AMPHIPOD NEWSLETTER

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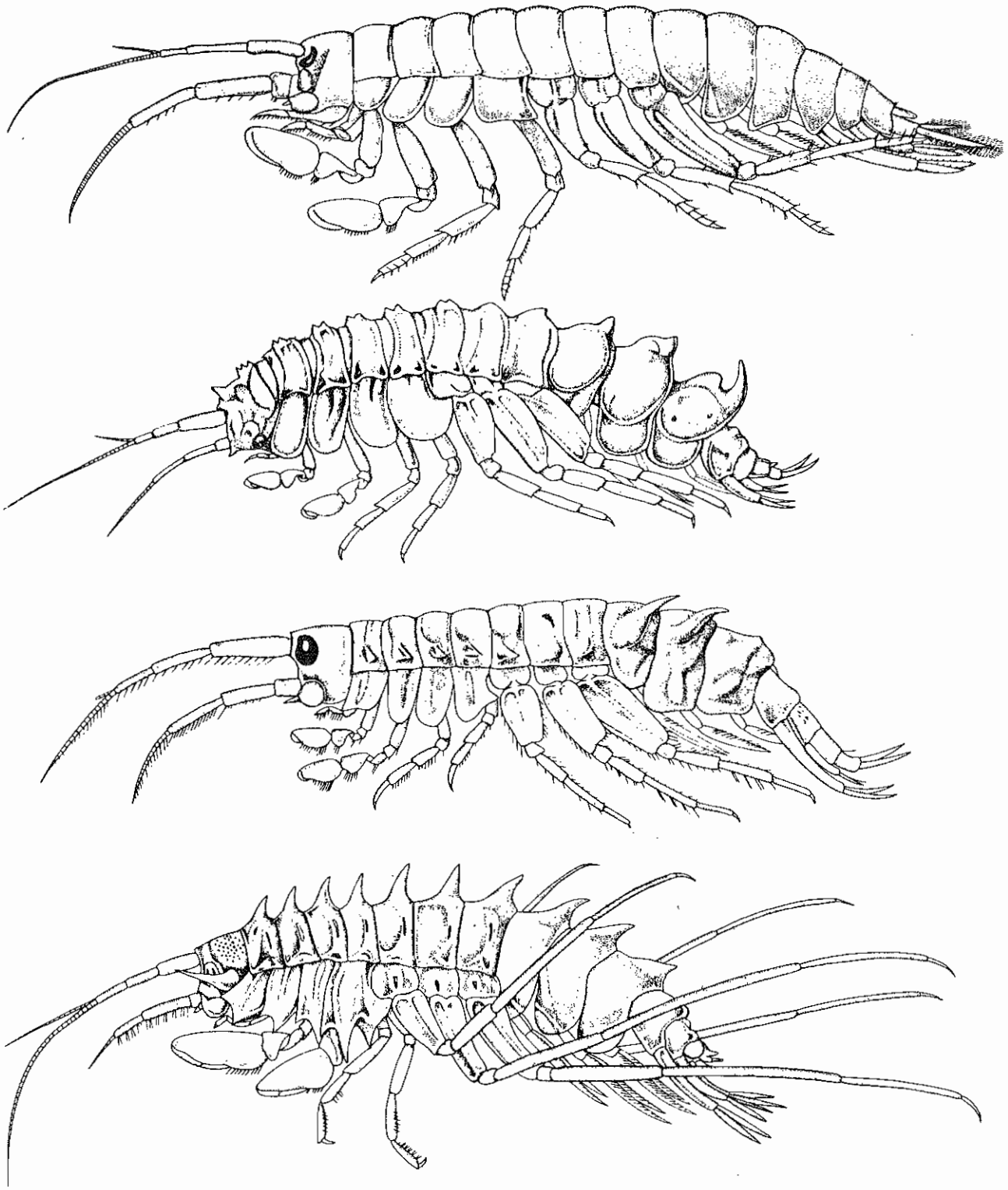

Edited by: Les Watling, University of Maine - Darling Center, Walpole, Maine 04573, USA

AMPHIPOD NEWSLETTER 15

November 1984

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 ommitted someone):

United Kingdom: Dr. Michael Thurston, Institute of Oceanographic Studies, Wormley, 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

NEXT AMPHIPOD MEETING

Jan Stock has arranged to host the next international amphipod meeting, formally called the "VIth 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.58 - 61

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 PHYLOGENY 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
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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 33457
R.P. Alexeev, Inst. of Biology South Seas, Odessa Branch, Acad. Sciences USSR, Odessa 270011, USSR
Matt Murphy, Sherkin Island Marine Station, Sherkin Island, Co. Cork, Eire

Report on a "Workshop" on the Phyletic Classification of Amphipod Crustaceans, August 18, 1984, National Museum of Natural Sciences, Ottawa, Canada.

Notes by staff of National Museum of Natural Sciences, Ottawa

I 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, Can.
Dahme, Hans, Universitat 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, Fahmida, National Museum of Natural Sciences, Ottawa, Canada
Schminke, Kurt, Universitat Oldenburg, Oldenburg, W. Germany
Schminke, Gisela, Universitat Oldenburg, Oldenburg, W. Germany
Seig, Jurgen, Universitat Osnabruck, 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: Phoxocephaloidea, Crangonyctoidea, Gammaroidea, Pontoporeioidea, 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 Gammaroidean 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 arguements against close relationships of isopods and ampipods 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.

Hendrycks, Ed. Phyletic Trends in the Mandibular Structure of Pleustid Amphipods.

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 Amphipoda of the Mediterranean. Part 1. Gammaridea (Acanthonotozomatidae to Gammaridae). Memoires de l'Institute Oceanographique, No. 13, xiii - 364pp. 1982.

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 suborders 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 Ampithoe 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.

BIBLIOGRAPHY

ABOLMOSOVA, G.I., 1981. (Elements of the daily energy balance in Gammarus olivii M.-Edw. at different temperatures). Ehkol. Morya 7: 52-57. (In Russian, not seen)

ACIOLI SOARES, C.M., 1979. (Ecological study of the Itamaraca region, Pernambuco, Brazil. 3. Amphipods of the families Talitridae and Ampithoidae.) Trab. oceanogr. Univ. Fed. PE, Recife 14: 93-104. (In Portuguese. 9 Talitridae s.l., 3 Ampithoidae)

ACIOLI SOARES, C.M., 1980. (Ecological study of the Itamaraca region, Pernambuco, Brazil. 6. Amphipods of the family Gammaridae. Trab. oceanogr. Univ. Fed. PE, Recife 15: 263-276. (In Portuguese. 11 spp of Gammaridae s.l.)

ADAMS, J. & P.J. GREENWOOD, 1983. Why are males bigger than females in pre-copula pairs of Gammarus pulex? Behav. Ecol. Sociobiol. 13: 239-241. (Because of mechanical constraint - i.e. superior swimming performance of such pairs - and not because of intrasexual competition for males)

ADAMS, J., P.J. GREENWOOD & J. MALLOY, 1983. Colour variation in Gammarus pulex in relation to sex and the moult cycle. Arch. Hydrobiol. 98: 265-271.

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

AHSANULLAH, M., 1982. Acute toxicity of chromium, mercury, molybdenum and nickel to the amphipod Allorchestes compressa. Austr. J. mar. Freshw. Res. 33: 465-474.

AL-HABBIB, O.A.M. & F.S. HANNA, 1981. Some aspects of the thermal acclimation in the freshwater Rivulogammarus syriacus: 3. The effect of experience to changing lethal temperatures on the thermal resistance. Verh. int. Ver. angew. Limnol. 21: 1589-1595. (Not seen, nor nrs. 1-2 in this series)

ALONSO, G., 1981. (Amphipods from ria Deseado (Santa Cruz-Argentina) I). Cont. cient. CIBIMA 175(1980): 1-15., 8 plts. (In Spanish. Description and figures of Ampithoe femorata, Atylus homochir, Bircenna fulva, Cerapus tubularis, Jassa falcata, Gammaropsis typica, Halirages stebbingi and Hyale hirtipalma. The Atylus and Cerapus are new to Argentina)

ALOUF, N.J., 1982. Repartition des Gammarides d'eau douce au Liban. Pol. Arch. Hydrobiol. 29: 247-253.

ALOUF, N.J., 1983. Cycle de vie de Gammarus laticoxalis ssp. dans l'exsurgence Shtaura (Liban). Note sur Gammarus syriacus de Shamaine. Hydrobiologia 107: 169-181.

ANDERSON, R.C. & P.L. WONG, 1982. The transmission and development of Paracuaria adunca (Creplin 1846) (Nematoda: Acuarinidea) of gulls (Laridae). Can. J. Zool. 60: 3092-3104. (Infective stages in freshwater amphipods)

ANDRES, H.G., 1981. Lysianassidae aus dem Abyssal des Roten Meeres, Bearbeitung der Koderfange von FS 'Sonne' - MESEDA 1 (1977). Senckenberg. biol. 61(1980): 429-443. (Pseudamaryllis nonconstricta n. gen. n. sp., Glycerina teretis n. sp., and Socarnes allectus n. sp. from baited traps at 700-1900 m deep in the Red Sea)

ANDRES, H.G., 1981. Die Gammaridea (Crustacea: Amphipoda) der Deutschen Antarktis-Expeditionen 1975/76 und 1977/78. 1. Gammaridae, Melphidippidae und Pagetinidae. Mitt. namb. zool. Mus. Inst. 78:179-196. (Peraceradocus ramulus n. sp., 54o 09'S, 36o 48'W; Melphisubchela prehenda n. gen., n. sp. of Melphidippidae from 69o 29'S, 56o 03'W; Pagetina antarctica n. sp., 61o 45'S, 56o 00'W.)

ANDRES, H.G., 1982. Die Gammaridea (Crustacea: Amphipoda) der Deutschen Antarktis - Expeditionen 1975/76 und 1977/78. 2. Eusiridae. Mitt. hamb.

zool. Mus. Inst. 79: 159-185. (Described and illustrated are Chosroes decoratus, Eusirella flagella n. sp. (61o08'S, 57o21'W, 3200 m), Eusiroides stenopleura, Gondogeneia georgiana, Pontogeneiella longicornis and Rhachotropis schellenbergi n. sp. (61o29'S, 56o03'W))

ANDRES, H.G., 1983. Die Gammaridea (Crustacea: Amphipoda) der Deutschen Antarktis - Expeditionen 1975/76 und 1977/78. 3. Lysianassidae. Mitt. hamb. zool. Mus. Inst. 80: 183-220. (New taxa: Lepidepecreum carinatum n. sp. (64oS, 64o30'W), L. infissum n. sp. (63o22'S, 54o10'W), Orchomene hiata n. sp. (64o06'S, 55o06'W) O. kryptopinguides n. sp. (63o28'S, 54o29'W), O. acotianensis n. sp. (= O. chilensis f. abyssorum Schellenberg, 63o22'S, 54o10'W), Parachisturella n. gen. (type species P. simplex n. sp. (55o, 35o30'W), further species Tryphosites capadarei))

APPY, R.G. & M.D.B. BURT, 1982. Metazoan parasites of Cod, Gadus morhua L., in Canadian Atlantic waters. Can. J. Zool. 60: 1573-1579. (Lafystius sturionis p. 1576)

ARENDSE, M.C. & C.J. KRUYSWIJK, 1981. Orientation of Talitrus saltator to magnetic fields. Neth. J. Sea Res. 15: 23-32.

ARIMOTO, I., 1981. A new Caprellida, Postocaprella marcida n. sp. (Amphipoda, Caprellida) sticking to the Sargassum, collected in Tassha Bay, Sado Island, Japan. Ann. Rep. Sado mar. biol. Stat. Niigata Univ. 11: 21-22.

ARIMOTO, I. & M. MURANO, 1981. Two species of caprellid amphipods off Boso Peninsula, Japan. Trans. Tokyo Univ. Fish. ?(4): 65-68. (Not seen. Second record of Paraprotella prima)

ARVY, L., 1982. Phoresies and parasitism in cetaceans: a review. Invest. Cetacea 14: 233-335. (Not seen)

ASARI, K.P. & A.A. MYERS, 1982. Taxonomic studies on the genus Grandidierella Coutiere (Crustacea, Amphipoda). IV. Indian species. Bull. Mus. natn. Hist. nat. Paris 44, A: 237-256. (Deals with G. macronyx, G. megnae (of which G. bonnieri is a synonym), G. gravipes, G. gilesi and G. bonnieroides)

ASARI, K.P., 1983. On two new species of Gammarids (Amphipoda, Crustacea) from Andaman and Nicobar islands, India. Bull. Mus. natn. Hist. nat. Paris (4)5: 641-649. (Victoriopisa papice n. sp. and Quadrivisio lobata n. sp., both from N. Andaman)

ATKISON, R.J.A., P.G. MOORE & P.J. MORGAN, 1982. The burrows and burrowing behaviour of Maera loveni (Crustacea: Amphipoda). J. Zool., Lond. 198: 399-416.

ATLAS, R.M., M. BUSDOSH, E.J. KRICHEVSKY & T. KANEKO, 1982. Bacterial populations associated with the Arctic amphipod, Boeckosimus affinis. Can. J. Microbiol. 28: 92-99.

BAID, I.C., A.K. SINHA & S. AL-DABACH, 1981. A morphometric study of different groups in a population of Rivulogammarus syriacus. Zool. Anz. 206: 379-381.

BANAS, P.T., D.E. SMITH & D.C. BIGGS, 1982. An association between a pelagic octopod, Argonauta sp. Linnaeus 1758 (sic!) and aggregate salps. Fish. Bull. 80: 648-650. (Pega socia also contained many Vibilia armata)

BARCLAY, I.M.T., 1982. New records of Bathyporeia (Amphipoda) from West Scotland. J. mar. biol. Ass. U.K. 62: 229-231. (B. nana and B. sarsi)

BARNARD, J.L., 1981. Redescription of Iphiplateia whiteleggei, a New Guinea marine amphipod (Crustacea). Proc. biol. Soc. Wash. 94: 1211-1218. (With a key to the genera of Phliantidae)

BARNARD, J.L. & M.M. DRUMMOND, 1981. Three Corophioids (Crustacea: Amphipoda) from Western Port, Victoria. Proc. R. Soc. Victoria 93: 31-41. (Deals with Baracuma alguirta gen. et. sp. nov. (Ischyroceridae, near Cerapus), Laetmatophilus dabbagi n. sp. and Leipauropus parasiticus. A key to Laetmatophilus spp. is provided.)

BARNARD, J.L. & C.M. BARNARD, 1982. Biogeographical microcosms of world freshwater Amphipoda (Crustacea). Pol. Arch. Hydrobiol. 29: 255-273.

BARNARD, J.L. & C.M. BARNARD, 1982. Revision of Foxiphalus and Eobrolgus (Crustacea: Amphipoda: Phoxocephalidae) from American Oceans. Smithson. Contr. Zool. 372: 1-35. (With a key to the species. Deals with Foxiphalus obtusidens, type (was in Pontharpinia), F. major n. rank (was ssp. of obtusidens), F. ximineus n. sp. (S. California), F. similis (was in Paraphoxus), F. cognatus (was in Paraphoxus), F. apache n. sp. (Gulf of California), F. golfensis n. sp. (Gulf of California), F. secasius n. sp. (Panama), and mentions two previously described Eobrolgus species.)

BARNARD, J.L. & C.M. BARNARD, 1982. The genus Rhepoxynius (Crustacea: Amphipoda: Phoxocephalidae) in American seas. Smithson. Contr. Zool. 357: 1-49. (A genus monograph. New taxa R. menziesi n. sp. (off S. California, is Paraphoxus epistomus s. Barnard 1960), R. spec. D, R. hudsoni n. sp. (Long Island Sound, is Trichophoxus epistomus s. Bousfield 1973), R. spec. C, R. homocuspidatus n. sp. (intertidal, Santa Barbara, Cal.) and R. spec. L. The species R. epistomus (type), R. lucubrans, R. gennatus, R. variatus, R. abronius, R. fatigans, R. daboius, R. stenodus, R. heterocuspidatus, R. tridentatus and R. vigitegus are transferred to the present genus from Paraphoxus)

BARNARD, J.L. & J. CLARK, 1982. Huarpe escofeti, new genus, new species, a burrowing marine amphipod from Argentina (Crustacea, Amphipoda, Urohaustoriidae). J. crust. Biol. 2: 281-295.

BARNARD, J.L. & J. CLARK, 1982. Puelche orensanzi, new genus, new species, a phoxocephalid amphipod from the shores of Argentina. J. crust. Biol. 2: 261-272.

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 (C. bassi n. sp. from Victoria, and C. praedens n. sp. from Tasmania) and two closely related new genera: Incratella n. gen. (type and only species Cheirocratus inermis from Madagascar) and Prosocratus (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. Gammaridean Amphipoda of Australia, part V: Superfamily Haustorioidea. Smithson. Contr. Zool. 360: 1-148. (New taxa: Zobrachoidae n. fam. for Zobracho, Prantinus n. gen. and Bumeralius n. gen. Bumeralius monotypic, type B. bucholicus n. sp. (Victoria); Prantinus also monotypic, type P. talanggi n. sp. (Victoria). The Urohaustoriidae n. fam. consist of 6 genera, of which 5 are new. Urohaustorius pulcus n. sp., U. pentinus n. sp., U. merkanius n. sp., U. wingaro n. sp., U. parnggius n. sp., and U. perkeus n. sp. all come from Victoria, U. yurrus n. sp. and U. urungari n. sp. from Queensland, and U. gunni n. sp. from New South Wales. Gheegerus garbaius n. gen. n. sp. (Queensland) and Narunius tallerkus n. gen. n. sp. (NSW) represent monotypic new genera, while Tuldarus n. gen. has 2 spp, both from Victoria: T. cangellus n. sp. (type) and T. barinius n. sp. Tottungus tungus n. gen. n. sp. (Victoria) and Dirimus tarlitus n. gen. n. sp. (Queensland) are again monotypic genera. Also monotypic is the new family Condukiidae, erected for Condukius karkan n. gen. n. sp. from Victoria.)

BARNARD, J.L. & M.M. DRUMMOND, 1982. Redescription of Exoediceros fossor (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, Parhaliaedon 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.)

BARNARD, J.L. & G.S. KARAMAN, 1982. Classificatory revisions in gammaridean Amphipoda (Crustacea), part 2. Proc. biol. Soc. Wash. 95: 167-187. (More armchair revisions, preparatory to the revision of the new 1969-Barnard. Deals with the following matters: Afrochiltonia is a senior synonym of Austrochiltonia. In the Eusiridae Pseudomoera is revived and Atyloides fontana transferred to it as a second species. Relictomoera n. gen. (type Paramoera relicta, further sp. P. tsushimana) and Sternomoera n. gen. (type and only sp. Paramoera yezoensis) are split off from Paramoera, and Nasageneia (type Pontogeneia nasa, further sp. P. guinsana) from Pontogeneia. Paramoera brachyura Stephensen, 1949 (not Schellenberg 1931) is renamed P. stephenseni n. nom.

In the Gammaridae Aurohornellia n. gen. has Tuleurogammarus sinuatus as type and only sp.; Maeracunha is synonymized with Ceradocopsis, and Metaceradocus and Tuleurogammarus with Hornellia. Lupimaera n. gen. (type Maera lupana), Maleriopa n. gen. (type Eriopisella dentifera), and Tegano n. gen. (type Melita setticornis) are monotypic genera. A key to hadziids and weckeliids is provided, and two new monotypic genera described: Texiweckeliopsis (type Texiweckelia insolita) and Holsingerius (type Texiweckelia samacos).

The new family Paracalliopiidae consists of the two genera Paracalliope and Indocalliope n. gen. (type and only sp. Paracalliope indica).

In the Phoxocephalidae, the monotypic Feriharpinia n. gen. has Harpinia ferenteria as type, and Torridoharpinia n. gen. Proharpinia hurleyi (further sp. Proharpinia tropicana.)

BARNARD, J.L. & C.M. BARNARD, 1983. Freshwater Amphipoda of the world. 1. Evolutionary patterns. 2. Handbook and bibliography. Hayfield Assoc., Mt. Vernon, 830 pp. (This is a veritable 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 Karaman's earlier sweeping 'lumpings' of a number of genera into Echinogammarus and Sarothrogammarus here partly reversed. 'Official changes': Austrocrangonyx n. gen. (Gammarus barringtonensis + 4). Gammarus ignotus is transferred from Heterogammarus to Corophiomorphus, and G. bifasciatus and H. tenuis from Heterogammarus to Eurybiogammarus. Pelicarinus n. gen. is erected for Gammarus puzylli, Pallasiola to n. gen. for Pallasea cancelloides var. quadrispinosa. Tadzhikistania n. gen. is erected for Sarothrogammarus ruffoi (+ 1) and Lusigammarus n. gen. for Gammarus guernei (+ 2). Zenkevitchia revesi is transferred to Anopogammarus. Calliope didactyla is a synonym of Allorchestes novizealandiae. Nuuanu and Cottesloe are merged with Gammarella, while Tabatzius is provisionally kept apart.)

BARNARD, J.L. & M.M. DRUMMOND, 1983. Warreyus, a new genus of Exoedicerotidae (Crustacea, Amphipoda) based on Exoediceros maculosus Sheard. Proc. R. Soc. Victoria 95: 65-75. (Warreyus n. gen. with type Exoediceros maculosus and further species Oedicerus latrans Haswell, both from S and SE Australia. A few additional figs of Exoediceros fossor are also given.)

BARNARD, J.L. & G.S. KARAMAN, 1983. Australia as a major evolutionary centre for Amphipoda (Crustacea). Mem. Austr. Mus. 18: 45-61. (An important paper, but very hard to abstract. The paper contains a new proposal for the higher classification of the order Amphipoda. This classification is reproduced on p. 00 of this Newsletter; it is not accepted by Karaman (see p. 59). New taxa diagnosed in Appendix 3 pp. 60-61: Exoedicerotidae n. fam. (type Exoediceros, further genera Exoediceropsis and Bathyporeiapus). Paracalliopiidae new family (type Paracalliope). Austrogammarus n. gen. (type sp. Gammarus australis, further sp. G. haasei), Austrocrangonyx n. gen. (also described as new in Barnard & Barnard 1983) for Gammarus barringtonensis (+ 4)

BARNARD, J.L. & J. CLARK, 1984. Redescription of Phoxocephalopsis zimmeri with a new species, and establishment of the family Phoxocephalopsidae (Crustacea, Amphipoda) from magellanic South America. J. crust. Biol. 4: 85-105. (The Phoxocephalopsidae n. fam. consists of Phoxocephalopsis (type) and Puelche. Phox. zimmeri is redescribed and P. gallardoi n. sp. (= P. zimmeri s. Barnard & Drummond 1982) described on material from the Falkland Islands.)

