium (formerly Colloquium on Gammarus and Niphargus).

Dates.- The period 28 June to 3 July 1985 has been selected, since several amphipod workers wish to participate, from 4 July onward, in an Evolution symposium in England.

Place.- The Colloquium will be held in the village of Amblyeuse (France, département Pas-de-Calais), on the Channel coast halfway Calais and Boulogne. The University of Amsterdam has a modest fieldstation in this place, whereas two other marine laboratories (Laboratoire de Biologie marine des Universités de Lille and Louvain, and the Institut de Biologie marine, Wimereux) are quite close.

The Colloquium will take place in the Léo Lagrange Centre of Amblyeuse, which offers complete, modern facilities (2 lecture halls, possibilities for slides, overhead, 16 mm movies, lodgement in bungalows on the grounds, all meals, sporting facilities).

Registration fee.- For the use of the congress facilities and (free) participation in excursions, a fee of US$ 60.- will be charged (ca. 600 ffr).

Lodgement.-

A) The recommended way. The congress centre possesses a number of bungalows for 2 and 4 persons (each with toilet and shower) around the lecture halls. The price per person (bed, kitchen use, but no lits) is ffr. 143.- (ca. US$ 15.-) per person per day (estimated price for 1985).

B) The budget way. The two field laboratories in Amblyeuse have a limited number of beds available in their student dormitories. With a few exceptions, there are several superimposed beds per room. For students and for amphipod workers from countries experiencing currency difficulties, this is a cheap, but decent, way to reduce their travel expense.

Since the number of beds available is limited (24 in the Amsterdam Lab., 14 in the Lille/Louvain Lab.), these are allotted strictly on the "first signed-up/first served" basis.

The price for these accommodations is ffr. 20.- per day in the Lille/Louvain Lab., (without kitchen use) or ffr. 30.- per day in the Amsterdam Lab. (with kitchen use). Meals are available from the Hôtel/Restaurant des Baigneurs (at 1 minute walk from both labs.): hot meals ffr. 34.-, breakfast ffr. 12.- (1 US$ is approx. 10.- ffr, fluctuated.

Pendant le "Workshop sur la Classification phyétique des Crustacés Amphipodes" (Ottawa, 17-19 août 1984), l'Université d'Amsterdam a été élue comme organisme organisateur du VIe Colloque sur les Amphipodes (autrefois: Colloque sur Gammarus et Niphargus).

Dates.- La période du 28 juin au 3 juillet 1985 a été choisie, parce que plusieurs participants désirent prendre part également à une Conférence sur l'Evolution en Angleterre, à partir du 4e juillet.

Place.- Le Colloque sera organisé dans le village d'Ambleteuse, dans le Pas-de-Calais (France, sur les côtes de la Manche entre Calais et Boulogne. L'Université d'Amsterdam dispose d'un modeste laboratoire de terrain. Ce laboratoire, tandis que deux autres laboratoires marins (Laboratoire de Biologie marine des Universités de Lille et de Louvain, ainsi que l'Institut de Biologie marine de Wimereux) se trouvent en proximité.

Le Colloque se déroul en le Centre Léo Lagrange d'Ambleteuse, avec ses facilité modernes (2 salles de conférence, avec tous les moyens audio-visoruels, hébergement dans des bungalows sur le domaine même, tous les repas, activités sportives).

Taxe d'inscription. - US $ 60.- (soit approximativement FF 600.-) donnent aussi le droit d'utiliser toutes les facilités du Centre et de participer gratuitement aux excursions.

Hébergement.-

A) Modalité recommandée. Le Centre Léo Lagrange offre un nombre de bungalows modernes, chaque logement à 2 ou 4 lits (chaque disposant d'une douche, W.C. et lavabo), arrangés autour des salles de conférence. Le prix par personne (estimé au niveau de 1985) sera de FF 143.- par jour, les trois repas y inclus.

B) Modalité économique. Les deux laboratoires de terrain à Amblyeuse offrent un nombre restreint de lits dans leurs dortoirs collectifs. Avec peu d'exceptions, il y a plusieurs lits superposés dans chaque chambre. Pour des étudiants et pour des chercheurs originaires de pays avec des difficultés vallituinaires, cet hébergement représente une alternative bon marché, moindre, mais décente. Parce que le nombre de lits disponibles est limité (24 dans le laboratoire d'Amsterdam, 14 dans le laboratoire de Lille/Louvain), les places seront allouées strictement selon la formule "les premiers venus sont les premiers servis". Le prix pour cette formule sera de FF 20.- par jour (dans le laboratoire de Lille/Louvain), sans accès à la cuisine, ou de FF 30.- par jour (dans le laboratoire d'Amsterdam, avec cuisine). Les repas pourront être pris dans le Restaurant des Baigneurs (1 minute à
at the rate of exchange).

C) For participants wishing single rooms the Hôtel des Baigneurs has a limited number of singles available (fr. 62.– per person per day); for meals see below. The laboratory dormitories and the Hotel are within 5 min. walking distance from the lecture halls.