BARLOCHER, F., 1982. The contribution of fungal enzymes to the digestion of leaves by Gammarus fossarum Koch (Amphipoda). Oecologia 52: 1-4.

BARTHELEMY, D., 1982. La colonisation artificielle de la riviere souterraine de La Balme (Dep de l'Isere) par l'amphipode Niphargus virei. Bilan actuel. Bull mens. Soc. linn Lyon 51: 250-256.

BAUDIN, J.P., 1982. Bioaccumulation et elimination du 65 Zn par Gammarus aequicauda Martinov. Mar. Environm. Res. 7: 227-233.

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. 18: 97-111. (i.a. on Gammarus locusta)

BEHBEHANI, M.I. & R.A. CROKER, 1982. Ecology of beach wrack in northern New England with special reference to Orchestia platensis. Est. coast. Shelf Res. 15: 611-622.

BELL, S.S. & L.D. COEN, 1982. Investigations on epibenthic meiofauna. 1. Abundance on and repopulation of the tube-caps of Diopatra cuprea (Polychaeta, Onuphidae) in a subtropical system. Mar. Biol. 67: 303-310.

BELLAN-SANTINI, D., 1981. Influence des pollutions sur le peuplement des amphipodes dans la biocoenose des algues photophiles. Tethys 10: 185-194.

BENGTSSON, G., 1982. Energetic costs of amino acids exudation in the interaction between the predator Gammarus pulex L and the prey Asellus aquaticus L. J. chem. Ecol. 8: 1271-1282.

BENGTSSON, G., 1982. Patterns of amino acid utilization by aquatic Hyaenocytes. Oecologia 55: 355-363. (Of amphipod interest because of grazing of decomposing leaves by Gammarus spp.)

BERENTS, P.B., 1983. The Melitidae of Lizard Island and adjacent reefs, the Great Barrier Reef, Australia. Rec. austr. Mus. 35: 101-143. (Described and illustrated are Ceradocus hawaiensis (commensal with hermit crabs), C. (D) oxyodus n. sp., C. (C) woorrea n. sp., C. (D) yandala n. sp., Dulichiella appendiculata, Elasmopus crenulatus n. sp., E. hooheeno, E. pocillimanus, E. pseudaffinis, E. spinicarpus n. sp., Maera griffini n. sp., M. octodens, M. quadrimana, M. reishi., M. serrata, Mallacoota balara

n. sp. (with key to Mallacoota spp), Parelasmopus echo and P. suensis.)
BERG, C.J. & N.L. ADAMS, 1984. Microwave fixation of marine invertebrates. J. exp. mar. Biol. Ecol. 74: 195-199.
BERLAND, B., 1983. (Sea lice in fish roe and dogfish.) Fiskets Gang 69: 175-179. (In Norwegian. On Cirolana borealis and Tmetonyx cicada in roe of cod and saithe, and Cirolana in dogfish)
BERNDT, J., 1984. Nachweis von Gammarus tigrinus Sexton fur den unteren Niederrhein. Decheniana 137: 168-169.
BERNEM, K.H. van, 1982. Effect of environmental crude oil contamination on abundance, mortality and resettlement of representative mud flat organisms in the mesohaline area of the Elbe estuary. Neth. J. Sea Res. 16: 538-546. (i.a Corophium volutator)
BLANCHET - TOURNIER, M.P., J-J. MEUSY & H. JUNERA, 1980. (Molting and vitellogenesis in Orchestia gammarella (Crustacea, Amphipoda): Study of the vitellogenin synthesis after cauterization of the enteromedian part of the protocerebrum.). CR Acad. Sci. Paris 291: 829-832. (In French, not seen)
BLANCHET - TOURNIER, M.P., 1982. (Some aspects of hormonal interactions between molting and vitellogenesis in Orchestia gammarellus (Crustacea, Amphipoda)). Reproduct. Nutrit. Dev. 22: 325-344. (In French, not seen)
BLINN, D.W. & D.B. JOHNSON, 1982. Filter-feeding of Hyalella montezuma, an unusual behavior for a freshwater amphipod. Freshw. Invertebr. Biol. 1: 48-52.
BLUZAT, R., O. JONOT & J. SEUGE, 1982. Acute toxicity of thiram in Gammarus pulex; effect of a one-hour contamination and degradation of an aqueous suspension. Bull. environm. Contam. Toxicol. 29: 248-252.
BOLT, S.R.L., 1983. Haemolymph concentration and apparent permeability in varying salinity conditions of Gammarus duebeni, Chaetogammarus marinus and Gammarus locusta. J. exp. Biol. 107: 129-140.
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 Corallina officienalis L. in intertidal rock pools. Sarsia 68: 149-156. (Again, amphipods turned out to be the most sensitive invertebrates.)
BOROWSKY, B., 1983. Behaviors associated with tube-sharing in Microdeutopus gryllotalpa (Costa) (Crustacea: Amphipoda). J. exp. mar. Biol. Ecol. 68: 39-51.
BOROWSKY, B., 1983. Reproductive behavior of three tube-building peracarid crustaceans: the amphipods Jassa falcata and Ampithoe valida and the tanaid Tanais cavolinii. Mar. Biol. 77: 257-263.
BOROWSKY, B., 1983. Placement of eggs in their brood pouches by females of the Amphipod Crustacea Gammarus palustris and Gammarus mucronatus. Mar. Behav. Physiol. 9: 319-325.
BORTKEVICH, L.V., 1983. (Corophiid diurnal vertical migrations (Amphipoda).) Vestnik Zool. ?(1): 68-71. (In Russian, not seen)
BOURGET, E. & D. MESSIER, 1983. Macrobenthic density, biomass, and fauna of intertidal and subtidal sand in a Magdalen Islands lagoon, Gulf of St. Lawrence. Can. J. Zool. 61: 2509-2518.
BOUSFIELD, E.L., 1981. British marine Amphipoda: Gammarida (R.J. Lincoln). Can. J. Fish. aq. Sci. 38: 732-733. (Book review)
BOUSFIELD, E.L., 1981. Evolution in North Pacific coastal marine amphipod crustaceans. Pp. 69-89 in G.G.E. SCUDDER & J.L. REVEAL (eds). Evolution

today. Proc 2d int. Congr. Syst. Evol. Biol. 1981. (A most interesting paper, but impossible to abstract)

BOUSFIELD, E.L. & J.R. HOLSINGER, 1981. A second new subterranean amphipod crustacean of the genus Stygobromus (Crangonyctidae) from Alberta, Canada. Can. J. Zool. 59: 1827-1830. (S. secundus n. sp.)

BOUSFIELD, E.L., 1982. Amphipoda (Palaeohistory). Pp. 96-100 in McGraw-Hill Yearbook of Science & Technology, 1982-1983. New York.

BOUSFIELD, E.L., 1982. Malacostraca. Amphipoda. Pp. 241-286 in S.S. PARKER (ed). Synopsis and classification of living organisms. McGraw-Hill Book Company, New York. (With diagnoses, but no lists of genera of all families in the 'new Bousfield classification' Hyperiidea by S.T. Shih)

BOUSFIELD, E.L., 1982. The amphipod Superfamily Talitroidea in the Northeast Pacific region. 1. Family Talitridae: systematics and distributional ecology. Natn. Mus. nat. Sci. (Ottawa) Publ. biol. Oceanogr. 11: 1-72. (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 nitida); Traskorchestia n. gen. (type Orchestia traskiana, further spp. O. ochotensis, O. ditmari, O. georgiana); Paciforchestia n. gen. (type Parorchestia klawei, further spp. O. pyatakovi, O. tenuimana); Transorchestia n. gen. (type Orchestia chiliensis, 5 further spp). 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. Megalorchestia Brandt, 1851, (type M. californiana), and 6 additional spp., among them M. dexterae n. sp. from Baja California, is revived. Orchestoidea tuberculata, the type species of this genus, is finally fully redescribed. Pseudorchestoidea n. gen. has Orchestoidea biolleyi as type, and 4 further sp.: Talorchestia brito, Orchestoidea meridionalis, O. gracilis and P. mexicana n. sp. from Sinaloa prov., Mexico.)

BOUSFIELD, E.L. & N.L. TZVETKOVA, 1982. (Studies on Dogielinotidae (Amphipoda, Talitroidea) from the shallow waters of the North Pacific region.) Issled. Fauni Morei 29(37): 76-94, 7 Plates. (In Russian, with English summary. Unless otherwise mentioned, the following new taxa have Bousfield as sole author. Dogielinoides n. gen. (monotypic, type Dogielinotus golikovi), Proboscinotus n. gen. (monotypic, for D. loquax), Haustorioides magnus n. sp. (Kurile Islands), H. gurjanovae n. sp. (Posajet Bay, Japan Sea), Eohaustorioides Bousfield & Tzvetkova n. gen. (type and only sp. Haustorioides japonicus). Also Dogielinotus moskvitini and Allorchestes malleolus are illustrated, and a key to all species provided.)

BOWMAN, T.E. & M. McMANUS McGUINESS, 1982. Epipelagic amphipods of the Family Hyperiidae from the International Indian Ocean Expedition 1959-1965. Smithson. Contr. Zool. 359: 1-53.

BOWMAN, T.E., A.C. COHEN & M. McMANUS McGUINESS, 1982. Vertical distribution of Themisto gaudichaudii (Amphipoda: Hyperiidea) in deepwater dumpsite 106 off the mouth of Delaware Bay. Smithson. Contr. Zool. 351: 1-24.

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')

BRACHT, G., 1981. The jump of Orchestia cavimana Heller, 1865 (Crustacea, Amphipoda, Talitridae). Experientia 36: 56-57.

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

BRADSTREET, M.S.W. & W.E. CROSS, 1982. Trophic relationships at High Arctic ice edge. Arctic 35: 1-12.

BRANCH, G.M., 1981. The biology of limpets: physical factors, energy flow, and ecological interactions. Oceanogr. mar. Biol. ann. Rev. 19: 235-280. (Amph. pp. 331-332)

BREHM, J. & M.P.D. MEYERING, 1982. Sur Saure-Empfindlichkeit ausgewahlter Suszwasser-Krebse (Daphnia und Gammarus, Crustacea). Arch. Hydrobiol. 95: 17-27.

BROWN, A.F. & M. DIAMOND, 1984. The consumption of rainbow trout (Salmo gairdneri Richardson) eggs by macroinvertebrates in the field. Freshw. Biol. 14: 211-215. (i.a. Gammarus pulex)

BROWN, B.E., 1982. The form and function of metal-containing 'granules' in invertebrate tissues. Biol. Rev. 57: 621-667. (A review paper)

BRUN, B., G. BRUN & A. CHAMPEAU, 1981. Genetique des populations de Gammarus insensibilis Stock (Crustace, Amphipode): Differenciation biometrique des populations du littoral meditterraneen. Biol.-Ecol. Mediterr. 8: 76-86. (not seen)

BRUSCA, G.J., 1981. Annotated key to the Hyperiidea (Crustacea: Amphipoda) of North American coastal waters. Techn. Repts Allan Hancock Fndn 5: 1-76. (In this most useful paper the key to Cystisoma on p. 19 is apparently misprinted: couplet 1a keys to 2, 1b is C. fabricii, 2a C. latipes and 2b C. pellucidum. The discussion only deals with Pacific records.)

BUBINAS, A.D., 1980. (Formation of benthic fauna as a food base for fish in the reservoir of the Kansas Hydroelectric Power Plant, Lithuanian SSR, USSR). Liet TSr Mokslu Akad. Darb., Ser. C. Biol. Mokslai 1980 4: 91-96. (In Russian, not seen. Successful introductions of i.a. Chaetogammarus warpachowskyi, Pontogammarus robustoides, P.r. aestuarius and P. crassus from the Caspian Sea.)

BUCHANAN, R.A. & A.D. SEKERAH, 1982. Vertical distribution of zooplankton in Eastern Lancaster Sound and Western Baffin Bay, July-October 1978. Arctic 35: 41-55.

BULLOCK, J.A., F. CLARK & S. ISON, 1982. Benthic invertebrates of Rutland Water. Hydrobiologia 88: 147-156.

BULNHEIM, H-P. & A. SCHOLL, 1981. Electrophoretic approach to the biochemical systematics of gammarids. Helgol. Meeresunters. 34: 391-400.

BULNHEIM, H-P. & M. MUHLENKAMP, 1982. Genetische Variabilitat und Ausbreitung von Gammarus tigrinus auf dem europaischen Kontinent. Verh. dtsch. zool. Ges. 1982, 293. (Abstract only)

BULNHEIM, H-P. & A. SCHOLL, 1982. Polymorphism of mannose phosphate isomerase in North Sea and Baltic Sea populations of the amphipods Gammarus zaddachi and G. salinus. Mar. Biol. 71: 163-166.

BUSDOSH, M., D.M. LAVIGNE & G.A. ROBILLIARD, 1982. Habitat separation by the amphipods Pontoporeia affinis and P. femorata near Prudhoe Bay, Alaska. Oikos 39: 77-82.

BUSDOSH, M., G.A. ROBILLIARD, K. TARBOX & C.L. BEEHLER, 1982. Chemoreception in an arctic amphipod crustacean: a field study. J. exp. mar. Biol. Ecol. 62: 261-269. (Boeckosimus affinis)

BUSHUEVA, I.V., 1982. (A new species of the genus Paeudharpinia from the Davis Sea (Antarctic). Zool. Zh. 61: 1262-1265. (In Russian. P. calcariaria n. sp. Key to all species)

BUTLER, M.J. & H.H. HOBBS, 1982. Drift and upstream movement of invertebrates in a springbrook community ecosystem. Hydrobiologia 89: 153-159. (principally Synurella dentata and the isopod Lyrceus fontinalis; Ohio, USA; a.o. Synurella dentata)

BUTLER, R.G., W. TRIVELPIECE & D.S. MILLER, 1982. The effects of oil, dispersant, and emulsions on the survival and behavior of an estuarine

teleost and an intertidal amphipod. Environm. Res. 27: 266-276. (The amphipod is Gammarus oceanicus)
CADWALLADR, Ph.L. & G.J. GOOLEY, 1981. an evaluation of the use of the amphipod Austrochiltonia to control growth of Saprolegnia on the eggs of Murray cod Maccullochella peeli. Aquaculture 24: 187-190. (It does not work)
CAINE, E.A., 1983. Community interaction of Caprella penantis Leach (Crustacea: Amphipoda) on sea whips. J. Crust. Biol. 3: 497-504.
CALVARIO, J. & J.C. MARQUES, 1983. Etude systematique et ecologique d'une collection d'amphipodes de la zone intertidale de l'estuaire du Tage (Portugal). Occurrence d'Orchestia kossuigi Ruffo, 1949 et d'Orchestia stepheni Ceccheni, 1928. Cienc. biol. ecol. syst. (Portugal) 5: 79-95.
CARACCIOLO, J.V. & F.W. STEIMLE, 1983. An atlas of the distribution and abundance of dominant benthic invertebrates in the New York Bight Apex with reviews of their life histories. NOAA tech. Rept, NMFS SSRF 766: 1-58. (7 amphipod spp on pp 39-43)
CARLSSON, R., 1983. Population dynamics, reproduction and production of Pontoporeia affinis (Crustacea, Amphipoda) in a meromictic bay in the northern Aland Islands, Baltic Sea. Mem. Fauna Flora fenn. 59: 53-60.
CARRASCO DE LUYO, S., 1981. (Amphipods and their relation to red tides.) Mem. del Seminario sobre Indicadores biologicos del Plancton. el Callao 1980: 45-53. (In Spanish, not seen)
CARRASCO, F.D. & D.F. ARCOS, 1984. Life history and production of a cold-temperate population of the sublittoral Ampelisca araucana. Mar. Ecol. Progr. Ser. 14: 245-252.
CARTER, J.W., 1982. Natural history observations on the gastropod shell-using amphipod Photis conchicola Alderman, 1936. J. crust. Biol. 2: 328-341.
CAVEDINI, P., 1982. (Contribution to the knowledge of the Caprellidea of the Mediterranean (Crustacea, Amphipoda). Boll. Mus. Civ. St. Nat. Verona 8(1981): 493-531. (In Italian. Seventeen species of which Deutella schieckei from Sardinia is new)
CEJAS, J.R., A. BRITO & G. LOZONO, 1983. (On some gammarideans (Crustacea, Amphipoda) new to the marine fauna of the Canary Islands.) Vieraea 12(1982): 317-328. (In Spanish. Twelve species new to the Canary Islands. Amphithoe kaneohe, A. neglecta, Elasmopus antennatus and Apherusa ovalipes are illustrated)
CHAPMAN, P., 1980. The biology of caves in the Gunung Mulu National Park, Sarawak. Trans. brit. Cave Res. Assoc. 7: 141-149. (Not seen. Amph. present)
CHEN, Q-C., B-Y CHEN & G-X ZHANG, 1978. (Pelagic amphipods in the vicinity of the Xisha islands and Zhongsha islands.) Pp 227-260 in (Research Reports on investigations in marine biology in waters of Xisha and Zhongsha islands, China). Science Press, Peking. (In Chinese, not seen)
CHOAT, J.H. and D.R. SCHIEL, 1982. Patterns of distribution and abundance of large brown algae and invertebrate herbivores in subtidal regions of northern New Zealand. J. exp. mar. Biol. Ecol. 60: 129-162.
CIAVATTI, G. & M. VINCENT, 1982. Etude comparee du metabolisme respiratoire de deux populations de Gammaridae: Gammarus pulex et Echonogammarus (sic!) berilloni. Ann. Stat. Biol. Besse-en-Chaudesse 16: 158-170.
CIAVATTI, G., 1983. Mise au point d'une methode d'isolement des talitres (Crustaces Amphipodes) a partir des laisses de plage. Bijdr. Dierk 53: 99-102.
CIBOROWSKII, J.J.H., 1983. A simple volumetric instrument to estimate biomass to fluid-preserved invertebrates. Can. Entomol. 115: 427-430.
CIRONI, R. & S. RUFFO, 1981. (Some considerations about the macroinvertebrate community of the Po River near Caorso (Piacenza, Italy).) Rev. Idrobiol. 20: 47-82. (In Italian)

CIUBUC, C. & A. VADINEANU, 1980. (Correlation of oxygen consumption with temperature and dimensions in Rivulogammarus balcanicus (Crustacea, Amphipoda).) An. Univ. Bucur. Biol. 29: 69-74. (In Roumanian, not seen)

COINEAU, N., 1983. Energetic value in interstitial isopods and amphipods from sandy beaches as a function of body size and season (western Mediterranean). Pp 687-692 in A. McLACHLAN & T. ERASMUS (eds), Sandy beaches as ecosystems. Junk. The Hague.

COLLETT, L.C., P.A. HUTCHINGS, P.J. GIBBS & A.J. COLLINS, 1984. A comparative study of the macrobenthic fauna of Posidonia australis seagrass meadows in New South Wales. Aquat. Bot. 18: 111-134.

COMMITO, J.A., 1982. Importance of predation by infaunal 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 Pseudopleonexes is erected for Pleonexes lessoniae from New Zealand. The other genera diagnosed are Ampithoe, Peramphithoe Conlan & Bousfield, 1982 and the revived Pleonexes. Lists of spp, and a key to all ampithoid genera are provided, as well as biological data.)

CONLAN, K.E. & E.L. BOUSFIELD, 1982. Studies on amphipod crustaceans of the northeastern Pacific region I. 2. The amphipod superfamily Corophioidea in the Northeastern Pacific region. Family Ampithoidae: systematics and distributional ecology. Natn Mus. nat. Sci. (Ottawa) Publ. biol. Oceanogr. 10: 41-75. (Deals with Cymadusa uncinata, 9 Ampithoe spp. and 6 spp in Peramphithoe n. gen. (type Ampithoe femorata, 14 further spp). New taxa: Ampithoe sectimanus n. sp. (Prince of Wales Isl., Alaska = A. pollex s. Barnard 1954) and Peramphithoe lessoniophila n. sp. (Coquimbo, Chile).)

CONLAN, K.E. & E.L. BOUSFIELD, 1982. Studies on amphipod crustaceans of the northeastern Pacific region I. 3. The Superfamily Corophioidea in the North Pacific region. Family Aoridae: systematics and distributional ecology. Natn Mus. nat. Sci. (Ottawa) Publ. biol. Oceanogr. 10: 77-101. (New taxa: Columbaora n. gen. (type sp. C. cyclocoxa n. sp. (Chicagof Isl., S. Alaska), Aoroides inermis n. sp., A. intermedius n. sp., A. exilis n. sp. and A. spinosus n. sp., all four Vancouver Island, Brit. Col., Canada.)

CONNELL, A.D. & D.D. AIREY, 1982. The chronic effect of fluoride on the estuarine amphipods Grandidierella lutosa and G. lignorum. Water Res. 16: 1313-1317. (Not seen)

COYLE, K.O., 1980. A new genus and species of Oedicerotidae (Crustacea, Amphipoda) from the southeast Bering Sea. Syesis 13: 197-204. (Machaironyx muelleri n. gen. n. sp. from SE Bering Sea)

COYLE, K.D., 1982. The amphipod genus Grandifoxus Barnard (Gammaridea, Phoxocephalidea) in Alaska. J. crust. Biol. 2: 430-450. (Deals with G. lindbergi n. comb. (=Pontarpinia robusta lindbergi and G. sp. R. s. Barnard 1980), G. vulpinus n. sp., G. acanthinus n. sp., G. nasuta, G. longirostris, G. aciculata n. sp. and G. grandis.)

CROSS, W.E., 1982. Under-ice biota at the Pond Inlet ice edge and in adjacent fast ice areas during spring. Arctic 35: 13-27.

CUADRAS, J., 1982. Microtriches of amphipod Crustacea: Morphology and distribution. Mar. Behav. Physiol. 8: 333-344.

CULVER, D.C., 1982. Cave life: evolution and ecology. Harvard Univ. Press, Cambridge (Mass.), viii + 189 pp. (Not seen, unfortunately)

CURTIS, D.J. & J.C. SMYTH, 1982. Variations in densities of invertebrate

benthos of the Clyde estuary tidal flats. Chem. Ecol. 1: 57-60. (i.a. Corophium volutator)

CZECZUGA, B., 1980. Changes occurring during the annual cycle in the carotenoid content of Gammarus lacustris G.O. Sars (Crustacea: Amphipoda) specimens from the river Narew. Comp. Biochem. Physiol. B 66: 569-572.

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')

DAHL, E., 1983. Alternatives in Malacostracan evolution. Mem. Austr. Mus. 18: 1-5.

DAHL, E., 1983. Phylogenetic systematics and the Crustacea Malacostraca - a problem of prerequisites. Verh. naturw. Ver. Hamburg 26: 355-371.

DAUER, D.M., G.H. TOURTELOTTE & R.M. EWING, 1982. Oyster shells and artificial worm tubes: the role of refuges in structuring benthic communities of the lower Chesapeake Bay. Int. Rev. ges. Hydrobiol. 67: 661-677.

DAUER, D.M., R.M. EWING, J.W. SOURBEER, W.T. HARLAN & T.L. STOKES, 1982. Nocturnal movements of the macrobenthos of the Lafayette River, Virginia. Int. Rev. ges. Hydrobiol. 67: 761-775. (Amph. pp 764, 767-769)

DAUVIN, J.C., 1983. Sur une annelide polychete et cinq amphipodes nouveaux pour la faune de Roscoff, France. Trav. stn. biol. Roscoff (N. Ser.) 27 (1981): 7-9. (The amphipods are Bathyporeia gracilis, Amphilochus manudens, Cressa dubia, Iphimedia obesa, Dyopedos monacanthus.)

DAUVIN, J.C. & D. BELLAN-SANTINI, 1982. Description de deux nouvelles especes d'Ampelisca des cotes francaises atlantiques (Crustacea-Amphipoda): Ampelisca toulemonti n. sp. et Ampelisca 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.)

DAUVIN, J.C., & F. GENTIL, 1983. Description de deux nouvelles especes de Lilljeborgiidae des cotes francaises (Crustacea - Amphipoda): Listriella dentipalma n. sp. et Listriella spinifera n. sp. Cah. Biol. mar. 24: 429-442.

DEANS, E.A., P.S. MEADOWS & J.G. ANDERSON, 1982. Physical, chemical and microbiological properties of intertidal sediments and sediment selection by Corophium volutator. Int. Rev. ges. Hydrobiol. 67: 261-269.

DE MARCH, B.G.E., 1983. The behavior of the amphipod Gammarus lacustris exposed to various hydrogen ion and copper concentration in a preference-avoidance trough. Can. tech. Rep. Fish. aq. Sci. 1187: 1-12.

DEMING, J.W., P.S. TABOR & R.R. COLWELL, 1981. Barophilic growth of bacteria from intestinal tracts of deep-sea invertebrates. Microb. Ecol. 7: 85-94.

DERMOTT, R., 1978. Benthic diversity and substrate-fauna associations in Lake Superior. J. Great Lakes Res. 4: 505-512.

DEXTER, D.M., 1983. Community structure of intertidal sandy beaches in New South Wales, Australia. Pp 461-472 in A. McLachlan & T. Erasmus (eds). Sandy beaches as ecosystems, W. Junk, Amsterdam.

DEXTER, D.M., 1983. A guide to sandy beach fauna of New South Wales. Wetlands (Australia) 3: 94-104. (Amph. pp 99-101)

DEXTER, D.M., 1983. Soft bottom infaunal communities in Mission Bay. Calif. Fish & Game 69: 5-17. (Amph. p. 10)

DHOMPS-ARENAS, 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)

DICKINSON, J.J., 1982. Studies on amphipod crustaceans of the northeastern Pacific region I. 1. family Ampeliscidae, genus Ampelisca. Natn. Mus. nat. Sci. (Ottawa) Publ. biol. Oceanogr. 10: 1-39. (Deals with 16 spp (key), of which the following are new: A. hessleri n. sp. (Swanson Bay, Br. Col.), A. fageri n. sp. (Vancouver Isl., Br. Col.), A. carevi n. sp. (Swanson Bay, Br. Col.). A. unaocalae, originally described as a subsp. of A. macrocephala, is considered to be a full species.)

DICKSON, G.W. & J.R. HOLSINGER, 1981. Variation among populations of the troglobitic amphipod crustacean Crangonyx antennatus Packard (Crangonyctidae) living in different habitats, III: Population dynamics and stability. Int. J. Speleol.11: 33-48.

DIVAKARAN, D., 1982. Nervous system of Parhyale hawaiensis (Crustacea: Amphipoda). Proc. Indian natn Sci. Acad. B. Biol. Sci. 48: 210-244.

DIVIACCO, G., 1979. (Amphipods of fouling in the conduits of the electric power station of Torvaldaliga (civitavecchio)). Atti Soc. Tosc. Sci. Nat., Mem., Ser. B, 86, Suppl., 312-315.

DIVIACCO, G., 1979. (Fouling amphipod crustaceans of the electric power station of Valdo Ligure (Savona)). Boll. Mus. Ist. Biol. Univ. Genova 47: 93-99.

DIVIACCO, G., 1979. (Remarks on amphipod crustaceans of the Orbetello lagoons (Grosseto)). Atti Soc. Tosc. Sci. Nat., Mem. Ser. B, 86, Suppl., 62-64. (I have not seen any of Diviacco's many recent papers. Apparently all are in Italian.)

DIVIACCO, G., 1980. (Remarks on Crustacea Amphipoda of Genoa harbour). Mem. Biol. mar. oceanogr., Suppl. 10: 387-388.

DIVIACCO, G., 1981. (Ecology and distribution of the amphipod Crustacea of the Lagoon of Orbetello). Boll. Mus. Civ. St. Nat. Verona 7(1980): 303-317.

DIVIACCO, G., 1981. (Remarks on Crustacea Amphipoda of the Po river delta). Rapp. Comm. int. Mer meditt. 27: 175-176.

DIVIACCO, G., 1983. (First record of Dautzembergia megacheir (Walker) in the Mediterranean and notes on the genus Dautzembergia Chevreux (Crustacea Amphipoda). Boll. Mus. Civ. St. Nat. Verona 9 (1982): 631-640. (In Italian. The genus Dautzembergia is revived. D. megacheir, originally described sub Parapleustes was found from deep water in the Ligurian Sea.)

DIVIACCO, G. & G. RELINI, 1981. (The Amphipoda of the Orbetello lagoon). Quad. Lab. Tecnol. Pesca 3 (Suppl.), 283-291.

DIVIACCO, G. & S. PINKSTER, 1982. Echinogammarus pungentoides n. sp. a new gammarid species from the delta of the river Po, Italy (Crustacea, Amphipoda). Boll. Mus. Civ. St. Nat. Verona 8(1981): 221-230.

DONN, T.E. & R.A. CROKER, 1983. Production ecology of Haustorius canadensis (Amphipoda, Haustoriidae) in southern Maine. Pp 661-667 in E. McLACHLAN & T. ERASMUS (eds), Sandy beaches as ecosystems. W. Junk, The Hague.

DORSEY, J.H., 1982. Intertidal community offshore from the Werribee sewage-treatment farm: an opportunistic infaunal assemblage. Austr. J. mar. Freshw. Res. 33: 45-54. (Coprophiid amphipods codominant)

DOYLE, R.W. & W. HUNTER, 1981. Demography of an estuarine amphipod (Gammarus lawrencianus) experimentally selected for high r. A model of the genetic effects of environmental change. Can. J. Fish. aq. Sci. 38: 1120-1127.

DOYLE, R.W. & R.A. MYERS, 1982. The measurement of direct and indirect intensities of natural selection. Pp 157-176 in H. DINGLE & J. HEGEMAN (eds). Evolution and genetics of life histories. Springer Verlag, N. York (Not seen, unfortunately. Deals apparently with experiments on Gammarus lawrencianus)

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.)
DRANK, C.M. & J.M. ELLIOTT, 1982. A comparative study of 3 air-lift samplers used for sampling benthic macro-invertebrates in rivers. Freshw. Biol. 12: 511-534.
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.)
DUCRUET, J., 1982. Effects de l'ecdysterone sur la formation des couples et sur la vitellogenese chez Gammarus pulex (L.) et Gammarus fossarum Koch (Crustaces Amphipodes). Pol. Arch. Hydrobiol. 29: 307-317.
DUDDRIDGE, J.E. & M. WAINWRIGHT, 1980. Heavy metal accumulation by aquatic fungi and reduction in viability of Gammarus pulex fed Cd2+ - contaminated mycelium. Water Res. 14: 1605-1611.
DUNCAN, K.W., 1981. The effect on Orchestia hurleyi (Amphipoda: Talitridae) of a whitey disease caused by Bacillus subtilis. N.Z. J. Zool. 8: 517-528.
DYE, A.H., A. McLACHLAN & T. WOOLDRIDGE, 1981. The ecology of sandy beaches in Natal, S. Africa. S. Afr. J. Zool. 16: 200-209.
EDGAR, G.J., 1983. The ecology of South-East Tasmanian phytal animal communities. I. Spatial organization on a local scale. J. exp. mar. Biol. Ecol. 70: 129-157.
EDGAR, G.J., 1983. The ecology of South-East Tasmanian phytal animal communities. II. Seasonal change in plant and animal populations. J. exp. mar. Biol. Ecol. 70: 159-179
EDGAR, G.J., 1983. The ecology of South-East Tasmanian phytal animal communities. III. Patterns of species diversity. J. exp. mar. Biol. Ecol. 70: 181-203
EDGAR, G.J., 1983. The ecology of South-East Tasmanian phytal animal communities. IV. Factors affecting the distribution of ampithoid amphipods among algae. J. exp. mar. Biol. Ecol. 70: 205-225. (Deals with 4 undescribed spp, 3 Ampithoe and 1 Cymadusa)
ERCOLINI, A., L. PARDI & F. SCHAPINI, 1983. An optical directional factor in the sky might improve the direction finding of sandhoppers on the sea shore. Monit. zool. ital. 17: 313-327. (Talitrus saltator)
EVERSON, I. & ? WARD, 1980. Aspects of Scotia Sea zooplankton. Biol. J. Linn. Soc. 14: 93-101. (i.a. on small scale aggregations of Parathemisto gaudichaudii.)
FANO, E.A., L. ROSSI & A. BASSET, 1982. Fungi in the diet of 3 benthic invertebrate species. Boll. Zool. 49: 99-106. (i.e. Echinogammarus veneris)
FELLER, R.J. & E.D. GALLAGHER, 1982. Antigenic similarities among estuarine soft-bottom benthic taxa. Oecologia 52: 305-310.
FENWICK, G.D., 1983. Two new sand-dwelling amphipods from Kaikoura, New Zealand (Oedicerotidae and Lysianassidae). (Patuki roperi n. sp. and Hippomedon whero n. sp.)
FENWICK, G.D. & D.H. STEELE, 1983. Amphipods of Placentia Bay, Newfoundland (Canada). Mem. Univ. Newfoundland occ. Papers Biol. 0(7): 1-22. (Not seen)
FIORONI, P., 1980. Das Dorsalorgan der Arthropoden unter besonderen Berucksichtigung der Malakostraken Drebse. Eine vergleichend embryologische Uebersicht. Zool. Jahrb., Abt. Anat. Ontog. Tiere 104: 425-465. (Not seen)
FIORONI, P., 1981. Zum Auftreten der Geschlechtszellen im Ontogenese-Verlauf der Krebse, mit besonderer Berucksichtigung der Crustacea Malacostraca. Cah. Biol. mar. 22: 383-406.

FITZHARDINGE, R., 1983. Comparisons of the invertebrate faunas colonizing soft sediments in two different habitats. Bull. mar. Sci. 33: 745-752. (An Australian study)

FORWARD, R.B., 1980. Phototaxis of a sand-beach amphipod: physiology and tidal rhythms. J. comp. Physiol. 135: 243-250.

FRIEND, J.A., 1982. New terrestrial amphipods (Amphipoda: Talitridae) from Australian forests. Austr. J. Zool. 30: 461-491. (New taxa: Austrotroides n. genus; type sp. A. pectinalis n. sp. (Walpole, W. Austr.), further spp. A. occidentalis n. sp. (W. Austr.), and A. crenatus n. sp. (S. Austr.). Agilestia new genus, type sp. A. hyperocha n. sp. (Victoria), further species A. hylaea n. sp. (Queensland).)

FROST, K.J. & L.F. LOWRY, 1983. Demersal fishes and invertebrates trawled in the northeastern Chukchi and western Beaufort Seas, 1976-77. NOAA techn. Rep. NMFS SSRF 764: 1-22. (Amph. pp. 17-18)

FURST, M., 1981. Results of introductions of new fish food organisms into Swedish lakes. Rept Inst. Freshw. Res. Drottningholm 59: 33-47. (i.a. Pallasea quadrispinosa and Gammaracanthus lacustris)

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 sleds)

GEE, J.H.R., 1982. Resource utilization by Gammarus pulex (Amphipoda) in a Cotswold stream: a microdistribution study. J. Anim. Ecol. 51: 817-332.

GEHRON, M.J. & D.C. WHITE, 1982. Quantitative determination of the nutritional status of detrital microbiota and the grazing fauna by triglyceride glycerol analysis. J. exp. mar. Biol. Ecol. 64: 145-158. (i.a. Melita appendiculata and Lembos websteri)

GEORGE, R.Y., 1981. Pressure and temperature adaptations of antarctic krill and common peracarid crustaceans. Antarct. J. U.S. 15: 145-146. (Not seen)

GIBERT, J. & R. LAURENT, 1982. L'ecosysteme karstique du Massif de Dorvan (Torcieu, Ain, France). 4. La derive d'invertebres hypoges aquatiques au niveau de l'exutoire principal du massif. Pol. Arch. Hydrobiol. 29: 471-483. (i.a. Niphargus rhenorhodanensis)

GIBSON, D.I. & E.T. VALTONEN, 1983. Two interesting records of tapeworms from Finnish waters. Aquilo Ser. Zool. 22: 45-49. (i.a. Bothrimonus olrikii from Pontoporeia affinis, a new host)

GINET, R., 1982. Structure et fonctionnement des ecosystemes du Haut-Rhone francais. 24. Les amphipodes des eaux interstitielles en amont de Lyon. Pol. Arch. Hydrobiol. 29: 231-237.

GINSBURGER-VOGEL, T., 1983. Etude de la mutation "male sterile 1" affectant la morphologie de la glande androgene chez le crustace amphipode Orchestia gammarellus Pallas. Int. J. Invert. Reprod. 6: 161-170. (Not seen)

GINSBURGER-VOGEL, T. & F. MAGNIETTE-MERGAULT, 1981. The effects of temperature on sexual differentiation in the temprature sensitive thelygenic-intersexual offspring of Orchestia gammarellus (Amphipoda, Crustacea). 1. Effects of temperature on pubescent females. Int. J. Invertebr. Reprod. 4: 39-50.

GINSBURGER-VOGEL, T. & F. MAGNIETTE-MERGAULT, 1981. The effects of temperature on sexual differentiation in the temperature sensitive thelygenic-intersexual offspring of Orchestia gammarellus (Pallas) (Amphipoda: Crustacea). 2. Effects of temperature during embryonic and post-embryonic development. Int. J. Invertebr. Reprod. 4: 51-65.

GINSBURGER-VOGEL, T. & J-J. MEUSY, 1982. Etude de la synthese de la vitellogenine ches les males intersexues d'Orchestia gammarellus (Pallas) (Crustace amphipode). Effets de la greffe d'un ovaire. Can. J. Zool. 60: 2588-2593.

GINSBURGER-VOGEL, T., 1983. (Study of the effect of the male sterile 1 mutation on the androgen gland in the amphipod crustacean Orchestia gammarellus.) Int. J. Invertebr. Reprod. 6: 161-170. (In French, not seen)

GLADYSHEV, M.I. & K.G. MALYSHEVSKII, 1982. (Daily vertical migrations of the benthoneuston in the Vostok Bay, Sea of Japan (USSR).) Biol. Morya (Vladivostok) 0(2): 20-23. (In Russian. Six species, i.a. Caprella excelsa and Pontogeneia rostrata)

GOEDMAKERS, A., 1981. Population dynamics of three gammarid species (Crustacea, Amphipoda) in a French chalk stream. 2. Standing crop. Bijdr. Dierk. 51: 31-69. (On Gammarus p. pulex, G. fossarum and Echinogammarus berilloni)

GOEDMAKERS, A., 1981. Population dynamics of three gammarid species (Crustacea, Amphipoda) in a French chalk stream. 4. Review and implications. Bijdr. Dierk. 51: 181-190.

GOEDMAKERS, A. & S. PINKSTER, 1981. Population dynamics of three gammarid species (Crustacea, Amphipoda) in a French chalk stream. 3. Migration. Bijdr. Dierk. 51: 145-180.

GOEKE, G.D., 1982. Tiron triocellatus, a new species of amphipod (Gammaridea: Synopiidae) from western Atlantic and Gulf of Mexico. J. crust. Biol. 2: 148-153. (Close to T. bellairsi Just, 1980. Type locality Tampa Bay, Florida)

GOEKE, G.D. & R.W. HEARD, 1983. Amphipods of the family Ampeliscidae (Gammaridea). 1. Ampelisca bicarinata, a new species of amphipod from the Gulf of Mexico. Gulf Res. Repts 7: 217-223.

GOEKE, G.D. & J.M GATHOF, 1983. Amphipods of the family Ampeliscidae (Gammaridea). 2. Notes on the occurrence of Ampelisca holmesi in the northern Gulf of Mexico. Gulf Res. Repts 7: 289-291.

GOLUBEV, A.P., Z.N. CHIRKOVA & V.E. ROSHCHIN, 1984. (The growth of young sand hoppers Gammarus lacustris (Crustacea, Amphipoda) from water bodies of Byelorussia and Kola Peninsula.) Zool. Zh. 63: 573-577. (In Russian)

GONZALES, G.R.G. & R. ANADON, 1981. (Dynamics of Hyale nilssoni (Amphipoda, Talitridae) in the Pelvetia canaliculata zone at Banugues (Asturias).) Oecol. aquat. 5: 207-218. (In Spanish, not seen)

GONZALEZ SANJURJO, R., DATE? (Study of the epifauna of seed mussel ropes in the Ria de Arosa.) Bol. Inst. Espa. Oceanogr. 7: 51-71.

GORDON, J.C.D., 1983. Some notes on small kelp forest fish collected from Saccorhiza polyschides bulbs on the Isle of Cumbrae, Scotland. Ophelia 22: 173-183. (Domicolous amphipods are the major component in the diet of Gobiusculus flavescens, Apletodon microcephalus and Liparis montagui)

GRAF, F., C. NOIROT-TIMOTHEE & C. NOIROT, 1982. The specialization of septate junctions in regions of tricellular junctions. 1. Smooth septate junctions (continuous junctions). J. Ultrastruct. Res. 78: 136-151. (Studies on i.a. Orchestia cavimana)

GRAF, F. & J-Cl. MEYRAN, 1983. Premolt calcium secretion in midgut posterior caeca of the crustacean Orchestia: ultrastructure of the epithelium. J. Morphol. 177: 1-23.

GRANT, I.F. & H.A. HAWKES, 1982. Effects of diel oxygen fluctuations on the survival of the fresh-water shrimp, Gammarus pulex. Environm. Poll. Ser. A, Ecol. Biol. 28: 53-66.

GRANT, J., 1981. Sediment transport and disturbance on an intertidal sandflat: infaunal distribution and recolonization. Mar. Ecol. Progr. Ser. 6: 249-255.

GRANT, J., 1983. The relative magnitude of biological and physical sediment reworking in an intertidal community. J. mar. Res. 41: 673-689.

GRANT, J. & E.A. LAZO-WASEM, 1982. Systematics and ecology of the estuarine amphipod crustacean Lepidactylus dytiscus Say, 1818 (Haustoriidae). Can. J. Zool. 60: 2039-2045.

GREEN, J.M., 1983. Observations on the food of marine fishes from Resolute Bay, Cornwallis Island, Northwest Territories. Astarte 12(1979): 63-68. (Fishes collected under ice in shallow water)

GREENWOOD, A.G., 1979. Odontocete parasites - some new host records. Aquat. Mamm. 7: 23-25. (Not seen, i.a. Isocyanus delphinii)

GREENWOOD, P.J. & J. ADAMS, 1984. Sexual dimorphism in Gammarus pulex; the effect of current flow on pre-copula pair formation. Freshw. Biol. 14: 203-209.

GRIFFITHS, C.L. & J. STENTON-DOZEY, 1981. The fauna and rate of degradation of stranded kelp. Estuar. coast. Shelf Sci. 12: 645-653. (A S. African study)

GRIGYALIS, A.I., 1980. (Benthic glacial relict Crustacea, found in glacial lakes of Lithuanian SSR, USSR, during 1952-1978.) Liet TSr Mokslu Akad. Darb. Ser. C, Biol. Mokslai (0)2: 69-76. (In Russian, not seen. I.a. Pallasea quadrispinosa and Pontoporeia affinis)

GROTTO, G.W., M.L.H. THOMAS, & J.S. BLEAKNEY, 1983. Growth and production of the intertidal amphipod Corophium volutator (Pallas) in the inner and outer Bay of Fundy. Proc. Nova Scotian Inst. Sci. 33: 47-56.

GUIDI, L.D. & A. TITO DE MORAIS, 1983. Ascidian faecal pellets and their utilization by an epibenthic amphipod. J. exp. mar. Biol. Ecol. 71: 289-298.

GUNNILL, F.C., 1982. Macroalgae as habitat patch islands for Scutellidium lamellipes (Copepode: Harpacticoidea) and Ampithoe tea (Amphipoda: Gammaridae (sic!)). Mar. Biol. 69: 103-116.

GUNNILL, F.C., 1982. Seasonal variations in the invertebrate faunas of Pelvetia fastigiata (Fucaceae). Effects of plant size and distribution. Mar. Biol. 73: 115-130.

HALCROW, K., 1981. The effects of reduced salinity on endocuticular deposition in Gammarus oceanicus Segerstrale. J. crust. Biol. 1: 526-530.

HARRIS, G.J. & E. MORGAN, 1983. Estimates of significance in periodogram analysis of damped oscillation in a biological time series. Behav. Anal. Lett. 3: 221-230. (A study using Corophium volutator as model)

HARRISON, P.G., 1982. Control of microbial growth and of amphipod grazing by water-soluble compounds from leaves of Zostera marina. Mar. Biol. 67: 225-230.

HARTNOLL, R.G., 1983. Strategies of crustacean growth. Mem. Austr. Mus. 18: 121-131.

HASTINGS, M.H., 1981. Intersex specimens of the amphipod Ampelisca brevicornis (Costa). Crustaceana 41: 199-205.

HAWKINS, C.M. & P.D. KEIZER, 1982. Ammonia excretion in Corophium volutator, using an automated method. Can. J. Fish. aq. Sci. 39: 640-643.

HEARD, R.W., 1982. Guide to common tidal marsh invertebrates of the northeastern Gulf of Mexico. Mississippi - Alabama Sea Grant Ptogram Publication 79-004. (Available from Gulf Coast Research Lab., Ocean Springs, MS 39564 USA)

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

HELLUY, S., 1983. Relations hotes-parasite du trematode Microphallus papillorobustus (Rankin, 1940). II. Modifications du comportement des Gammares hotes intermediares et localisations des metacercaires. Ann. Parasitol. hum. comp. 58: 1-17.