Excursions and fieldwork. - The laboratories are at a few minutes walk from the coast, the Léo Lagrange Centre is 800 m from the coast. The Channel area is reknown for its large tidal difference (ca. 9 m at equilibrium spring tides) and a wide variety of biotopes is readily available (rocky intertidal, sandy beaches, estuarine environments with mud flats, running chalk streams).

A number of excursions will be organized for the Colloquium members (to the old walled town of Boulogne, to the chalk cliffs of Cap Blanc Nez, a demonstration of up- and downstream migrations of Gammarus).

Travel. - Ambleteuse can be reached:

A) By car via road D940 (formerly N40), between Calais Boulogne, ca. 12 km N of the latter.

B) By train: direct trains connect the railway station Wimereux-Wimille (ca. 4 km from the lecture halls) with Paris (once a day), Lille (5 times a day) or Boulogne (8 times a day).

C) By air: the nearest airport is Lille-Lesquin (130 km). From Lille five direct trains serve the railway station Wimereux-Wimille.

Air travellers through Paris should make connections by train (once a day direct, or else change in Boulogne).

D) By boat: visitors from Great Britain may wish to take the ferry from Dover to Boulogne, and reach Ambleteuse by bus or by train (many services per day).

Languages. - The official Colloquium languages will be English and French.

Call for papers. - If you intend to present an oral communication or a poster, please indicate the intended title on the attached form.

Registration. - Please fill out the attached form as soon as possible if you intend to visit the Colloquium or if you wish to be kept informed. Since the number of places available in a small village like Ambleteuse is not unlimited, firm subscription at an early date will insure reservation of accommodation in the desired category.

Please address registration, accommodation, and communication forms as soon as possible to

The Secretariat, Wth International Colloquium on Amphipoda
Jan H. Stock or Sjouk Pinkster
I.T.Z., P.O. Box 20125
1000 HC Amsterdam
The Netherlands.
tel. 020 - 522.3435 or 522.3635
telex FAC WN 16460.

A demonstration of up- and downstream migrations of Gammarus): repas chauds à FF 38.–, petit déjeuner à FF 12.–

C) Chambres individuelles. L'Hôtel/Restaurant des Baigneurs offre un nombre limité de chambres individuelles à FF 62.– par personne par jour; pour les repas voir B.

Les dortoirs des laboratoires et l'Hôtel des Baigneurs se trouvent à 5 min. à pied des salles de conférence.

Excursions touristiques et démonstratives. - Les laboratoires sont à quelques minutes seulement du littoral, le Centre Léo Lagrange se trouve à 800 m de la côte. Les côtes de la Manche sont connues pour leur grande amplitude des marées (de 9 m environ pendant les grandes marées d'équinoxe) et pour leur grande variété de biotopes (côtes rocheuses, plages de sable, estuaires avec schorre intertidale, eaux douces courantes).

Quelques excursions seront offertes aux participants (la vieille Cité de Boulogne, les falaises de Cap Blanc Nez, démonstration des migrations anadromes et katadromes de Gammarus).

Moyens d'accès. - Ambleteuse peut être atteint:

A) En voiture: prenez la D 940 (antérieure N 410), le village se trouve entre Calais et Boulogne, à 12 km environ au Nord de Boulogne.

B) Par le train: Gare SNCF de Wimereux-Wimille (à 4 km environ de l'endroit du Colloque), desservie par des trains directs de Paris 1 fois par jour), de Lille (5 fois par jour) ou de Boulogne (8 fois par jour).

C) Aéroport le plus proches Lille-Lesquin (à 130 km). De Lille, il y a 5 trains par jour à la gare SNCF de Wimereux-Wimille. Les voyageurs en avion à destination de Paris peuvent prendre le train direct (Paris-Wimereux) ou faire la correspondance par Boulogne.

D) En bateau: les voyageurs venant d'Angleterre peuvent utiliser le bac (Douvrains-Boulogne), et atteindre Ambleteuse par le SNCF ou par l'autocar (plusieurs services par jour).

Languages. - Les langues officielles du Colloque seront l'anglais et le français.

Communications. - Les participants souhaitant présenter des exposés oraux ou des documents pour des séances de démonstration ("poster") sont invités de mentionner le titre de leur communication sur la formule ci-jointe.

Inscription. - Si vous avez l'intention de participer au Colloque, veuillez bien remplir le formulaire ci-jointe. Le nombre de lots (dans une localité si petite qu'Ambleteuse) étant limité, l'inscription définitive et rapide vous assurera une chambre dans la catégorie désirée.

Veuillez remplir et envoyer le plus tôt possible la demande d'inscription et de logement, ainsi que celle de communications, à

Secrétariat Vie Colloque international sur les Amphipodes
Jan H. Stock ou Sjouk Pinkster
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No. de téléx: FAC WN 16460.