HEMPEL, I., G. HUBOLD, B. KACZMARUK, R. KELLER, & R. WEIGMANN-HAAS, 1983. Distribution of some groups of zooplankton in the inner Weddell Sea in summer 1979/80. Ber. Polarforsch. 9: 1-35. (Amph. pp. 8-9, 23-26. On p. 9-10 Hyperiella dilatata has ba lapsus been called H. antarctica (R. Weigmann-Haas, pers. com.).)

HEPPLESTON, P.B., 1984. Gammarus pulex (L.) in Orkney, Scotland (Amphipoda). Crustaceana 46: 220.

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

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

HERBST, G.N. & C. DIMENTMAN, 1983. Distributional patterns and habitat characteristics of Amphipoda (Crustacea) in the inland waters of Israel and Sinai. Hydrobiologia 98: 17-24. (Deals with 10 spp, i.a. new (unnamed) spp of Echinogammarus and Metacrangonyx)

HERBST, V., 1982. Amphipoden in salzbelasteten niedersachsischen Oberflachengewassern. Gewasser Abwasser 68/69: 35-40. (Gammarus tigrinus, Chaetogammarus ischnus, Corophium lacustre, C. curvispinum)

HESSLER, R.R., 1982. The structural morphology of walking mechanisms in eumalacostracan crustaceans. Phil. Trans. R. Soc. Lond. 296B: 245-298.

HESTHAGEN, T., 1982. A regional study on the environmental requirements of Gammarus lacustris G.O. Sars (Crustacea, Amphipoda) in Jotunheimen, southern Norway. Fauna norv., Ser. A 3: 26-30.

HEUSCHELE, A-S., 1982. Retention of benthic invertebrates with different sieving techniques. J. Great Lakes Res. 8: 619-622.

HEUSCHELE, A-S., 1982. Vertical distribution of profundal benthos in Lake Superior sediments. J. Great Lakes Res. 8: 603-613.

HIRAYAMA, A., 1983. Taxonomic studies on the shallow water gammaridean Amphipoda of West Kyushu, Japan. 1. Acanthonotozomatidae, Ampeliscidae, Ampithoidae, Amphilochidae, Anaximidae, Argissidae, Atylidae and Colomastigidae. Publ. Seto mar. biol. Lab. 28: 75-150. (New taxa: Cyphaphimedia mala n. sp. (Tomioka Bay), Postodius imperfectus gen. et sp. nov. (Acanthonotozomatidae, Ariake Sea), Terepeltopes dolichorhunia gen. et sp. nov. (Amphilochidae, Shijiki Bay), Gitanopsis japonica n. sp. (Shijiki Bay), G. longus n. sp. (Tomioka Bay), G. breviculus n. sp. (Tomioka Bay), G. robustodentes n. sp. (Tomioka Bay) and Paranamixis aberro n. sp. (Shijiki Bay). Fully illustrated are also Ampelisca cyclops iyoensis, A. furcigera and Argissa hamatipes.)

HIROKI, M., 1982. Diel changes in traffic frequency of three freshwater gammarid species in their natural habitats and in a laboratory aquarium. Pol. Arch. Hydrobiol. 29: 331-342.

HOBERG, M.K., S.G. McGEE & H.M. FEDER, 1982. Polychaetes and amphipods as commensals with pagurids from the Alaska shelf. Ophelia 21: 167-169. (Podoceropsis nitida, Melita spp and Parapleustes pugettensis)

HOLMAN, H. & L. WATLING, 1981. Pagetina reducta sp. n. (Crustacea: Amphipoda), with a review of the family Pagetinidae. Sarsia 66: 213-215. (P. reducta sp. n. from 52o33's, 63o53'W. Heterocressa is synonymized with Pagetina)

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), Astyrinae n. stat. (Astyra, 5 spp) and Alexandrellinae n. subfam. (with Alexandrella, 4 spp, Astyroidea and Bathypanoploea). Redescribed are Alexandrella australis, A. dentata (the type-species of Pseudandaniexis), A. subchelata n. sp. (Great Australian

Bight, 1340 m, = A. dentata s. Barnard 1961), Bathypanoploea schellenbergi n. name (a replacement name for Iphimediopais australis Schellenberg non A. australis Chilton). The genus Astyroides is provisionally resurrected, and the authors express skepticism as to the merging of Eclysis with Epimeriella.)

HOLMAN, H., & L. WATLING, 1983. Amphipods from the Southern Ocean: families Colomastigidae, Dexaminidae, Leucothoidae, Lilljeborgiidae and Sebidae. Antarctic Res. Ser. 38: 215-262. (Leucothoe orkneyi n. sp. from 61o 27'S, 41o 55'W; key to species of Seba; redescriptions of several of Schellenberg's Antarctic species)

HOLMQUIST, J.G., 1982. The functional morphology of gnathopods importance in grooming, and variation with regard to habitat, in talitroidean amphipods. J. crust. Biol. 2: 159-179.

HOLMSTROM, W.F., B.W.W. GRANT & E. MORGAN, 1981. Preliminary observations on the low temperature tolerance of an estuarine amphipod, Corophium volutator. Cryolett 2: 129-134.

HOLMSTROM, W.F., & E. MORGAN, 1983. Variation in the naturally occurring rhythm of the estuarine amphipod, Corophium volutator (Pallas). J. mar. Biol. Ass. U.K. 63: 833-850.

HOLMSTROM, W.F., & E. MORGAN, 1983. The effects of low temperature pulses in rephasing the endogenous activity rhythm of Corophium volutator (Pallas). J. mar. biol. Ass. U.K. 63:851-860.

HOLMSTROM, W.F., & E. MORGAN, 1983. Laboratory entrainment of the rhythmic swimming activity of Corophium volutator (Pallas) to cycles of temperature and periodic inundation. J. mar. biol. Ass. U.K. 63: 861-870.

HOLSINGER, J.R., 1981. Amphipoda. Pp. 36-40 in S.H. HURLBERT, G. RODRIGUEZ & N.D. SANTOS (eds.) Aquatic biota of tropical South America, part 1. Arthropoda. San Diego. (Holsinger's contribution deals with entire South America)

HOLSINGER, J.R., 1981. Stygobromus canadensis, a troglobitic amphipod crustacean from Castleguard Cave, with remarks on the concept of cave glacial refugea. Proc. 8. int. Congr. Speleol. 1: 93-95.

HOLSINGER, J.R., 1982. A preliminary report on the cave fauna of Burnsville Cave, Virginia. NNS Bull. 44: 98-101 (i.a., Stygobromus conradi).

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

HOLSINGER, J.R., J.S. MORT, & A.D. RECKLIES, 1983. The subterranean crustacean fauna of Castleguard Cave, Columbia Icefields, Alberta, Canada, and its zoogeographic significance. Arct. Alp. Res. 15: 543-549.

HONG, J.S., 1983. Three tube-building amphipods from experimental plates in Deukryang Bay in the southern coast of Korea. Korean J. Zool. 26: 135-153. (Jassa falcata, Corophium acherusicum and Ericthonius brasiliensis)

HOVENKAMP, F., W. HOVENKAMP & J.J. van der HEIDE, 1983. Two new hyporheic amphipods, Bogidiella (Bogidiella) cyrnensis n. sp. and Bogidiella (Medigidiella?) paolii n. sp., from Corsica. Bijdr. Dierk. 53: 82-92.

HOWARD, R.K., 1982. Impact of feeding activities of epibenthic amphipods on surface fouling of eelgrass leaves. Aquat. Bot. 14: 91-97. (Paradexamine churinga and Tethygeneia nalgo)

HUBERDEAU, L. & P. BRUNEL, 1982. (Efficiency and comparative faunistic selectivity of 4 endobenthic, epibenthic and suprabenthic samples on 2 bottom types.) Mar. Biol. 69: 331-343. (In French, not seen)

HUDON, C., 1983. Selection of unicellular algae by the littoral amphipods Gammarus oceanicus and Calliopius laeviusculus (Crustacea). Mar. Biol. 78: 59-67.

HUGHES, J.E., 1982. Life history of the sandybeach amphipod Dogielinotus loquax (Crustacea: Dogielinotidae) from the outer coast of Washington, USA. Mar. Biol. 71: 167-176.

IKEDA, T. & E. KING FAY, 1981. Metabolic activity of zooplankton from the Antarctic Ocean. Austr. J. mar. Freshw. Res. 32: 921-930. (i.a. Paratheraisto gaudichaudii)

IMADA, K., A. HIRAYAMA, S. NOJIMA & T. KIKUCHI, 1981. (The microdistribution of phytal amphipods on Sargassum seaweeds.) Res. Crust. 11: 124-137. (In Japanese)

IMADA, K. & T. KIKUCHI, 1984. Studies on some reproductive traits of three caprellids (Crustacea: Amphipoda) and their seasonal fluctuations in the Sargassum bed. Publ. Amakusa mar. Biol. Lab. 7: 151-172. (Caprella tsugaruensis, C. danilevskii and C. decipiens)

INSTINSKY, T., 1983. Zur Bindung von Gammarus fossarum Koch, 1835 (Crustacea, Amphipoda) an den Umweltfaktor Stromung. Verh. Ges. Oekol. 10: 569-573.

IVANJUSHINA, E.A., 1984. (The life cycle of Atylus carinatus (Crustacea, Amphipoda) in the Kandalaksha Bay (White Sea).) Zool. Zh. 63: 191-196. (In Russian)

JACOBS, R.P.W.M. & W.H.T. HUISMAN, 1982. Macrobenthos of some Zostera beds in the vicinity of Roscoff (France) with special reference to relations with community structure and environmental factors. Proc. K.N.A.W. C85: 335-356.

JARRETT, N.E. & E.L. BOUSFIELD, 1982. Studies on amphipod crustaceans of the northeastern Pacific region I. 4. Studies on the amphipod family Lysianassidae in the northeastern Pacific region. Hippomedon and related genera. Systematics and distributional ecology. Natn. Mus. nat. Sci. (Ottawa). Publ. biol. Oceanogr. 10: 103-128. (New taxa: H. columbianus n. sp. (Br. Col. = H. denticulatus s. Barnard 1954), Wecomedon n. gen. (type Hippomedon wecomus, further species W. similis n. sp. (Lelu Isl. Br. Col.), H. wirketis, H. boreopacificus, H. sinuaculus), and Paammonyx longimerus n. sp. (Br. Col.))

JAZDZEWSKI, K., 1981. Amphipod crustaceans in the diet of pygoscelid penguins of the King George Island, South Shetland Islands, Antarctica. Polish polar Res. 2: 133-144.

JAZDZEWSKI, K. & R. FRANC, 1982. Vertical distribution of Gammarus species on the pier in the Gdynia harbour, Baltic Sea. Pol. Arch. Hydrobiol. 29: 221-230.

JAZDZEWSKI, K. & A.W. SKALSKI, 1982. (5th International Colloquia on Gammarus and Niphargus and 3rd International Symposium on Groundwater Ecology.) Przeglad zool. 26: 259-265. (In Polish)

JUNERA, J. & J-J. MEUSY, 1982. Vitellogenin and lipovitellins in Orchestia gammarellus (Crustacea, Amphipoda): Labelling of subunits after in vivo administration of tritium- labelled leucine. Experientia (Basel) 38: 252-254.

JUST, J., 1981. Tiron bellairsi sp. n. (Amphipoda, Synopiidae) from coral sand in Barbados, with notes on behaviour. Zool. Scripta 10: 259-263.

JUST, J., 1983. Anonyx affinis (Crus., Amphipoda: Lysianassidae), commensal in the bivalve Musculus laevigatus, with notes on Metopa glacialis (Amphipoda: Stenothoidae). Astarte 12(1979): 69-74.

JUST, J., 1983. Siphonoecetinae subfam. n. (Crustacea, Amphipoda, Corophiidae) 1: Classification. Steenstrupia 9:117-135. (Just recognizes the following genera: Siphonoecetes, with subgenera S. s. str., Centraloecetes subgenus nov., (type S. kroyeranus + 4) and Orientoecetes (type S. orientalis + 1); Bubocorophium (here also S. conchicola); Rhinoecetes n. gen. (monotypic for

R. robustus sp. nov. from New South Wales, Australia); Australoecetes n. gen. (type S. aellicki, here also S. australis); Carriboecetes n. gen. (monotypic, for C. barbadensis s. sp. from Barbados); Concholeates; and Africoecetes n. gen. (monotypic for Concholeates armatus).)

KAFANOV, A.I. & P.A. FEDOTOV, 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)

KAMENSKAYA, D.E., 1979. (Some data on the biology of Jassa falcata (Montagu) (Amphipoda, Gammaridae) in the Sea of Japan.) Pp 104-107 in A.P. KUZNETSOV (ed). Ekologiya donnogo naseleniya Shelfovoy Zony. Inst. okeanol. An SSSR, Moskva. (In Russian)

KAMENSKAYA, O.E., 1980. (Deep-sea Amphipoda (Amphipoda, Gammaridea) collected from drifting station ' North-Pole 22'.) Pp 241-251 in M.E. VINOGRADOV & I.A. MELNIKOV (eds). Biologiya tsentral'nogo arkticheskogo basseyna. NAUK, Moskva, 180 pp. (In Russian. Seventeen species in 9 families, of which Haliragoides caecum 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.)

KAMIHIRA, Y., 1981. Life history of sand-burrowing amphipod Haustorioides japonicus (Crustacea: Dogielinotidae.) Bull. Fac. Fish. Hokkaido Univ. 32: 338-348.

KANNEWORFF, E. & W. NICOLAISEN, 1983. A simple, hand-operated quantitative bottom sampler. Ophelia 22: 253-255.

KARAMAN, G.S., 1980. Cocoharpinia iliffei, 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. iliffei 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 Harpiniinae.)

KARAMAN, G.S., 1980. Contribution on the knowledge of the Amphipoda 113. Redescription of Niphargus aquilex Schiodte and its distribution in Great Britain. Biosistematika 6: 175-185.

KARAMAN, G.S., 1980. Contribution to the knowledge of the Amphipoda 116. Revision of some genera of family Corophiidae with description of three new genera. Poljoprivreda i Sumarstvo 26(3): 3-12. (New taxa: Dactylocorophium n. gen. (type and only sp. Unciola obliqua --Note, Bousfield 1973 previously created Pseudunciola for this species (LW)); Pedicorophium n. gen. (type and only sp. Unicola laminosa), and Bubocorophium (type sp. Siphonoecetes tenebensis, possibly also S. conchicola.)

KARAMAN, G.S., 1980. First discovery of Niphargus bihorensis Schell 1940 (fam. Gammaridae) in Italy with remarks to N. elegans Garb. 1894 (Contributions to the knowledge of the Amphipoda 111). Glas. Republ. Zavoda Zast. Prirode-Prirodnjackog Muzeja Titograd 13: 71-80.

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

KARAMAN, G.S., 1980. Revision of genus Idunella Sars 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 spp is provided and I. aketi n. sp. from Bermuda described.

KARAMAN, G.S., 1980. Revision of the genus Iphimedia Rathke 1843 with description of two new genera, Anisoiphimedia and Stegopanoploea, n. gen. (fam. Acanthonotozomatidae) (Contribution to the knowledge of the Amphipoda 117). Poljoprivreda i Sumarstvo 26(4): 47-72. (New taxa: Anisoiphimedia n. gen. (type and only sp. Iphimedia haurakiensis) and Stegopanoploea n. gen. (type and only sp. Panoploea joubini. Panoploea ? hedgpethi is removed to Coboldus. Iphimedia quasimodus is illustrated from Adriatic material.)

KARAMAN, G.S., 1981. Contribution to the knowledge of the Amphipoda 118. Revision of genus Metacrangonyx Chevr. 1900. Glas. Republ. Zavoda Zast. Prirode- Prirodnjackog Muzeja Titograd 14: 31-46. (Afrocrangonyx n. gen., with type Metacrangonyx spinicaudatus and further spp M. panousei (redescribed here) and M. longicaudus. Also Pygocrangonyx remyi is redescribed. Metacrangonyx s. str. now only contains the type species, M. longipes.)

KARAMAN, G.S., 1981. Genus Gammarellus Herbst and the value of its species (fam. Gammaridae) (Contribution to the knowledge of the Amphipoda 122). Poljoprivreda i Sumarstvo 27(4): 27-43. (G. angulosus is a junior synonym of the Black Sea species G. carinatus. G. homari is not known from the Mediterranean.)

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

KARAMAN, G.S., 1981. Redescription of Melita planaterga Kunkel, 1910 from Bermuda islands with revision of genera Melita Leach and Abludomelita n. gen. (Contribution to the knowledge of the Amphipoda 119). Paljoprivreda i Sumarstvo 27(1): 29-50. (Abludomelita n. gen., with type species Melita gladiosa and 24 further species, is split off from Melita s. str. on characters of mx.2 and ur.3. Melita grandimana is removed to Dulichiella, Crangonyx shimizui 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 Sumarstvo 27(3): 23-44. (With key to genera. The following new taxa are described: Bogidiella (B) chitalensis (Chiapas, Mexico), B. (B) mexicana (Chiapas, Mexico), Bogidiella subgen. Eobogidiella n. subgen. (type sp. B. purmamarcensis, further sp. B. brasiliensis), Marinobogidiella n. gen., monotypic, with type sp. B. tyrrhenica)

KARAMAN, G.S., 1981. Revision of genus Maerella Chevr. 1911 with description of Coxomaerella pirloti, n. gen. n. sp. and Maerella ledoyeri n. sp. (fam. Gammaridae) (Contribution to the knowledge of the Amphipoda 120). Poljoprivreda i Sumarstvo 27(2): 37-50. (Maerella tenuimana is redescribed. M. tenuimana s. Nagata 1965 and Ledoyer 1979 is redescribed as M. ledoyeri n. sp. (type loc. Madagascar). M. tenuimana s. Pirlot 1936 is redescribed as Coxomaerella pirloti n. gen. n. sp. (type loc. Aru islands)).

KARAMAN, G.S. & J.L. BARNARD, 1981. The synonymization of Triodos K.H. Barnard with Ampelisca Kroyer (Crustacea, Amphipoda). Ann. S. Afr. Mus. 84: 255-264.

KARAMAN, G.S., 1982. Contribution to the knowledge of the Amphipoda 101. Niphargus pseudocaspius, n. sp. and N. caelestis, n. sp., new names for some Niphargus species. Poljoprivreda i Sumarstvo 28(1): 73-77. (N. pseudocaspius n. name for N. caspius Derzhavin (non Grimm). N. caelestis

n. name for N. stygius longidactylus Birstein (non N. kochianus longidactylus Ruffo).)

KARAMAN, G.S., 1982. Contribution to the knowledge of the Amphipoda 125. First discovery of genus Niphargopsis Chevr. 1922 in Yugoslavia with revision of the genus (fam. Gammaridae). Poljoprivreda i Sumarstvo 28(2): 87-103. (New material from Serbia show N. trispinosus to be a junior synonym of N. caspary, 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. Gammaridae) (Contribution to the knowledge of the Amphipoda 126). Poljoprivreda i Sumarstvo 28(3-4): 31-57. (Bogidiella (Guagidiella) arganoides n. sp. (=B. cf. arganoi Ruffo & Vigna Taglianti 1977, from well in Oaxaco, Mexico). B. semidenticulata is redescribed from new Serbian material. Diagnoses of and a key of all genera are provided. Somagidiella Stock is a junior objective synonym of Afridiella. B. arganoi is placed in subgen. Guagidiella. Eobogidiella is upgraded from subgeneric to generic rank.

KARAMAN, G.S., 1982. First diacovery of Niphargus aquilex Schiodte in Italy. (Contributions to the knowledge of the Amphipoda 114). Pol. Arch. Hydrobiol. 29: 239-246.

KARAMAN, G.S., 1982. One new subterranean amphipod from Yugoslavia, Niphargus jugoslavicus, n. sp. (fam. Gammaridae) (Contribution to the knowledge of the Amphipoda 124). Poljoprivreda i Sumarstvo 28(2): 119-130. (N. jugoslavicus n. sp. from eastern Serbia. N. melticensis, described as ssp of N. kochianus, is upgraded to specific status.)

KARAMAN, G.S., 1982. Contribution to the knowledge of the Amphipoda 127. New freshwater subterranean genus Relictoseborgia n. gen. with remarks to genus Seborgia Bousfield (Fam. Sebidae). Studia Marina 11-12: 85-94. (created for Seborgia relicta of Holsinger)

KARAMAN, G.S., 1983. Contribution to the knowledge of the Amphipoda 128. A new subterranean species from Jugoslavia, Niphargus lattingerae, n. sp. (Fam. Gammaridae). Poljopr. Sumarst. 29: 37-46.

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

KASYMOV, A.G., 1982. The role of Azov- Black Sea invaders in the productivity of the Caspian Sea benthos. Int. Rev. ges. Hydrobiol. 67: 533-541. (Not seen)

KENSLEY, B., 1983. Biogeographic relationships of some southern African benthic Crustacea. Mem. Austr. Mus. 18: 173-181.

KIMBLE, R., 1982. The distribution of the genus Ampelisca (Crustacea: Amphipoda) with respect to sediment and bathymetry on the Texas inner shelf. Pp. 249-256 in J.R. DAVIS (ed), Proc. Symp. recent benthol. Invest. Texas adj. States. Aquat. Sci. Section, Texas Acad. Sci. Austin. (Not seen)

KITTITSYNA, 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)

KLEMETSEN, A., 1982. Food and feeding habits of Cod from the Balsfjord, northern Norway, during a one-year period. J. Cons. int. Explor. Mer 40: 101-111. (Amphipods p. 104, det WV)

KNEIB, R.T., 1982. Habitat preference, predation, and the intertidal distribution of gammaridean amphipods in a North Carolina salt marsh. J. exp. mar. Biol. Ecol. 59: 219-230.

KNOTT, D.M., D.R. CALDER & R.F. VAN DOLAH, 1983. Macrobenthos of sandy beach and nearshore environment at Murrels Inlet, South Carolina, USA. Est. coast. Shelf Sci. 16: 573-590.

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

KOLDING, S., 1981. Habitat selection and life cycle characteristics of five species of the amphipod genus Gammarus in the Baltic. Oikos 37: 173-178.

KOLDING, S. & T.M. FENCHEL, 1981. Patterns of reproduction in different populations of five species of the amphipod Gammarus. Oikos 37: 167-172.

KOLDING, S., 1982. (Speciation in amphipods). Naturens Verden 1982 (10): 357-369. (In Danish)

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

KRAFT, K.L., 1979. Pontoporeia distribution along the Keweenaw shore of Lake Superior affected by copper tailings. J. Great Lakes Res. 5: 28-35.

KUDRYASHOV, V.A. & S.A. LENSKAYA, 1978. (Biogeographic structure of the intertidal amphipod fauna of the Chukotsk coast (Bering Sea)). Nauchnye Soob. Inst. Biol. Morya, Vladivostok 3: 45-48. (In Russian, not seen)

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 pelagicheskikh i donnykh organismov dal'nevostochnykh morej. DVNTs AN SSSR, Vladivostok. (In Russian, not seen. Dogielinotus golikovi n. sp. is described.)

KUHLMANN, D., O. FUKUHARA & H. ROSENTHAL, 1982. Shrinkage and weight loss of marine fish food organisms preserved in formalin. Bull. Nansei reg. Fish. Res. Lab. 14: 13-18. (Not seen, 'Ten % wet weight reduction in Gammarus after 100 days'.)

KULIKOV, A.S., 1980. (On the ecology of two gammarids (Amphipoda, Gammaridae) and a mysid (Mysidacea) in the cryopelagic biocoenosis of the Central Arctic basin.) Pp 111-117 in M.E. VINOGRADOV & I.A. MELNIKOV (ed), Biologiya tsentral'nogo arkticheskogo Basseyna NAUKA, Moskva. (In Russian, not seen. Data on Mysis polaris, Gammarus wilkitzkii and Apherusa glacialis. Can anyone get me a copy of this paper?-WV)

KUL'KINA, L.V., 1982. (Helmintha of gammarids in water bodies of Tien Shan.) Izv. Akad. Nauk Kazakh. SSR, Ser. Biol 0(2): 30-38. (In Russian. Eight helminth spp. in Gammarus lacustris and G. balcanicus)

KURANDIAN, D.P., 1981. (Reproduction and fecundity of Chaetogammarus ischnus major in the Lower Dniepr). Pp 71-74 in G.G. VINBERG (ed), Ornovy Izucheniya Presnovodnykk Ehkosistem. Leningrad. (In Russian, not seen)

LAMPITT, R.S., N.R. MERRETT & M.H. THURSTON, 1983. Interrelationship of necrophagous amphipods, a fish predator, and tidal currents in the deep sea. Mar. Biol. (Berl.) 74: 73-78.

LAND, M.F., 1981. Optics of the eyes of Phronima sedentaria and other deep-sea amphipods. J. comp. Physiol. A. Neural Behav. Physiol. 145: 209-226.

LANDRUM, P.F. & D. SCAVIA, 1983. Influence of sediment on anthracene uptake, depuration, and biotransformation by the amphipod Hyalella azteca. Can. J. Fish. aq. Sci. 40: 298-305.

LARSEN, L.N., 1983. The heart ultrastructure of Gammarus lacustris G.O. Sars and Gammarus pulex(L.) (Crustacea, Amphipoda). Zool. Anz. 210: 289-295.

LARSSON, R., 1982. A rickettsial pathogen of the amphipod Rivulogammarus pulex. J. Invertebr. Pathol. 40: 28-35.

LAUBITZ, D.R., 1983. A revision of the family Podoceridae (Amphipoda: Gammaridea). Mem. Austr. Mus. 18: 77-86. (The Iciliidae n. fam. are

monotypic based on Icilius punctatus. The Podoceridae are divided into 4 subfamilies: Podocerinae n. subfam. (with Podocerus (c. 30 spp), Laetmatophilus (7), Crytophium (2) and Leipsuropus (1); the Xenodicinae n. subfam. (Xenodice (1) and Styloxenodice n. gen. (monotypic, for X. macrophthalma), the Neoxenodicinae n. subfam. (monotypic, for Neoxenodice (2)), and the Dulichiinae n. subfam. (with Dulichia (5), Dulichiopsis (6), Dyopedos (9) and Paradulichia (1)). Diagnoses of and a key to all genera are provided, together with a synoptic key.)

LAZO-WASEM, E., 1983. Additional record of the terrestrial amphipod Arcitalitrus sylvaticus (Haswell, 1880) in California, USA. Crustaceana 45: 213-214.

LEBER, K.M., 1982. Seasonality of macroinvertebrates on a temperate high wave energy sandy beach. Bull. mar. Sci. 32: 86-98. ('Haustoriid amphipods dominant in winter'. A study from N. Carolina.)

LEDOYER, M., 1982. Crustacea Amphipoda Gammariena. Famille des Acanthonotozomatidae a Gammaridae. Faune de Madagascar 59(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 ochlesid characters) and Lepechinellopsis (Dexaminidae). Further new taxa and changes in classification: Ochlesodius n. gen. (Acanthonotozomatidae), monotypic, with O. spinicornis n. sp. (Iles Glorieuses), Ampeliaca nosaibeensis n. sp. (Nosy Be), Byblis gloriosae n. sp. (3700 m), ? Gitanopsis tenuipes n. sp. (coral reef), Moolapheonoides angustipes n. sp. (coral reef), Amphithoe alluaudi (=A. inda Nayar, non M. Edw.), A. cavimana (=Cymadusa brevidactyla Ledoyer 1972, non Chevreux, and A. kergueleni Rabindranath non Stebbing), Cymadusa filosa s.l. (different forms), Paranamixis madagascarensis n. sp. (=P. bocki Ledoyer, non Schellenberg and P. ? indicus Ledoyer, non Sivaprakasam), Colomastix brevicornis n. sp. (Banc Walters), Aorcho gracilipes n. sp. (2500 m), Bonnierella dimorpha n. sp. (3716 m), Cheiriphotis minima n. sp. (coral reef), Gammaropsis atlantica (forme A & forme B), G. chelifera (of which Eurystheus aemichelatus is a synonym), Grandidierella bonnieroides robusta n. ssp. (Tulear), G. longidactylus n. sp. (coral reef), Konatopus tulearensis n. sp. (Nosy Ve), Lemboides caecus n. sp. (625 m), Leptocheirus dufresni n. sp. (Banc Walters), ? Maragopsis obliquimanus n. sp. (Mayotte), Pseudomegamphopus pseudochelatus n. sp. (=P. chelatus Ledoyer 1979 non Lembos chelatus Walker), Atylus tulearensis n. sp. (=A. granulosus Ledoyer 1979, non Walker), Guernea (Haustoriopsis) brevispinis n. sp. (Tulear), G. (? G) longicornis n. sp. (Nosy Be), G. (G) spinicornis n. sp. (Tulear), Lepechinella madagascarensis n. sp. (2300-2500 m), Lepechinellopsis n. gen. (Dexaminidae), type L. brevicaudata n. sp. (3710 m), further species L. inaequicaudata n. sp. (3450 m), Paralepechinella longicornis n. sp. (3716 m), Sphaerophthalmus cavimana n. sp. (Nosy Be), Cleonardo brevipes n. sp. (2500 m), Eusiroides dentimerus n. sp. (Banc Walters), Eusirus latirostris n. sp. (2500 m), Rhachotropis gloriosae n. sp. (615-625 m), Bathyceradocus stephenseni (Figures labelled Benthedius spinosus n. gen. n. sp.),

Ceradocus tatteraalli n. sp. (=C. ? rubromaculatus a. Tatteraall 1922 & Ledoyer 1968, type loc. Tulear), Indocratus n. subgenus of Cheirocratus, type Cheirocratus (I.) inermis, further sp. C (I) unidentatus, Dulzura paucispinosa n. sp. (Isles Glorieuses) Dentelaasopus n. subgen. of Elasmopus, type E. (D) spinipalpus n. sp. (mangrove, no further loc.), E. waltersi n. sp. (Banc Walters), Eriopisa inaequicaudata n. sp. (Tulear), Gammarus sp. (new to the Indian Ocean, 770-860 m!), Hadzia (Liagoceradocus) dentifera n. sp. (Sarodrano), Jerbania (recte Jerbarnia) tridentata n. sp. (Banc de la Zelee), Maera gloriosae n. sp. (isles Glorienaes), M. multispinosa n. sp. (240 m), M. pacific form A & B, M. pedonculata n. sp. (Banc de la Zelee), M. pseudomarginata n. sp. (Tulear, = M. mastersi Ledoyer, non Haswell), Mallacoota latidactylus n. sp. (450 m), Melita alluaudi n. sp. (Fort Dauphin), Metaceradocus bidentatus n. sp. (Italy), ? M. inermis n. sp. (Banc Walters) Meximaera sinuata n. sp. (Banc Waltera) and Parelasmopus zelei 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 ?Arrhis mediterranea n. sp. (Napoli), Bathymedon acutifrons, B. banyulensis n. sp. (SE France), B. monoculodiformis n. sp. (Napoli), Halicreion aequicornis, Monoculodes acutipes n. sp. (Marseille), M. carinatus, M. gibbosus, M. griseus, M. latissimanus, M. packardi, M. subnudus, Oediceroides pilosus n. sp. (Napoli), Oediceropsis brevicornis, Perioculodes longimanus angustipes n. sap. (Marseille), Westwoodilla caecula and W.rectirostris. Also the genera Pontocrates (2 spp.) and Synchelidium (2 spp.) are discussed.)

LEE, W.Y. & C.R. ARNOLD, 1983. Chronic toxicity of ocean-dumped pharmaceutical wastes to the marine amphipod Amphithoe valida. Mar. Poll. Bull. 14: 150-153.

LENANTON, R.C.J., A.I. ROBERTSON & J.A. HANSEN, 1982. Nearshore accumulations of detached macrophytes as nursery area of fish. Mar. Ecol. Progr. Ser. 9: 51-58. (Allorchestes compressus is main prey for 0 + year classes of 4 surf zone fish species in W. Australia.)

LEWIS, S.M. & B. KENSLEY, 1982. Notes on the ecology and behaviour of Pseudamphithoides incurvaria (Just) (Crustacea, Amphipoda, Ampithoidae). J. nat. Hist. 16: 167-174. (Not seen)

LIESHOUT, S.E.N. van, 1983. Presence of a member of the genus Saliweckelia (Amphipoda) on Tortuga, Venezuela. Bijdr. Dierk. 53: 244-246. (Specimens intermediate between S. emarginata and S. holsingeri.)

LINCOLN, R.J. & M.H. THURSTON, 1983. Valettietta, a new genus of deep-sea amphipod (Gammaridea: Lysianassidae) with descriptions of two new species from the North Atlantic Ocean. Bull. Br. Mus. nat. Hist. (Zool.) 44: 85-101. (Valettiopsis macrodactyla is redescribed. Valettietta n. gen. has 2 spp., V. lobata n. sp. and V. gracilis n. sp., both from abyssal depths in the Bay of Biscay.)

LINDEMAN, D.H. & W.T. MOMOT, 1983. Production of the amphipod Hyalella azteca (Saussure) in a northern Ontario lake. Can. J. Zool. 61: 2051-2059.

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)

LOCKWOOD, A.P.M.L., S.R.L. BOLT & M.E. DAWSON, 1982. Water exchange across crustacean gills. Pp 129-147 in D.L. HOULIHAN, J.C. RANKIN & T.J. SHUTTLEWORTH (eds), Gills. Exp. Biol. Seminar Ser. 16. Cambridge Univ. Press.

LOM, J. & I. DESPORTES, 1981. Affinites de Paramyxa paradoxa Chatton, 1911, parasite de Poecilochaetus serpens (Annelide Polychete) avec les

Marteiliidae Sprague, parasite d'Huitrea et du Crustace Orchestia gammarellus. CR Acad. Sci. Paris 292: 627-632.

LOPRETTO, E.C., 1983. (On the bioecology of the freshwater amphipod Hyalella pampeana Cavalier 1. Reproductive behavior). Limnobios 2: 371-378 (In Spanish, not seen).

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LOWRY, J.K., 1981. A redescription of Sphaerophthalmus grobbeni Spandl based on type material from the Red Sea and new material from the Great Barrier Reef (Amphipoda, Dexaminidae). Crustaceana 41: 190-198. (Dexaminoculus n. gen. is proposed as replacement name for the preoccupied Sphaerophthalmus.)

LOWRY, J.K., 1982. The status of the gammaridean Amphipoda collected by the Australasian Antarctic Expedition 1911-1914. Crustaceana 42: 319-320. (Missing type material)

LOWRY, J.K. & G.D. FENWICK, 1982. Rakiroa, a new amphipod genus from The Snares, New Zealand (Gammaridea, Corophiidae). J. nat. Hist. 16: 119-125. (Rakiroa rima n. gen. n. sp., a species living in empty barnacle shells.)

LOWRY, J.K. & G.D. FENWICK, 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. sp. (Auckland Isl.), C. peke, C. tristanensis (from Tristan da Cunha, the redescribed type material of Maeracunha tristanensis), Gammarella hybophora n. sp. (Snares), Hoho n. gen. (Melitidae, type Mallacoota marilla spp phenotype, further spp. H. hirtipalma n. sp. (Snares Isl., is Mallacoota marilla Ps. phenotype) and Mallacoota carteta), Maera incerta, Tagua n. gen. (Melitidae) type and only species T. aporema n. sp. (Snares); Zhadia n. gen. (Hadziidae), type and only species Z. subantarctica n. sp. from Auckland Isl.)

LOWRY, J.K. & H.E. STODDART, 1983. The amphipod genus Parawaldeckia in New Zealand waters (Crustacea, Lysianassoidea). J. roy. Soc. N.Z. 13: 261-277. (Deals with P. angusta n. sp. (Lyttelton Harbour), P. karaka n. sp. (Wellington Harbour; this is the 'P. stephensens' on which Fincham published his studies of periodic swimming behaviour), P. parata n. sp. (Hawke Bay) and P. stephensens).

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 lysianassoids in their material (there are more elsewhere), v.z. the conicostomatids, the lysianassids and the uristids. The conicostomatid group consists of Acidostoma, Acontiostoma, Conicostoma n. gen. (described in a paper in press), Ocosingo, Phoxostoma, Scolopostoma n. gen., Shackletonia, Socarnoides (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 conicostomatid genera are provided. The type and only species of Scolopostoma n. gen. is Stomacontion prionoplax. The following spp are described and illustrated: Acontiostoma marionis, A. tuberculata n. sp. (Snares), Stomacontion acutibasalis (transferred from Acontiostoma), S. hurleyi n. sp. (Snares), S. pepinii (with S. kergueleni, a synonym based on secondary males), S. pungapunga n. sp. (Campbell Isl.), Ensayara iara n. sp. (Snares), Kakanui n. gen. (lysianassid group), type sp. K. punui n. sp. (Snares) further species Ambasia integricauda) (here also? Parambasia sp. of Bellan-Santini & Ledoyer 1974), Lysianopsis tieke n. sp. (Campbell Isl.), Parambasia rossii (of which Pseudambasia bipartita is the male).

The history of the genus Parawaldeckia is discussed and a key to females provided; fully described are P. dabita n. sp. (Snares), P. hirsuta n. sp. (Campbell Isl.), P. kidderi (with reidentification of earlier material published under this name), P. pulchra n. sp. (Snares), P. auzae n. sp. (Auckland Isl.), P. thomsoni, P. vesca n. sp. (Snares), Hippomedon hake n. sp. (Snares), H. manene n. sp. (Snares), H. matikuku n. sp. (Snares), Orchomene aahu n. sp. (Snares), Pseudorchomene coatsi, Tryphosella serana n. sp. (Snares) and Pseudonesimoides cornutilabris. In an appendix on p. 394 Conicostoma karta n. sp. (Kangaroo Isl., S. Australia) is typified; it will be described elsewhere.)

LOWRY, J.K., 1984. Maxillipius commensalis, a second species in the family Maxillipiidae from Papua New Guinea (Amphipoda, Gammaridea). Crustaceana 46: 194-201. (This new species lives among the branches of a gorgonacean, Melithaea sp., Maxillipius is closely related to Icilius, the two genera probably forming the family Iciliidae, near to the Paramphithoidae)

MACDONALD, A.G. & I. GILCHRIST, 1982. The pressure tolerance of deep sea amphipods collected at their ambient high pressure. Comp. Biochem. Physiol. A 71: 349-352.

MACKO, A.S., W.Y. LEE & P.L. PARKER, 1982. Nitrogen and carbon isotope fractionation by two species of marine amphipods: laboratory and field studies. J. exp. mar. Biol. Ecol. 63: 145-149. (Ampithoe valida and Parhyale hawaiensis)

MACKO, S.A., M.L.E. ESTEP & W.Y. LEE, 1983. Stable hydrogen isotope analysis of foodwebs on laboratory and field populations of marine amphipods. J. exp. mar. Biol. Ecol. 72: 243-250.

MACQUART-MOULIN, C., 1982. Effets de l'agitation sur les rythmes d'emergence des Peracarides fouisseurs Urothoe elegans (Amphipoda) et Eurydice inermis (Isopoda). Tethys 10: 236-244.

MAGNHAGEN, C. & A.M. WIEDERHOLM, 1982. Food selectivity versus prey availability: a study using the marine fish Pomatoschistus microps. Oecologia 55: 311-315. (Corophium volutator is main prey.)

MAGNIETTE, F. & T. GINSBURGER-VOGEL, 1982. Etablissement d'une table chronologique du developpement embryonnaire a differentes temperatures, chez Orchestia gammarellus (Pallas) (Crustace Amphipode). Bull. Soc. zool. Fr. 107: 101-110.

MARCH, B.G.E. de, 1982. Decreased day length and light intensity as factors inducing reproduction in Gammarus lacustris lacustris Sars. Can. J. Zool. 60: 2962-2965.

MARELLI, D.C., 1981. New records for Caprellidae in California, and notes on a morphological variant of Caprella verrucosa Boeck, 1871. Proc. biol. Soc. Wash. 84: 654-662.

MARGOLIS, L. & F. MORAVEC, 1982. Ramellogammarus vancouverensis Bousfield (Amphipoda) as an intermediate host for salmonid parasites in British Columbia. Can. J. Zool. 60: 1100-1104.

MATHIAS, J.A. & M. PAPST, 1981. Growth, survival and distribution of Gammarus lacustris (Crustacea, Amphipoda) stocked into ponds. Can. techn. Rep. Fish. aquat. Sci. 989: 1-11.

MATHIAS, J.A., J. MARTIN, M. YURKOWSKI, J.G.I. LARK, M. PAPST & J.L. TABACHEK, 1982. Harvest and nutritional quality of Gammarus lacustris for trout (Salmo gairdneri) culture. Trans. Am. Fish. Soc. 111: 83-89.

MATHIEU, J., 1982. Metabolisme respiratoire du gammaride interstiel Niphargus rhenorhodanensis. Influence de la temperature. Pol. Arch. Hydrobiol. 29: 351-365.

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

de differentes conditions experimentales. Vie Milieu 32: 183-192.
MATHIEU, J., 1983. Le metabolisme respiratoire de Niphargus (Amphipode hypogee). Determinisme de sa variabilite par la comparaison de deux populations de Niphargus rhenorhodanensis. Unpubl. Thesis., Univ. Cl. Bernard, Lyon, 59 pp.
MATHIEU, J., 1983. Metabolisme respiratoire d'une population karatique de Niphargus rhenorhodanensis (Amphipode, Gammaride). Influence de la temperature. Bull. Soc. zool. Fr. 108: 67-77.
MATSUDA, R., 1982. The evolutionary process in talitrid amphipods and salamanders in changing environments, with a discussion of 'genetic assimilation' and some other evolutionary concepts. Can. J. Zool. 60: 733-749.
MAURER, D., R.T. KECK, J.C. TINSMAN & W.A. LEATHEM, 1981. Vertical migration and mortality of benthos in dredged material: part II. Crustacea. Mar. environm. Res. 5: 301-318. (Much work on Parahaustorius longimerus)
MAYRAT, A., 1981. Nouvelle definition des yeux simples et composes chez les Arthropodes. Le cas des Amphipodes et des Cumaces. Arch. Zool. exp. gen. 122: 255-236.
McDONALD, M.E., 1983. A sampler for quantitatively assessing the macrobenthic epifaunal community of a hard substrate. Est. coast. Shelf Sci. 17: 571-572.
McGROTHER, M.A., 1983. Comparison of feeding mechanisms in two intertidal gammarideana, Hyale rupicola (Haswell) and Paracalliope australis (Haswell) (Crustacea: Amphipoda). Austr. J. mar. Freshw. Res. 34: 717-726.
McKENZIE, J.D. & P.G. MOORE, 1981. The microdistribution of animals associated with the bulbous holdfasts of Saccorhiza polyschides (Phaeophyta). Ophelia 20: 201-213.
McLACHLAN, A., T. WOOLDRIDGE & A.H. DYE, 1981. The ecology of sandy beaches in southern Africa. S. Afr. J. Zool. 16: 219-231.
McLUSKY, D.S., 1982. The impact of petrochemical effluent on the fauna of an intertidal estuarine mudflat. Est. coast. Shelf Sci. 14: 489-499. (A muddy Corophium-site in a Scotland estuary)
MEADOWS, P.S. & A.A. RUAGH, 1981. Multifactorial analysis of behavioural responses of the amphipod Corophium volutator to temperature-salinity combinations. Mar. Ecol. Progr. Ser. 6: 183-190.
MEADOWS, P.S. & C. ERDEM, 1982. The effect of mercury on Corophium volutator: viability and uptake. Mar. Environm. Res. 6: 227-233.
MELNIKOV, I.A. & A.S. KULIKOV, 1980. (Cryopelagic fauna of the Central Arctic Basin.) Pp 97-111 in VINOGRADOV, M.E. & I.A. MELNIKOV (eds), Biologiya tsentral'nogo arkticheskogo Basseyno. NAUKA, Moskva. (In Russian, not seen, most unfortunately.)
MERUANE, Z., J.A., 1982. (Amphipods collected in the waters of the Roninson Crusoe and Santa Clara islands). Invest. mar. 10: 35-40. (In Spanish, not seen)
MEUSY, H.J. & J-H. MEUSY, 1982. Vitellogenin and lipovitellin in Orchestia gammarellus (Pallas) (Crustacea: Amphipoda); labelling of subunits after in vivo administration of 3 H-leucine. Experientia 38: 252-253.
MEYER-ROCHOW, V.B. & C.A. PYLE, 1980. Fatty acid analysis of lens and retina of two antarctic fish and of the head and body of the antarctic amphipod Orchomene plebs. Comp. Biochem. Physiol. B 65: 395-398.
MEYER-ROCHOW, V.B., 1981. The eye of Orchomene rossi, an amphipod living under the Ross Ice Shelf (Antarctic). Proc. R. Soc. Lond. B. Biol. Sci. 212: 93-112.
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

species of Antarctic crustaceans. Cell Tissue Res. 221: 625-632. (i.a. Orchomene pleba)
MEYERING, M.P.D., 1982. Zum Lebensformtypen Gammarus und dessen Indikationswert fur Fliesgewaesserschaden. Natur u. Menach (1982), 133-138.
MILLER, S.A., 1982. The life history of Gammarus pseudolimnaeus Bousfield in a central Wisconsin stream (Amphipoda, Gammaridae). Crustaceana 43: 89-99.
MILLER, S.A., 1984. Seasonal activity patterns of Gammarus pseudolimnaeus Bousfield (Amphipoda). Crustaceana 46: 135-147.
MILLS, B.J., P.S. LAKE & R. SWAIN, 1979. Two freshwater crustaceans suitable for toxicity tests in Australian waters. Water Stud. Cent. techn. Rept 10, 19 pp.
MILLS, E.L., K. PITTMAN & B. MUNROE, 1982. Effect of preservation on the weight of marine benthic invertebates. Can. J. Fish. aq. Sci. 39: 221-224. (amphipods included)
MIRAMAND, P., P. GERMAIN & H. CAMUS, 1982. Uptake of Americium and Plutonium from contaminated sediments by three benthic species: Arenicola marina, Corophium volutator and Scorbicularia plana. Mar. Ecol. Progr. 7: 59-65.
MOLLER, P. & R. ROSENBERG, 1982. Production and abundance of the amphipod Corophium volutator on the West coast of Sweden. Neth. J. Sea Res. 16: 127-140.
MOORE, P.G., 1981. Marine Amphipoda (Crustacea) new to science from the Tasmanian phytal fauna. J. nat. Hist. 15: 939-964. (Deals with Cypsiphimedia edgari n. sp., Austropheonoides splendens n. sp., A. truganini n. sp., Cyproidea marmorata n. sp., Mesoproboloides cruxlorraina n. sp., and Raumahara judithae n. sp. Keys to the genera Cypsiphimedia, Austropheonoides, Mesoproboloides and Raumahara are provided.)
MOORE, P.G., 1982. A new species in the aberrant genus Yulamara (Amphipoda, Colomastigidae) from Tasmania. Crustaceana 43: 60-64. (Y. armadillicta n. sp.)
MOORE, P.G., 1982. Little known Amphipoda from the Clyde deep. J. mar. biol. Ass. U.K. 62: 237. (Amphilochoides boecki, Eriopisa elongata and Dyopedos monacantha)
MOORE, P.G., 1983. The apparent role of temperature in breeding initiation and winter population structure in Hyale nilssoni Rathke (Amphipoda): field observations 1972-83. J. exp. mar. Biol. Ecol. 71: 237-248.
MOORE, P.G., 1983. On the male of Sophrosyne robertsoni Stebbing & Robertson (Crustacea, Amphipoda). Zool. J. Linn. Soc. 77: 103-109.
MOORE, P.G., 1983. On the shape and posterior ornamentation of the third epimeral plates of gammaridean amphipods (Crustacea): decorative flamboyance or plain adaptation. Sarsia 68: 221-228.
MOORE, P.G., 1983. Pagurisaea schembrii gen. et sp. n. (Crustacea, Amphipoda) associated with New Zealand hermit crabs, with notes on Isaea elmhirsti Patience. Zool. Scr. 12: 47-56. (A new isaeid from the Otago Peninsula, S. Island, N.Z.)
MOORE, P.G. & A.A. MYERS, 1983. A revision of the Haplocheira group of genera (Amphipoda, Aoridae). Zool. J. Linn. Soc. 79: 179-221. (Anonychocheirus richardsoni gen et sp. nov. from Anvers Island, Antarctic peninsula. Kuphocheira emancipata n. sp. also from Anvers Island. The synonymy of Haplocheira barbimana s. l. is disentangled and H. pulmosa resurrected for the Antarctic material, while cold-temperature specimens consist of 3 subspecies: H.b. barbimana, H.b. typica and H.b. robusta, H. balssi from the Falkland islands is 'a good species'.)
MOORE, P.G., 1984. The amphipod Monoculodes gibbosus (Crustacea) in British waters. J. mar. biol. Ass. U.K. 64, 271-278. (With description, and key to the six British spp of Monoculodes)

MOORE, P.G., 1984. Gammaridean Amphipoda (Crustacea) collected by the yacht Tulip from surface waters of the Arabian Sea. J. nat. Hist. 18: 369-380. (Atylus megalops n. sp. (17o56'N, 67o09'E) and Amphithoe ramondi)

MOORE, P.G. & A.C. TAYLOR, 1984. Gill area relationships in an ecological series of gammaridean amphipods (Crustacea). J. exp. mar. Biol. Ecol. 74: 179-186.

MORGAN, E., 1984. The pressure-responses of marine invertebrates: a psychophysical perspective. Zool. J. Linn. Soc. 80: 209-230.

MORRIS, R.J., M.E. DAWSON & A.P.M. LOCKWOOD, 1982. The identification of some lipophilic contaminants in the gill neutral lipids of Gammarus duebeni. Mar. Poll. Bull. 13: 13-18.

MORRIS, R.J., A.P.M. LOCKWOOD & M.E. DAWSON, 1982. An effect of acclimation salinity on the fatty acid composition of the gill phospholipids and water flux of the amphipod crustacean Gammarus duebeni. Comp. Biochem. Physiol. 72A: 497-503.

MORRIS, R.J., A.P.M. LOCKWOOD & M.E. DAWSON, 1982. Changes in the fatty acid composition of the gill phospholipids in Gammarus duebeni with degree of gill contamination. Mar. Poll. Bull. 13: 345-348.

MORRISON, S.J., 198?. Trophic interactions between detrital microbiota and detritus-feeding estuarine gammaridean amphipods. Ph.D. Thesis, Florida State Univ., Tallahassee. (Not seen)

MORTENSEN, E., 1982. Production of Gammarus pulex L. (Amphipoda) in a small Danish stream. Hydrobiologia 87: 77-82.

MOULDER, S.M., 1979. Effects of interaction between heavy metals and salinity on the physiological responses of the amphipod, Gammarus duebeni. Ph.D. Thesis, Univ. of Southampton. (Not seen)

MUHLENHARDT-SIEGEL, U., 1981. Die Biomasse mariner Makrobenthos-Gesellschaften im Einflusbereich der Klarschlammverklappung vor der Elbemundung. Helgol. Meeresunters. 34: 427-437. (Amph. p. 431)

MULDER, M. & A. STAM, 1982. The macrobenthic fauna in a discharge area for TiO2 waste acid in the North Sea, a baseline study. Publ. Versl. biol. Onderz. Eems- Dollard Est. 1: 1-49. (Amphipoda on pp 17-18, det. WV)

MULLER-HAECKEL, A., 1979. Gammarus zaddachi and Limnephilus politus as agents in the decomposition of leaves in the estuary of the stream Angeran on the northern Baltic coast. Aquilo, Ser. Zool. 19: 13-15.

MUSAEVA, E.I. & I.A. SOKOLOVA, 1980. Calorific equivalents of planktonic animals in the Peruvian upwelling region. Pol. Arch. Hydrobiol. 27: 471-476. (Not seen. Includes data on Hyperiidea)

MUSHKO, I.B., 1983. (Epithelium structure and lipid content in the hepatopancreas of the amphipod Gammarus roeseli Gervais. Dokl. Akad. Nauk SSSR 268: 1513-1516. (In Russian, not seen)

MUZZALL, P.M., 1982. Parasites of Gammarus pseudolimnaeus and Hyalella azteca (Crustacea: Amphipoda) in 3 south-central Michigan, USA, localities. Proc. helminthol. Soc. Wash. 49: 289-294.

MYERS, A.A., & D. McGRATH, 1981. Taxonomic studies on British and Irish Amphipoda. The genus Photis with the re-establishment of P. pollex (= P. macrocoxa). J. mar. Biol. Ass. U.K. 61: 759-768.

MYERS, A.A. & D. McGRATH, 1982. Taxonomic studies on British and Irish Amphipoda. The genus Gammaropsis. J. mar. biol. Ass. U.K. 62: 93-100. (With redescriptions on G. lobata (Chevr.) (=G. melanops a. Jones 1948), and G. sophiae, new to England. The other species are G. maculata, G. palmata and G. nitida.)

MYERS, A.A. & D. McGRATH, 1982. Taxonomic studies on British and Irish amphipods: Reestablishment of Leucothoe procera. J. mar. biol. Ass. U.K. 62: 693-698. (L. procera is redescribed from Irish and British material,

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

MYERS, A.A. & D. McGRATH, 1983. The genus Listriella (Crustacea: Amphipoda) in British and Irish waters, with the description of a new species. J. mar. biol. Ass. U.K. 63: 347-353. (Listriella mollis n. sp., a blind sp. from maerl deposits off W. Ireland, possibly identical to the Idunella n. sp. of Spooner (1960). L. picta is redescribed.)

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

MYERS, A.A. & M.J. COSTELLO, 1984. The amphipod genus Aora in British and Irish waters. J. mar. biol. Ass. U.K. 64: 279-283. (Aora gracilis and A. spinicornis, the latter newly found in Co. Cork, Eire)

MYERS, A.A. & D. McGRATH, 1984. A revision of the North-east Atlantic species of Ericthonius (Crustacea: Amphipoda). J. mar. biol. Ass. U.K., 64: 379-400. (A timely and thorough revision of a traditionally confused group of species. The authors recognize seven species in two species-groups in the area of investigation, as follows: In group 1 E. brasiliensis (W. Atl. and Med.), E. punctatus (=E. abditus s. Sars and E. brasiliensis s. C & F, Gurj, and Lincoln) and E. difformis, and in group 2 E. rubricornis (Stimpson, 1853) (=E. hunteri auct. and E. difformis s. Lincoln), E. fasciatus (Stimpson, 1853) (=E. rubricornis s. Bousfield 1973), E. megalops, and E. stephenseni n. sp. (deep water off Faroes).)

NAIR, K.K.C., T.C. GOPALAKRISHNAN, P. VENUGOPAL, M. GEORGE PETER, K.V. JAYALAKSHMI & T.S.S. RAO, 1983. Population dynamics of estuarine amphipods in Cochin backwaters. Mar. Ecol. Progr. Ser. 10: 289-295. (Deals with 11 spp.)

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

NELSON, W.G., 1980. Amphipods. Little-known crustaceans. Sea Frontiers 26: 138-144. (Not seen)

NELSON, W.G., K.D. CAIRNS & R.W. VIRNSTEIN, 1982. Seasonality and spatial patterns of seagrass-associated amphipods of the Indian River lagoon, Florida. Bull. mar. Sci. 32: 121-129.

NERINI, M.K. & J.S. OLIVER, 1983. Gray whales and the structure of the Bering Sea benthos. Oecologia (Berl.) 59: 224-225.

NICOLAISEN, W. & E. KANNEWORFF, 1983. Annual variations in vertical distribution and density of Bathyporeia pilosa Lindstrom and Bathyporeia sarsi Watkin at Julebaek (North-Sealand, Danmark). Ophelia 22: 237-251.

NIELSEN, M.V. & L.H. KOFOED, 1982. Selective feeding and epipsammic browsing by the deposit-feeding amphipod Corophium volutator. Mar. Ecol. Progr. Ser. 10: 81-88.

NIELSEN, M.V. & L.H. KOFOED, 1983. Selective feeding and epipsammic browsing by the deposit-feeding amphipod Corophium volutator. Mar. Ecol. (Progr. Ser.) 10: 81-88.

NIKALAYEV, S.G., 1980. Production of Gammarus lacustris (Amphipoda, Gammaridae) in Lake Sevan. Hydrobiol. J. 16(4): 40-44. (Translated from Russian)

NILSSON, D-E., 1982. The transparent compound eye of Hyperia (Crustacea): examination with a new method for analysis of refractive index gradients. J. comp. Physiol. 147: 339-349.

NORTON, T.A. & M.R. BENSON, 1983. Ecological interactions between the brown seaweed Sargassum muticum and its associated fauna. Mar. Biol. 75: 169-177.

OAKDEN, J.M., J.S. OLIVER & A.R. FLEGAL, 1984. Behavioral responses of a phoxocephalid amphipod to organic enrichment and trace metals in sediment. Mar. Ecol. Progr. Ser. 14: 253-257.

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

OBDRLIK, P., 1982. Remarks to the thermal tolerance of Gammarus fossarum Koch (Amphipoda). Pol. Arch. Hydrobiol. 29: 343-349.

OCKELMANN, K.W., 1983. Descriptions of mytilid species and definition of the Dacrydiinae n. subfam. (Mytilacea-Bivalvia). Ophelia 22: 81-123. (Dr. Anatal 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. sp. is recorded.)

OLENICK, R.J. & J.H. GEE, 1981. Tiger salamanders (Ambystoma tigrinum) and stocked rainbow trout (Salmo gairdneri): potential competitors for food in Manitoba, Canada, prairie pothole lakes. Can. Field-Nat. 95: 129-132. (Gammarus dominant prey of both predators)

OLIVER, J.S., J.M. OAKDEN & P.N. SLATTERY, 1982. Phoxocephalid amphipod crustaceans as predators on larvae and juveniles in marine soft-bottom communities. Mar. Ecol. Progr. Ser. 7: 179-184.

OLIVER, J.S., P.N. SLATTERY, M.A. SILBERSTEIN & E.F. O'CONNOR, 1984. Gray Whale feeding on dense ampeliacid amphipod communities near Bamfield, British Columbia. Can. J. Zool. 62: 41-49.

OMORI, K., M. TANAKA & T. KIKUCHI, 1982. Seasonal changes of short-term reproductive cycle in Corophium volutator (Crustacea: Amphipoda).

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

OPALINSKI, K.W., 1982. Metabolic compensation in Amphipoda. Pol. Arch. Hydrobiol. 29: 367-373.

ORTIZ, M., 1980. (A new species of benthic amphipod (Amphipoda, Gammaridea) from Cuban waters.) Rev. Invest. mar. Univ. Habana 1: 91-103. (In Spanish. Lembos habanensis n. sp. from near Habana)

ORTIZ, M., 1983. (The amphipods (Gammaridea) of the Caribbean coasts of Colombia). Rev. Invest. mar. 4: 23-32. (In Spanish, not seen)

ORTIZ, M. & R.R. LAVANA, 1980. (A new amphipod of the genus Leptocheirus (Amphipoda, Gammaridea) from Cuban waters.) Rev. Invest. mar. Univ. Habana 1: 57-73. (In Spanish, Leptocheirus rhizophorae n. sp., from a lagoon on the SE coast of Cuba)

PARDI, L. & F. SCAPINI, 1981. New data on the innate directional tendency in littoral amphipods. Monit. zool. ital. 15: 322.

PARDI, L. & F. SCAPINI, 1983. Inheritance of solar direction finding in sandhoppers: mass-crossing experiments. J. comp. Physiol. 151A: 435-443.

PARKER, J.I., 1980. Predation by Mysis relicta on Pontoporeia hoyi. A food chain link of potential importance in the Great Lakes, Canada, USA. J. Great Lakes Res. 6: 164-166.

PEATTIE, M.E. & R. HOARE, 1981. The sublittoral ecology of the Menai Strait. 2. The sponge Halichondria panicea (Pallas) and its associated fauna. Est. coast. Shelf Sci. 13: 621-635. (An interesting paper involving many amphipods. "Caprella linearis may be chemically attracted towards Halichondria.")

PECK, S.B., 1981. The invertebrate fauna of the caves of the Uinta mountains, northeastern Utah, USA. Great Basin Nat. 41: 207-212. (Not seen. Amph. present)

PERCY, J.A. & F.J. FIFE, 1981. The biochemical composition and energy content of arctic marine macrozooplankton. Arctic 34: 307-313. (i.a. Hyperoche medusarum, Parathemisto libellula, Anonyx nugax, Gammarus setosus, Onisimus litoralis and Orchomenella minuta)

PERSSON, L-E., 1982. Seasonal migrations of Bathyporeia pilosa Lindstrom in the Southern Baltic. Ophelia 21: 205-213.

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 researchers in phreatic subterranean waters of Maghreb (Tunisie, Algerie, Morocco) and Egypt.) Natura (Milano) 72: 63-98. (In Italian. Mainly a survey of localities prospected.)

PETRE-STROOBANTS, G., 1982. Analyse comparative de la variabilite de certains caracteres taxonomiques de Gammarus pulex (Linnaeus, 1758), Gammarus fossarum Koch, 1835 et Gammarus caparti Petre-Stoobants, 1980 (Crustacea Amphipoda). Pol. Arch. Hydrobiol. 29: 205-219.

PETROVA, A., 1982. Pollution organique et autopurification des eaux alluviales et proluviales. Pol. Arch. Hydrobiol. 29: 513-517. (A Bulgarian study)

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

PIENKOWSKI, M.W., 1983. Surface activities of some intertidal invertebrates in relation to temperature and the foraging behaviours of their shorebird predators. Mar. Ecol. Progr. Ser. 11: 141-150. (i.a. Bathyporeia pelagica)

PIEPER, H-G. & M.P.D. MEYERING, 1982. Gammarus occurrence as an indication for stable conditions in Hessian woodland brooks and rivers. Pol. Arch. Hydrobiol. 29: 283-288.

PIEPER, H-G. & M.P.D. MEYERING, 1982. Zur Situation der Gattung Gammarus im Abfluszgebiet der unteren Fulda. Beitr. Naturkde Osthessen 18: 17-24.

PIEPER, H-G. & M.P.D. MEYERING, 1983. Zur Situation der Gattung Gammarus im Abfluszgebiet von Eder und Diemel. Beitr. Naturk. Osthessen 19: 75-84.

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)

PINKSTER, S. & D. PLATVOET, 1983. Further observations on the distribution and biology of two alien amphipods, Gammarus tigrinus Sexton, 1939, and Crangonyx pseudogracilis Bousfield, 1958, in the Netherlands (Crustacea, Amphipoda). Bull. zool. Mus. Univ. A'dam 9: 153-164.

PIPE, A.R., 1982. Epizoites on marine invertebrates: with particular reference to those associated with the pycnogonid Phoxichilidium tubulariae Lebour, the amphipod Caprella linearis (L.) and the decapod Corystes cassivelaunus (Pennant). Chem. Ecol. 1: 61-74.

PLATVOET, D., 1983. Bogidiella (B.) neotropica Ruffo, 1952 (Crustacea, Amphipoda) rediscovered in Venezuela. Bijdr. Dierk. 53: 109-114.

PORCU, M. & M.L. TAGLIASACCHI MASALA, 1983. Ecologie trophique des crustaces et pollution par le mercure dans un etang saumatre mediterraneen (Santa Gilla, Sardaigne). Cah. Biol. mar. 24: 159-175. (Not seen. I.a. series of tests with Gammarus aequicauda)

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

PULLIAINEN, E., DATE?. Occurrence of Gammarus lacustris in eastern Finnish Lapland. Aquilo Ser. Zool. 19: 23-27.

RABALAIS, S.C., & R. W. FLINT, 1983. IXTOC 1 effects on intertidal and subtidal infauna of south Texas beaches. Contr. mar. Sci. 26: 23-35. (Once again, amphipods, this time haustoriids, are shown to be very sensitive to oil pollution).

RACH, J.J., 1982. Water-stable diet for aquatic invertebrates. Progr. Fish-Cult. 44: 111-112.

RAGA, J.A., E. CARBONELL & A. RADUAN, 1982. (Incidence of parasites in stranded Cetacea on the Spanish Mediterranean coasts.) Mem. Mus. mar. Portugal 2(19): 1-11. (In Spanish. Syncyamus aequus from Stenella coeruleoalba)

RAGA, J.A. & A. RADUAN, 1982. First record of Syncyamus aequus Lincoln and Hurley, 1981 (Amphipoda, Cyamidae) in the Mediterranean Sea. Pp 22-23 in G. PILLERI (ed), Investigations on Cetacea XIV.

RAGA, J.A., A.RADUAN & C. BLANCO, 1983. (On the presence of Isocyamus delphinii (Guerin-Meneville, 1836) (amphipoda: Cyamidae) in the waters of the Spanish Mediterranean.) Actas I Congr. iberico Entomol. 2: 627-630. (In Spanish. On Globicephala melaena)

RAGA, J.A., A. RADUAN, C. BLANCO & E. CARBO-NELL, 1983. Etude parasitologique du dauphin bleu et blanc Stenella coeruleoalba dans la Mediterranee occidentale. Rapp Comm. int. Mer Medit. 28: 211-212. (Syncyamus aequus)

RAO, G. Chandrasekhara & A. MISRA, 1983. Meiofauna from Lakshadweep, Indian Ocean. Cah. Biol. mar. 24: 51-68. (i.a., Bogidiella and Melita)

RAY, G.L., 1983. Ecology of benthic macroinvertebrates in two New Jersey salt marsh waterways. Ph.D. Thesis, Rutgers State Univ., 378 pp. (Not seen. Contains data on Ampelisca abdita and Leptocheirus plumulosus)

REMMERT, H., 1982. The wrack-beds and their fauna. Pp 70-84 in C.J. SMIT, J. den HOLLANDER, W.K.R.E. van WINGERDEN & E.J. WOLFF (eds), Terrestrial and freshwater fauna of the Wadden Sea area. Balkema, Rotterdam.

REYGROBELLET, J.L., 1979. Complement a l'etude de la physiologie sexuelle de l'Amphipode aquatique Niphargus virei Chevreux; durees des processus spermatogenetiques. Vie Milieu, Biol. mar. Oceanogr. 28/29: 489-507 (sic). (Not seen)

REYGROBELLET, J.L. & M-J. DOLE, 1982. Structure et fonctionnement des ecosystemes du Haut-Rhone francais. 17. Le millieu interstitiel de la 'Lone du Grand Gravier', premiers resultats hydrologiques et faunistiques. Pol. Arch. Hydrobiol. 29: 485-500.

RICHARDS, L.J., 1982. Prey selection by an intertidal beetle: field test of an optimal diet model. Oecologia 55: 325-333. (The beetle Thinopinus pictus is a predator on Orchestoidea.)

RICHARDS, L.J., 1983. Feeding and activity patterns of an intertidal beetle. J. exp. mar. Biol. Ecol. 73: 213-224. (Thinopinus pictus a predator of Orchestoidea californiana in W. Canada)

RIETSMA, C.S., I.J. VALIELA & A. SYLVESTER-SERIANNI, 1982. Food preferences of dominant salt marsh herbivores and detritivores. PSZNI Mar. Ecol. 3: 179-189. (i.a. Orchestia grillus, Talorchestia longicornis)

RIMET, M., 1981. Persistence of a day-night rhythm in Gammarus pungens when submitted to U.V. rays. Ann. zool. (Agra) 18: 175-190. (Not seen)

ROBERTSON, A.I. & J.S. LUCAS, 1983. Food choice, feeding rates and the turnover of macrophyte biomass by a surf-zone inhabiting amphipod. J. exp. mar. Biol. Ecol. 72: 99-124. (Allorchestes compressus from W. Australia)

ROSSET, J., F. BARLOCHER & J.J. OERTLI, 1982. Decomposition of conifer needles and deciduous leaves in two Black Forest and two Swiss Jura streams. Int. Rev. ges Hydrobiol. 67: 695-711.

ROUX, C., 1981. Les variations du metabolisme respiratoire et de l'activite de quelques invertebres dulcaquicoles sous l'influence de divers facteurs ecologiques. These Doct. Etat-es-Sci., Univ. de Lyon, 69 pp. (2 Trichoptera and 4 Gammarus spp)

ROUX, C., 1982. L'activite locomotrice du Gammarus pulex (L.) et Gammarus fossarum Koch (Amphipodes) dans differentes conditions experimentelles. Pol. Arch. Hydrobiol. 29: 319-329.

RUBER, E. & K. LA-FRANCE, 1983. Effects of temephos on the respiratory rate of the salt marsh amphipod, Gammarus mucronatus. Bull. environm. Contam. Toxicol. 31: 148-151.

RUEDA, R.L., ORTIZ & O GOMEZ, 1980. (List of benthic invertebrates of the coastal lagoons "Tolete" and "El Basto" of Tunas de Zata, south coast of Cuba.) Rev. Invest. mar. Univ. Habana 1: 20-45. (In Spanish. Amph. pp 34-36)

RUFFO, S., 1982. (The Amphipoda of the subterranean water of Italy.) Lavori Soc. ital. Biogeogr. NS 7(1978): 139-169. (In Italian, summary pp 168-169. A biogeographical study)

RUFFO, S., 1982. (Study of amphipod crustaceans. 92. New amphipods 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 Metaniphargus, the latter as a subgenus.) Afridiella pectinicauda n. sp. (S. Somalia) is also described.)

RUFFO, S., 1982. Une nouvelle espece de Metacrangonyx Chevreux (Amphipoda:

Gammaridae) du desert de Sinai. Israel J. Zool. 31: 151-156. (M. sinaicus n. sp. Ruffo considers Afrocrangonyx to be a synonym of Metacrangonyx)
RYAN, P.A., 1982. Energy contents of some New Zealand freshwater animals. NZ J. mar. Freshw. Res. 16: 283-288. (i.a. Paracalliope fluviatilis)
SAINTE-MARIE, B. & P. BRUNEL, 1983. Differences in life history and success between two suprabenthic shelf populations of Arrhis phyllonyx (Amphipoda Gammaridea) in two ecosystems of the Gulf of St. Lawrence. J. crust. Biol. 3: 45-69.
SANCHEZ, M., J.C. CASTILLA & O. MENA, 1982. (Summer and winter variations of the macrofauna of sandy beach in Morrillos, Norte Chico, Chile.) Stud. neotrop Fauna Environm. 17: 31-49. (In Spanish)
SARVIRO, V.S., 1980. (Respiration of the scud Gammarus lacustris under sinusoidal changes in temperature.) Gidrobiol. Zh. 16(6): 43-48.
SCAPINI, F. & A. UGOLINI, 1981. Influence of landscape on the orientation of Talitrus saltator Montagu (Crustacea Amphipoda). Monit. zool. ital. 15: 324-325.
SCAPINI, F., A. UGOLINI & L. PARDI, 1981. Analysis of astronomical orientation in littoral amphipods using individual and group tests (Crustacea, Amphipoda). Monit. zool. ital. 15: 77-86.
SCAPINI, F. & L. BARTOLOZZI, 1983. Orientation of the freshwater riparian amphipod Orchestia cavimana (Crustacea Amphipoda). Monit. zool ital. 17: 295-302.
SCHAFFNER, L.C. & D.F. BOESCH, 1982. Spatial and temporal resource use by dominant benthic Amphipoda (Ampeliscidae and Corophiidae) on the middle Atlantic Bight outer continental shelf. Mar. Ecol. Progr. Ser. 9: 231-243.
SCHMITT, R.J. & J.A. COYER, 1982. The foraging ecology of sympatric marine fish in the genus Embiotoca (Embiotocidae): importance of foraging behavior in prey size selection. Oecologia 55: 369-378. (Principally predators on amphipods)
SCHNEIDER, D.E., 1980. Physiologic responses of Arctic epibenthic invertebrates to winter stresses and exposure to Prudhoe Bay crude oil dispersions. NOAA/OMPA- AR- 80-1: 413-475. (i.a. Anonyx nugax and Boeckosimus affinis)
SCHWEDHELM, E., 1980. Thermopraferenz, Schlafaktivitat, Mortalitat und Hautungsfrequenz von Gammarus fossarum und Gammarus roeselii in Abhangigkeit von Temperaturschocks. Verh. Ges. Okol. 8: 295-303.
SCHWEDHELM, E., 1982. (Thermopreference of Gammarus fossarum and Gammarus roeselii (Crustacea, Amphipoda) in dependence on season.) Zool. Anz. 208: 367-374. (In German, not seen)
SCIPIONE, M.B., E. TARAMELLI, E. FRESI, F. CINELLI & L. MAZZELLA, 1981. (Distribution of benthic biocoenoses along a light gradient in a superficial marine cave: amphipods.) Mem. Biol. mar. Oceanogr. 11: 1-16. (In Italian, not seen. Amphipod det. S. Ruffo)
SCIPIONE, M.B., G. CARNEVALE, F. CINELLI, E. FRESI, L. MAZZELLA, M.P. PONTICELLI & E. TARAMELLI, 1981. (Studies on the benthic populations of hard bottoms of the harbour of Ischia. The photophilous infralittoral. 3 Amphipoda.) Quad. Lab. Tecnol. Pesca 3 Suppl. 1: 505-517. (In Italian)
SCIPIONE, M.B., E. FRESI & K.J. WITTMANN, 1982. The vagile fauna of Posidonia oceanica (L.) Delile foliar stratum: a community approach. Proc. 28th Congr. ICSEM, Cannes, Dec. 2-10 1982, 2 pp.
SCIPIONE, M.B., E. FRESI, C. CHIMENZ-GUSSO, M.C. GAMBI, A. GIANGRANDE & R. COLOGNALA, 1982. (Zonation of the benthic community of hard-bottoms along a hydrodynamic gradient.) Atti Convegno delle Unita Operative afferenti ai Sottoprogetti Risorse biologiche e Inquinamento marina, Roma 1981, 107-117. (In Italian)
SCONFIETTI, R., 1983. (Occurrence of Elasmopus pectenicrus (Bate) (Crustacea,

Amphipoda) in the Laguna di Venezia.) Boll. Mus. Civ. St. nat. Venezia 33(1982): 91-93. (In Italian. Formerly in the Mediterranean only found in the extreme eastern part)
SEGERSTRALE, S.G., 1982. The immigration of glacial relicts into Northern Europe in the light of recent geological research. Fennia 160: 303-312.
SEKIGUCHI, H., 1982. Scavenging amphipods and isopods attacking the spiny lobster caught in a gillnet. Repts Fish. Res. Lab., Mie Univ. 3: 21-30.
SEKIGUCHI, H. & Y. YAMAGUCHI, 1983. Scavenging Gammaridean 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 spp. collected, among which Anonyx hayashii n. sp. is new. The others are A. lilljeborgii, Euonyx lagueus, Schisturella pulchra and Scopelocheirus hopei.)
SEMENOVA, T.N., 1981. (Parapronoe elongata sp. n. (Crustacea, Hyperiidea) and discussion of status of the genus Synpronoe Stebbing, 1888). Zool. Zh. 60: 1581-1585. (In Russian. Parapronoe elongata n. sp. is described from off Lord Howe Isl., S.W. Pacific, 1257 m. As the new species is intermediate, Synpronoe is synonymized with Parapronoe.)
SHACKLOCK, P.F. & E.W. DOYLE, 1983. Control of epiphytes in seaweed cultures using grazers. Aquaculture 31: 141-152. (Gammarus lawrencianus and the isopod Idotea baltica)
SHAPOVALOVA, I.M. & V.N. KUZMICH, 1981. (Role of the lake sandhopper in bioproductivity and nutrition of fish in Lakes Ivan and Arakhlei, Russian SFSR, USSR.) Gidrobiol. Zh. 17(15): 44-47. (In Russian, not seen. Which species is this?)
SHEADER, M., 1983. The reproductive biology and ecology of Gammarus duebeni (Crustacea: Amphipoda) in southern England. J. mar. biol. Ass. U.K. 63: 517-540.
SHELTON, C.R. & P.B. ROBERTSON, 1981. Community structure of intertidal macrofauna on two surf-exposed Texas sandy beaches. Bull. mar. Sci. 31: 833-842.
SHIOGAKI, M., 1981. (Notes on the life history of the stichaeid fish Opisthocentrus tenuis.) Jpn J. Ichthyol. 28: 319-328. (In Japanese, not seen. 'Feeds mainly on benthic gammarids and caprellids')
SHULENBERGER, E., 1982. Biological evidence for a split in the North Pacific central gyre. Deep-Sea Res. 29: 403-410. (A study with Hyperiidea as evidence)
SHYAMASUNDARI, K., 1981. The alimentary canal of amphipods: The foregut. Folia Morph. (Prague) 29: 367-374. (Not seen)
SIEGEL-CAUSEY, D., 1983. Factors determining the distribution of hyperiid Amphipoda in the Gulf of California. Ph.D. Thesis, Univ. of Arizona, 550 pp. (Not seen. No further data available)
SKADSHEIM, A. 1982. The ecology of intertidal amphipods in the Oslofjord. The life cycles of Chaetogammarus marinus and C. stoerensis. Mar. Ecol. 3: 213-224. (A study from a virtually tideless Norwegian shore)
SKADSHEIM, A., 1983. The ecology of intertidal amphipods in the Oslofjord. Distribution and response to physical factors. Crustaceana 44: 225-244. (SE Norway)
SKADSHEIM, A., 1984. Coexistence and reproductive adaptations of amphipods: the role of environmental heterogeneity. Oikos 43: 94-103. (A fine study of intertidal Gammarus spp in SE Norway)
SKALSKI, A.W., 1982. Groundwater fauna of the Malopolska gap of the Vistula. Pol. Arch. Hydrobiol. 29: 387-404. (Amph. pp 395-397)
SKET, B., 1980. (Reichtum und Bedrohung der Hohlenfauna des Popovo Polje (Hercegovina, Jugoslawien.) Proc. 7. jugosl. speleol. Kongr. (Herceg.-Novi 1976), 403-409.

SKET, B., 1981. (Distribution, ecological character and phylogenetic importance of Niphargus valachicus (Amphipoda, Gammaridae s.l.).) Biol. vestn. 29: 87-103. (In Slovenian with English summary. Deals also with N. hrabei, found near Zagreb)
SKET, B., 1981. Niphargobates orophobata n.g., n. sp. (Amphipoda, Gammaridae s.l.) from cave waters in Slovenia (NW Yugoslavia). Biol. vestn. 29: 105-118. (A new niphargid genus)
SKET, B. & F. VELKOVRH, 1981. Phreatische Fauna in Ljubljansko polje (Ljubljana- Ebene, Jugoslawien) - ihre okologische Verteilung und zoogeografische Beziehungen. Int. J. Speleol. 11: 105-121.
SKET, B. & F. VELKOVRH, 1981. (The Postojna-Planina cave system as a model for investigations of polluted subterranean rivers.) Nase jame 22(1980): 27-44. (In Slovenian, with English summary)
SKET, B. & F. VELKOVRH, 1981. (Subterranean animals in thermal waters.) Biol. vestn. 29: 91-120. (In Slovenian, with English summary. Few amphipods)
SKOPTSOV, V.G., 1981. (Energy balance in the Gammarus lacustris Sars population from the Bolshoe Lake littoral.) Pp 80-86 in G.G. VINBERG (ed), Osnoya izucheniya presnovodnykh ekosistem. Leningrad. (In Russian, not seen)
SKOPTSOV, V.G., 1981. (Growth and metabolism of Gammarus lacustris at different temperatures.) Ekologiya 0(2): 97-98. (In Russian, not seen)
SLOOFF, W., 1983. Benthic macroinvertebrates and water quality assessment: Some toxicological considerations. Aquat. Toxicol. 4: 73-82.
SMITH, A.L., 1981. Comparison of macrofaunal invertebrates in sand dollar (Dendraster excentricus) beds and in adjacent areas free of sand dollars. Mar. Biol. 65: 191-198.
SMITH, C.R. & T.M.C. PRESENT, 1983. In vivo marking of shallow-water and deep-sea amphipods by ingestion of bait mixed with Fast green. Mar. Biol. 73: 183-192. (Lysianassidae)
SMITH, D.G., 1982. Range extensions for two species of gammaroidean amphipods in northeastern North America. Crustaceana 42: 315-316. (Gammarus pseudolimnaeus and Crangonyx pseudogracilis)
SMITH, G.A., J.S. NICKELS, W.M. DAVIS, R.F. MARTZ, R.H. FINDLAY & D.C. WHITE, 1982. Perturbations in the biomass, metabolic activity, and community structure of the estuarine detrital microbiota: resource partitioning in amphipod grazing. J. exp. mar. Biol. Ecol. 64: 125-143. (Work on Gammarus mucronatus and Melita appendiculata)
SMITH, K.L. & R.J. BALDWIN, 1982. Scavenging deep-sea amphipods: Effects of food odor on oxygen consumption and a proposed metabolic strategy. Mar. Biol. 68: 287-298.
SMITH, M.J. & W.D. WILLIAMS, 1983. Reproduction cycles in some freshwater amphipods in southern Australia. Mem. Austr. Mus. 18: 183-194. (Deals with Pseudomoera gabrieli and Austrochiltonia australis)
SMOCK, L.A., D.L. SONEBURNER & D.R. LENAT, 1981. Littoral and profundal macroinvertebrate communities of a coastal brown-water lake. Arch. Hydrobiol. 92: 306-320. (A study from Georgia, USA. Crangonyx spp common)
SORBE, J.C., 1981. Role du benthos dans le regime alimentaire des poissons demersaux du secteur Sud Gascogne. Kieler Meeresf., Sonderheim 5: 479-489.
SORBE, J.C., 1982. (Observations preliminaires du suprabenthos dans un transect bathymetrique de la plataforme continentale aquitaine). Oecol. aquat. 6: 9-17. (In Spanish, not seen)
SORBE, J.C., 1983. Description d'un traineau destine a l'echantillonnage quantitatif etage de la faune suprabenthique neritique. Ann. Inst. oceanogr. Paris (N.S.) 59: 117-126.
SOYEZ, D., 1980. (Demonstration of an action of glucose and serotonin on the

molt cycle of the crustacean amphipod Orchestia gammarellus.) . CR Acad. Sci. Paris 291: 841-844. (In French, not seen)

STATZNER, B. & A. BITTNER, 1983. Nature and causes of migrations of Gammarus fossarum Koch (Amphipoda). A field study using a light intensifier for the detection of nocturnal activities. Crustaceana 44: 271-291.

STEELE, D.H., 1982. The genus Anonyx (Crustacea, Amphipoda) in the North Pacific and Arctic oceans: Anonyx nugax group. Can. J. Zool- 60: 1754-1775. (Consists of A. nugax, A. makarovi (=A. pacificus s. Steele & Brunel 1968), A. pacificus, A. sarai, A. lilljeborgi, A. beringi n. sp. (Kyska Harbor, Alaska), A. barrowensis n. sp. (Point Barrow, Alaska), A. anivae, A. schokalskii, A. comecrudus, A. debruyni, A. knipowitschi and A. epistomicus.)

STEELE, D.H., 1982. Survival, growth and reproduction of Gammarus lawrencianus on a diet of Pilayella littoralis. Pol. Arch. Hydrobiol. 29: 299-306.

STEELE, D.H., 1983. The genus Anonyx (Crustacea, Amphipoda) in the North Pacific Ocean: Anonyx validus-group. Can. J. Zool 61: 2921-2931. (The group consist of A. dalli n. sp. (Kyska Harbor, Al.), A. shoemakeri n. sp. (cf. Aleutian Islands) and A. validus)

STEELE, D.H., 1983. Size compositions of lysianassaid amphipods in cold and warm water habitats. Mem. Austr. Mus. 18: 113-119.

STEELE, P. & S.B. COLLARD, 1981. First Gulf of Mexico record for Biancolina brassicacephala (Amphipoda: Biancolinidae). North-East Gulf Sci. 4: 115-118.

STEELE, V.J. & B.R. MACPHERSON, 1981. Morphological features of sessile and circulating hemocytes in the cephalon of Gammarus setosus Dementieva (Crustacea: Amphipoda) by light and electron microscopy. J. Morph. 170: 253-269.

STEIMLE, F.W., 1982. The benthic macroinvertebrates of the Block Island Sound. Est. coast. Shelf Sci. 15: 1-16. (Amph. p 7)

STEPHENSON, R.R., 1983. Effects of water hardness, water temperature, and size of the test organism on the susceptibility of the freshwater shrimp, Gammarus pulex (L.), to toxicants. Bull. environm. Contam. Toxicol. 31: 459-466.

STOCK, J.H., 1981. L'origine geologique des iles des Indes Occidentales en relation avec la diapersion de quelques Malacostraces stygobiontes. Geobios (Lyon) 14: 219-227. (Not seen)

STOCK, J.H., 1981. The taxonomy and zoogeography of the family Bogidiellidae (Crustacea, Amphipoda), with emphasis on the West Indian taxa. Bijdr. Dierk. 51: 345-374. (A monographic review, in which the group is split up into the following supraspecific taxa: Artesia (1 sp), Spelaeogammarus (1), Somagidiella n. gen. (for Bogidiella somala), Parabogidiella (1), Bogidiella, with 7 subgenera: Bogidiella s.s. (at least 8), Medigiella n. subgen. (for B. chappuisi + 4), Orchestigidiella n. subgen. (for B. orchestipes), Stygogidiella n. subgen. (for B. bredini + 1), Mexigidiella n. subgen. (for B. tabascensis + 1), Guagidiella n. subgen. (for B. holsingeri + 1) and Antillogidiella n. subgen. (for B. martini). Furthermore Actogidiella n. gen. (for A. cultrifera n. sp.), Marigidiella n. gen. (type B. brasiliensis, further species M. crassipes n. sp.), Dergueleniola (1), Bollegidia (2, as Bogidiella sootai is here transferred to Bollegidia), Dussartiella (1) and Pseudingolfiella (2). A. cultrifera n. sp., M. crassipes n. sp. and Bogidiella (Stygogidiella) virginalis n. sp. were all found on the island of Tortola (West Indies), Bogidiella (?Stygogidiella) perla n. sp. from Isla de Margarita, Venezuela. Bogidiella (S.) bredini is redescribed.)

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

islands 18. Stygobiont Crustacea Malacostraca from geologically older and younger Antillean islands: a biogeographic analysis. Bijdr. Dierk. 52: 191-199. (Not seen)
STOCK, J.H., 1982. The influence of hadziid Amphipoda on the occurrence and distribution of Thermosbaenacea and cyclopoid Copepoda in the West Indies. Pol. Arch. Hydrobiol. 29: 275-282. ('It is considered most likely that Hadziids predate on smaller Crustacea')
STOCK, J.H., 1982. Validite du genre Pectenogammarus Reid, 1940 et distribution de son espece-type, P. planicrurus (Reid, 1940) (Crustacea, Amphipoda, Gammaridae). Cah. Biol. mar. 23: 325-329.
STOCK, J.H. & J.J. VERMEULEN, 1982. A representative of the mainly abyssal family Pardaliscidae (Crustacea, Amphipoda) in cave waters of the Caicos Islands. Bijdr. Dierk. 52: 3-12. (Spelaeonicippe provo n. gen. n. sp. from the Caicos Islands N. of Haiti. Nicippe buchi from Lanzarote is also transferred to Spelaeonicippe)
STOCK, J.H., 1983. Discovery of a bogidiellid amphipod crustacean in inland waters of the East Indian archipelago: Bogidiella (Medigidiella) sarawacensis n. sp. Crustaceana 44: 198-204. (type locality: caves in Sarawak, Borneo)
STOCK, J.H., 1983. A new species of Psammogammarus (Crustacea, Amphipoda) from the Roques archipelago, Venezuela. Bijdr. Dierk. 53: 103-108. (P. acopulorum n. sp.)
STOCK, J.H., 1983. Predation as a factor influencing the occurrence and distribution of small Crustacea in West Indian groundwater. Bijdr. Dierk. 53: 233-243.
STOCK, J.H., 1983. The stygobiont amphipods of Jamaica. Bijdr. Dierk. 53: 267-268. (Metaniphargus jamaicae, M. craterensis n. sp., M. hyporheicus n. sp. and M. anchihalinus n. sp. The taxonomy at generic level of the Hadzia complex is discussed extensively.)
STOCK, J.H. & L. BOTOSANEANU, 1983. Premiere decouverte d'Amphipodes Gammaridae du groupement des Hadziidea dans des eaux souterraines de l'Amerique du Sud: description de Metaniphargus venezolanus n. sp. Bijdr. Dierk. 53: 158-164. (type area: peninsula Morocoy in N. Venezuela)
STOCKTON, W.L., 1982. Scavenging amphipods from under the Ross Ice shelf, Antarctica. Deep-Sea Res. 29: 819-835. (A study of an undescribed Orchomene sp., trapped from below 700 m's of ice many hundreds of kilometers from the ice edge. A few other amphipods were also caught.)
STONER, A.W., 1982. The influence of benthic macrophytes on the foraging behavior of pinfish, Lagodon rhomboides (Linnaeus). J. exp. mar. Biol. Ecol. 58: 271-284.
STOUT, R.J. & W.E. COOPER, 1983. Effect of P-cresol on leaf decomposition and invertebrate colonization in experimental outdoor streams. Can. J. Fish. aquat. Sci. 40: 1647-1657. (Hyalella azteca most sensitive of all invertebrates tested)
SUNDBACK, K. & L-E. PERSSON, 1981. The effect of microbenthic grazing by an amphipod, Bathyporeia pilosa Lindstrom. Kieler Meeresf. Suppl. 5: 573-575.
SUNDELIN, B., 1983. Effects of cadmium on Pontoporeia affinis (Crustacea: Amphipoda) in laboratory soft-bottom microcosms. Mar. Biol. 74: 203-212.
SUTCLIFFE, D.W. & T.R. CARRICK, 1981. Effect of temperature on the duration of egg development, and moulting and growth in juveniles of Crangonyx pseudogracilis (Crustacea, Amphipoda) in the laboratory. Freshw. Biol. 11: 511-522.
SUTCLIFFE, D.W. & T.R. CARRICK, 1981. Number of flagellar segments and moulting in the amphipod Gammarus pulex. Freshw. Biol. 11: 497-509.
SWARTZ, R.C., W.A. DEBEN, K.A. SERCU & J.O. LAMBERSON, 1982. Sediment toxicity

and the distribution of amphipods in Commencement Bay, Washington, USA. Mar. Poll. Bull. 13: 359-364. (A study on Rhepoxynius (formerly Paraphoxus) abronius)

SWARUPA, K.M.C. & Y. RADHAKRISHNA, 1983. Heterocaprella krishnaensis n. sp., a new caprellid from Indian waters (Amphipoda, Caprellidea). Crustaceana 44: 54-? . (Bapatla coast, India)

SYAMENCHANKA, V.P., 1982. (Age-related and seasonal changes in content of dry substance and caloricity in the amphipod Pontoporeia affinis.) Vyestsi Akad. Nauk BSSR Syer Biyal Navuk 1982(1): 88-91. (In Russian, not seen)

TAGATZ, M.E., C.H. DEANS, J.C. MOORE & G.R. PLAIA, 1983. Alterations in composition of field and laboratory-developed estuarine benthic communities exposed to di-n butyl phthalate. Aquat. Toxicol. 3: 239-248.

TAGHON, G.L., 1982. Optimal foraging by deposit-feeding invertebrates: roles of particle size and organic coating. Oecologia (Berl.) 52: 295-304. (i.a. Corophium salmonis)

TAKAMURU, N. & S. NAKAO, 1982. (Benthic communities of Japanese surf clam (Pseudocardium sybillae) beds in Hamanaka Bay and Biwase Bay, Hokkaido, Japan.) Sci Repts. Hokkaido Fish. exp. Stn 0(24): 51-58. (In Japanese, not seen. Has apparently much information on amphipods)

TAKAMURU, N. & T. OCHIAI, 1982. (Gammaridean amphipods in Hamanako Bay and Biwase Bay, Hokkaido, Japan.) Sci. Repts Hokkaido Fish exp. Stn 0(24): 29-40. (In Japanese, not seen. Deals with 13 spp from sandy bottoms classified in 3 groups: Hippomedon-Synchelidium-Atylus group, Ampelisca brevicornis - Protomedeia-Anonyx-Urothoe grimaldii - Siphonoecetes tanabensis-Corophium group and Eohaustorius eous-Monoculodes limnophilus group)

TARARAM, A.S. & Y. WAKABARA, 1981. The mobile fauna - especially Gammaridea - of Sargassum cymosum. Mar. Ecol. Progr. Ser. 5: 157-163. (Brasil)

TARARAM, A.S. & Y. WAKABARA, 1982. Notes on the feeding of Blennius cristatus Linnaeus from a rocky pool of Itanhaem, Sao Paulo State. Bolm Inst. oceanogr. S. Paulo 31(2): 1-3. (Hyale media is a very important prey)

TURNER, R.D., 1981. (Wood islands and thermal vents as centers of diverse communities in the deep sea.) Biol. Morya (Vladiv.) 0(1): 3-10. (In Russian, not seen)

THIBAULT, Y. & R. COUTURE, 1982. Resistance thermique superieure de Gammarus fasciatus, Say (Crustacea, Amphipoda) et son utilisation en situation de rejets thermiques. Can. J. Zool. 60: 1339-1346.

THOMAS, J.D., 1983. Curidia debrogania, new genus new species of amphipod (Crustacea: Ochlesidae) from the Barrier Reefs of Belize, Central America. Proc. biol. Soc. Wash. 96: 127-133. (An ochlesid with maxillipedal palps!)

THOMAS, J.D. & J.L. BARNARD, 1983. The Platyischnopidae of America (Crustacea: Amphipoda). Smithson. Contr. Zool. 375: 1-33. (New taxa: Eudevenopus n. gen. with the spp Platyischnopus metagracilis (type), P. gracilipes and E. honduranus n. sp. (from Belize); Tiburonella n. gen., monotypic for P. viscana, and Skaptopus, n. gen. also monotypic, for S. brychius n. sp. (off N. Jersey, 129 m).)

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

THOMPSON, D.J. & S.J. MOULE, 1983. Substrate selection and assortative mating in Gammarus pulex L. Hydrobiologia 99: 3-6.

THURSTON, M.H., 1982. Cheus annae, new genus, new species (Cheidae new family), a fossorial amphipod from the Falkland Islands. J. crust. Biol. 2: 410-419. (The new family belongs in the phoxocephalid-haustoriid group of families. It is an intertidal sand-burrower.)
TIMMS, B.V., 1983. A study of benthic communities in some shallow saline lakes of western Victoria, Australia. Hydrobiologia 105: 165-177. (i.a. Austrochiltonia subtenuis)
TSUTSUMI, H. & T. KIKUCHI, 1983. Benthic ecology of a small cove with seasonal oxygen depletion caused by organic pollution. Puybls Amakusa mar. biol. Lab. 7(1): 17-40.
TURQUIN, M.J., 1981. Profil demographique et environnement chez une population de Niphargus virei (Amphipode troglobie). Bull. Soc. zool. Fr. 106: 457-466.
VADER, W., 1983. Associations between amphipods (Crustacea: Amphipoda) and sea anemones (Anthozoa: Actiniaria). Mem. Austr. Mus. 18: 141-153. (A review paper, with new data on 'Allogausia' recondita)
VADER, W., 1983. Prehensile pereopods in gammaridean Amphipoda. Sarsia 68: 139-148.
VADER, W. & C.L. BEEHLER, 1983. Metopa glacialis (Amphipoda Stenothoidae) in the Barents and Beaufort Seas, and its association with the lamellibranchs Musculus niger and M. discors s.l. Astarte 12(1979): 57-61.
VALTONEN, E.T. & A. NIINIMAA, 1983. Dispersion and frequency distribution of Corynosoma spp (Acanthocephala) in the fish of the Bothnian Bay. Aquilo Ser. Zool. 22: 1-11. (Intermediate host is Pontoporeia affinis)
VALTONEN, E.T., M.J. van MAREN & O. TIMALA, 1983. A note on the intermediate hosts of Echinorhynchus gadi Zoega, in Muller (Acanthocephala) in the Baltic Sea. Aquilo Ser. Zool. 22: 93-97. (Field data and experiments on possible amphipod hosts; Gammarus zaddachi is the most likely intermediate host.)
VAN BLARICOM, G.R., 1982. Experimental analyses of structural regulation in a marine sand community exposed to oceanic swell. Ecol. Monogr. 52: 283-305.
VARELA, C., 1983. (Amphipods from sandy beaches of southern Chile (Maiquillahue Bay, Valdivia).) Stud. Neotrop. Fauna Environm. 18: 25-52. (In Spanish. Deals with Phoxocephalopsis mehuinensis n. sp., Paracorophium chilensis n. sp. (recte: chilense), Bathyporeiapus magellanicus, Orchestoidea tuberculata and O. chilensis, all described and illustrated. Data on zonation, production and biomass.)
VASILENKO, 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: Cercops minutus n. sp. and Pseudocercops pubescens n. sp., both from the Kurile Islands. The Paracercopidae should not, as done by Bousfield, be united with the Phtisicidae.)
VENABLES, B.J., 1981. Aspects of the population biology of a Venezuelan beach amphipod, Talorchestia margaritae (Talitridae), including estimates of biomass and daily production, and respiration rates. Crustaceana 41: 271-285.
VENABLES, B.J., 1981. Energy allocation for growth and metabolism in Talorchestia margaritae (Amphipoda, Talitridae). Crustaceana 41: 182-189.
VIEITEZ, J.M., 1982? (Study of the benthic communities of two beaches of the Ria de Pontevedra and R. de Vigo (Galicia, Spain).) Bol. Inst. esp. Oceanol. 6: 242-258. (In Spanish. Amph. p. 248)
VILLIERS, L., 1982. The feeding of juvenile goby Deltentosteus quadrimaculatus (Pisces: Gobiidae). Sarsia 67: 157-162. (A predator of sand-living amphipods)
VINOGRADOV, M.E., A.F. VOLKOV & T.N. SEMENOVA, 1982. (Amfipody-Giperiidy

Mrovogo Okeana.) 492 pp. (In Russian. A very important monograph on the world's hyperiids, which I hope somebody will offer to review for the Amphipod Newsletter. New taxa: Laxohyperia vespuliformis Vinogradov & Volkov n. gen. n. sp. (Hyperiidae), Lycaea lilia Valkov n. sp. and Amphithyrus muratus Volkov n. sp.)

VIRNSTEIN, R.W., W.G. NELSON & R.K. HOWARD, 1983. Latitudinal gradients in seagrass epifauna, especially amphipods. Estuaries 6: 254. (Abstract only)

VOLLESTAD, L-A., 1983. (New records of Pontroporeia affinis Lindstrom, Pallasea quadrispinosa G.O. Sars and Mysis relicta Loven in Norway.) Fauna (Oslo) 36: 129-131. (In Norwegian)

WAKABARA, Y.E., E. KAWAKAMI de REZENDE & A.S. TARARAM, 1982. Amphipods as one of the main food components of 3 pleuronectiformes from the continental shelf of south Brazil and north Uruguay. Mar. Biol. 68: 67-70.

WALKER, M.H. & E. ROBERTS, 1982. The protozoan epizooites found on the gills of Gammarus pulex. Hydrobiologia 88: 171-176.

WARD, J.V. & J.R. HOLSINGER, 1981. Distribution and habitat diversity of subterranean amphipods in the Rocky Mountains of Colorado, USA. Int. J. Speleol. 11: 63-70.

WARD, T.J. & P.C. YOUNG, 1982. Effects of sediment trace metals and particle size on the community structure of epibenthic sea grass fauna near a lead smelter, South Australia. Mar. Ecol. Progr. Ser. 9: 137-146.

WATERS, T.F., 1981. Seasonal patterns in production and drift of Gammarus pseudolimnaeus in Valley Creek, Minnesota. Ecology 62: 1458-1466.

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

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

WATLING, L. & H. HOLMAN, 1981. Additional acanthonotozomatid, paramphithoid and stegocephalid Amphipoda from the southern Ocean. Proc. biol. Soc. Wash. 94: 181-227. (New taxon: Odius antarcticus n. sp. (62o41'S, 54o43'W). Redescriptions of Anchiphimedia dorsalis, Gnathiphimedia barnardi, G. macrops (with Iphimediella discoveryi Watling & Holman, 1980, as junior synonym), G. s. sexdentata, G. s. incerta n. rank (described as G. incerta), Iphimedia joubini, I. multidentata, Iphimediella margueritei, I. octodentata, I. rigida, I. serrata, Maxilliphimedia longipes, Parapanoploea oxygnathia, Epimeria georgiana (with E. excisipes as new synonym), E. macrodonta, E. puncticulata (with Subepimeria geodesiae as new synonym), Metepimeria acanthurus, Uschakoviella echinophora, Andaniotes corpulentus, A. linearis, Euandania gigantea and Parandania boecki)

WATLING, L., 1983. Peracaridan disunity and its bearing on eumalacostracan phylogeny with a redefinition of eumalacostracan superorders. Pp 213-228 in F.R. SCHRAM (ed), Crustacean Phylogeny. A.A. Balkema, Rotterdam. (Watling recognizes the following superorders: Syncarida (with Anaspidacea, Bathynellacea and Paleocaridacea), Brachycarida (with Thermosbaenacea, Spelaeogriphacea, Tanaidacea and Cumacea), Isopoda (with 9 orders), Amphipoda (with the customary 4 orders) and Eucarida (with 6 orders.)

WEIGMANN-HAAS, R., 1983. Zur Taxonomie und Verbreitung der Gattung Cyllopus Dana 1853 (Amphipoda: Hyperiidea) im Antarktischer Teil der Atlantik.

Meteor Forshungsergebn. (D. Biol.) 36: 1-11.
WELTON, J.S., M. LADLE, J.A.B. BASS & I.R. JOHN, 1983. Estimation of gut throughput time in Gammarus pulex under laboratory and field conditions with a note on the feeding of young in the brood pouch. Oikos 41: 133-138.
WESLAWSKI, J.M., 1980. Mass species of Amphipoda from Hornsund fjord Spitsbergen. ICES Counc Meeting 1980, coll. Papers, 9 pp.
WESLAWSKI, J.M., 1983. Observations on the coastal Amphipoda of the Hornsund Fjord (South West Spitsbergen). Pol. Arch. Hydrobiol. 30: 199-206.
WESLAWSKI, J.M. & S. KWASNIEWSKI, 1983. Application of biological indicators for determination of the reach and origin of sea currents within the region of Spitsbergen. Pol. Arch. Hydrobiol. 30: 189-197.
WESTINGA, E. & P.C. HOETJES, 1981. The intrasponge fauna of Spheciospongia vesparia (Porifera, Demospongiae) at Curacao and Bonaire. Mar. Biol. 62: 139-150. (Amphipods not identified, except Leucothoe spinicarpa, the most common species.)
WICKINS, J.E., 1983. Catches of large lysianassaid amphipods in baited traps at the Nuclear Energy Authority dump site during June 1979. Deep-Sea Res. 30A: 83-86. (A large sample of Eurythenes gryllus from c 46oN, 17oW)
WICKSTEN, M.K., 1982. Crustaceans from baited traps and gill nets off Southern California. Calif. Fish & Game 68: 244-248. (Caprella unguline from Paralomis multispina, Parapleustes commensalis from Paralithodes californiensis. Both hosts are lithodids.)
WILDISH, D.J., 1979. Reproductive consequences of the terrestrial habit in Orchestia (Crustacea, Amphipoda). Int. J. Invert. Reprod. 1: 9-20.
WILDISH, D.J., 1982. Evolutionary ecology of reproduction in gammaridean Amphipoda. Int. J. Invert. Reprod. 5: 1-19.
WILDISH, D.J., 1982. Talitroidea (Crustacea, Amphipoda) and the driftwood ecological niche. Can. J. Zool. 60: 3071-3074.
WILDISH, D.J. & J.J. DICKINSON, 1982. Haploops fundiensis, new species (Amphipoda, Ampeliscidae) from the Bay of Fundy, Canada. Can. J. Zool. 60: 962-967.
WILDISH, D.J., D.L. PEER, A.J. WILSON, J. HINES, L. LINKLETTER & M.J. DADSWELL, 1983. Sublittoral macro-infauna of the Upper Bay of Fundy. Can. techn. Rept Fish. aq. Sci. 1194, 64 pp.
WILLIAMS, J.A., 1981. The respiratory rhythm and respiratory quotient of Talitrus saltator. Comp. Biochem. Physiol. A70: 639-642.
WILLIAMS, J.A., 1982. A circadian rhythm of oxygen consumption in the sand beach amphipod Talitrus saltator. J. exp. mar. Biol. Ecol. 57: 125-134.
WILLIAMS, J.A., 1982. Environmental influence on the locomotor activity rhythm of the sand-shore amphipod Talorchestia deshayesi. Mar. Biol. 69: 65-71.
WILLIAMS, J.A., 1983. Environmental regulation of the burrow depth distribution of the sand-beach amphipod Talitrus saltator. Est. coast. Shelf Sci. 16: 291-298.
WILLIAMS, J.A., 1983. The endogenous locomotor activity rhythm of four supralittoral peracarid crustaceans. J. mar. biol. Ass. U.K. 63: 481-492. (Talitrus saltator, Talorchestia deshayesi, Orchestia gammarella and an isopod)
WILLIAMS, J.A., 1983. Environmental regulation of the burrow depth distribution of the sand-beach amphipod Talitrus saltator. Est. coast. Shelf Sci. 16: 291-298.
WILLIAMS, R. & D. ROBINS, 1981. Seasonal variability in abundance and vertical distribution of Parathemisto gaudichaudi (Amphipoda: Hyperiidea) in the North East Atlantic Ocean. Mar. Ecol. Progr. Ser. 4: 289-298.
WILLOUGHBY, L.G. & R. EARNSHAW, 1982. Gut passage times in Gammarus pulex (Crustacea, Amphipoda) and aspects of summer feeding in a stony stream.

Hydrobiologia 97: 105-118.
WILLOUGHBY, L.G., 1983. Feeding behaviour of Gammarus pulex (L.) (Amphipoda) on Nitella. Crustaceana 44: 245-250.
WILSON, S.L., D.L. HIGLEY & L. HOLTEN, 1981. The life history of Corophium salmonis in the Columbia River Estuary. Estuaries 4: 273 (Abstract only).
WIRSEN, C.O. & H.W. JANNASCH, 1983. In-situ studies on deep-sea amphipods and their intestinal microflora. Mar. Biol. 78: 69-73.
WITTMANN, K., M.B. SCIPIONE & E. FRESI, 1981. Some laboratory experiments on the activity of the macrofauna in the fragmentation of detrital leaves of Posidonia oceanica (L.) Delile. Rapp. Comm. int. Mer Medit. 27: 205-206.
WONG, P.L. & R.C. ANDERSON, 1982. The transmission and development of Cosmocephalus obvelatus (Nematoda: Acuarioidea). Can. J. Zool. 60: 1426-1440. (Infective stage in freshwater amphipods)
WOOLDRIDGE, F., A.H. DYE & A. McLACHLAN, 1981. The ecology of sandy beaches of Transkei, South Africa. S. Afr. J. Zool. 16: 210-218.
WRIGHT, D.A. & J.W. FRAIN, 1981. Cadmium toxicity in Marinogammarus obtusatus: Effects of external calcium. Environm. Res. 24: 338-344.
YAMAMOTO, T. & Y. HONMA, 1979. Studies on gonad maturity in some marine invertebrates 10. Sexual characters and structure of reproductive organs in a gammarid amphipod, Talorchestia brito (? W.V.). Ann. Rep. Sado mar. biol. Stat. Niigata Univ. 9: 7-18.
YAYABOS, A.A., 1981. Reversible inactivation of deep-sea amphipods (Paralicella capereaca) by a decompression from 601 bars to atmospheric pressure. Comp. Biochem. Physiol. A69: 563-565.
YAYANUS, A.A., 1980. Measurements and instrument needs identified in a case of deep-sea amphipod research. Belle W. Baruch Libr. mar. Sci. 10: 307-318.
YOO, K-I., 1980. Zoogeography of pelagic amphipods in the western North Pacific and adjacent sea. Pp 625-631 in: The Kuroshio 4. Proc 4th Symp. coop. Study Kuroshio and adjacent Regions. The Japan Academy, Tokyo, 1979. (Not seen)
YOSHIYAMA, R.M., 1980. Food habits of three species of rocky intertidal sculpins (Cottidae) in central California. Copeia 1980-3: 515-525.
YOUNG, P.C., 1981. Temporal changes in the vagile epibenthic fauna of 2 seagrass meadows (Zostera capricornis and Posidonia australis). Mar. Ecol. Progr. Ser. 5: 91-102.
ZAJAC, R-N. & R.B. WHITLATCH, 1982. Responses of estuarine infauna to disturbance 1. Spatial and temporal variation of initial recolonization. Mar. Ecol. Progr. Ser. 10: 1-14.
ZAJAC, R-N. & R.B. WHITLATCH, 1982. Responses of estuarine infauna to disturbance 2. Spatial and temporal variation of succession. Mar. Ecol. Progr. Ser. 10: 15-28.
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. Meeresuntera. 35: 47-63. ('The most prominent food component by biomass was gammarids in all investigated fish')
ZAUKE, G-P., 1981. Cadmium in Gammaridae (Amphipoda: Crustacea) of the rivers Werra and Weser: I. Geographical variation and correlation to cadmium in sediments. Environm. Poll. (Ser. B) 2: 465-474.
ZAUKE, G-P., 1982. Monitoring aquatic pollution using Gammaridae (Amphipoda: Crustacea) with emphasis on Cadmium. Pol. Arch. Hydrobiol. 29: 289-298.
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. MEUSY, 1983. Electron microscopic observations of the subepidermal fat-body changes following ovariectomy in Orchestia

gammarellus (Pallas) (Crustacea: Amphipoda). Int. J. Invertebr. Reprod. 6: 123-127. (Not seen)

ZIMMERMAN, R.C., 1979. Structure of algae associated gammaridean amphipod communities in selected temperate (California) and subtropical (Mexico) habitats. M. Sc. Thesis, Univ. S. Calif., L.A., 53 pp.

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

VIth INTERNATIONAL COLLOQUIUM ON AMPHIPOD CRUSTACEANS - organized by the University of Amsterdam, 28 June - 3 July 1985

VI^{e} COLLOQUE INTERNATIONAL SUR LES CRUSTACÉS AMPHIPODES - organisé par l'Université d'Amsterdam, du 28 juin au 3 juillet 1985

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

Date.- 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 Ambleteuse (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 of the Universities of Lille and Louvain, and the Institut de Biologie marine, Wimereux) are quite close.

The Colloquium will take place in the Léo Lagrange Centre of Ambleteuse, 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) aronnd the lecture halls. The price per person (bed, kitchen use, breakfast and 2 warm meals a day) is ffr. 143.- (ca. US$ 15.-) per person per day (estimated price for 1985).

B) The budget way. The two field laboratories in Ambleteuse have a limited number of beds available in their student dormatories. 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 alloted strictly on the "first signed-up/first served" basis.

The price for these accomodations 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. 38.-, breakfast ffr 12.- (1 US$ is approx. 10.- ffr, fluctu-

Pendant le "Workshop sur la Classification phylétique 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 à cet endroit, 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 déroula dans le Centre Léo Lagrange d'Ambleteuse, avec ses facilités modernes (2 salles de conférence, avec tous les moyens audio-visuels, hébergement dans des bungalows sur le domaine même, tous les repas, activités sportives).

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

Hébergement.-

A) Modalité recommendée. Le Centre Léo Lagrange offre un nombre de bungalows modernes, chaque logement à 2 ou 4 lits (chaucun dispose de 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 denx laboratoires de terrain à Ambleteuse offrent un nombre restreint de lits dans leurs dortoirs collectifs. Avec peu d'exceptions, il y a plusieurs lits superposés dans chaque chambre. Ponr des étudiants et pour des chercheurs originaires de pays avec des difficultés valutaires, cet hébergement représente une alternative bon marchée, modeste, mais décente. Parce-que le nombre de lits disponibles est limité (24 dans le labo d'Amsterdam, 14 dans le labo 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 labo de Lille/Louvain, sans accès à la cuisine), ou de FF 30.- par jour (dans le labo d'Amsterdam, avec cuisine). Les repas pourront être pris dans le Restaurant des Baigneurs (1 minute à

ating with the rate of exchange).

C) For participants wishing single rooms the Hôtel des Balgneurs has a limited number of singles available (ffr. 65.- per person per day); for meals see under B.
The laboratory dormatories 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 equinoxal 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 accomodation in the desired category.

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

The Secretariat, VIth 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.

pled des deux laboratoires): repas chauds à FF 38.-, petit déjeuner à FF 12.-

C) Chambres individuelles. L'Hôtel/Restaurant des Balgneurs offre un nombre limité de chambres individuelles à FF 65.- 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'equinoxe) 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 anadrome et katadrome de Gammarus).

Moyens d'accès.- Ambleteuse peut être atteint:

A) En voiture: prenez le D 940 (antérieurement N 40); 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 proche: Lille-Lesquin (à 130 km). De Lille, il y a 5 trains par jours 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 correspondence par Boulogne.

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

Langues.- 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-joint. Le nombre de lits (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 plutôt possible la demande d'inscription et de logement, ainsi que celle de communications, à:

Secrétariat VIe Colloque international sur les Amphipodes
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