

# PSAMMONALIA

Newsletter of the International Association of Meiobenthologists



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FROM THE EDITOR

#### Constitution and Bylaws Revision

I hoped that this issue might include a revised Constitution and Bylaws (minor changes) which could be considered before taking any necessary action on this matter at the business meeting of IAM scheduled for Thursday, 31 July, at 1100. The revision will be available prior to the business meeting. This and other subjects are of considerable importance in our Association and all attendees of FIMCO are urged to be present at the business meeting.

#### A Proposal for Two IAM Awards

Several ideas have been suggested relevant to the "Swedmark Fund." One of these includes the annual award of a special certificate, "The Bertil Swedmark Award," for the outstanding publication or contribution to meiobenthology during the current year or during the three year period between meetings of the IAM. A similar suggestion has been made regarding a second certificate, "The Adolf Remane Award," for the outstanding publication in meiofaunal systematics during a specified period of time.

#### Additional Classes of Membership

Another business item to be discussed in July is the suggestion that we establish different classes of membership beyond the single regular membership we now have. The purpose of this would be to produce additional income to offset our cost of free issues to members whose countries impose currency restrictions, retired and honorary members. An example of this system would be to establish a Sustaining Membership at twice the annual dues rate and a Patron Membership at five times the annual dues rate.

#### PSAMMONALIA Costs Now Exceed Our Income from Dues

Finally, you will note that this issue was mailed at direct cost to the Association. It will be necessary to pay our full costs during the current tenure of my editorship. I suspect that this will become a permanent necessity as institutional funds become more restrictive. We have been extremely fortunate to operate on an annual dues rate of \$3 per year for the past thirteen years. Based on current projections, I shall propose that the annual dues rate be increased to \$4 per year beginning 1981. I am asking our Treasurer, Lee Pollock, to make a special report and final recommendation at our annual meeting and to, temporarily, suspend acceptance of advance dues beyond 1980.

#### Apologies

To Jan Hendelberg whose name should have been included with those of his colleagues from Sweden in the last issue (No. 47, p. 5).

To Wilfried Westheide whose name appears under those of colleagues listed from the UK and not West Germany where it belongs (No. 47, p. 5).

To Robert W. Pennak who was listed as retired (from the university) but (at his request) wishes to continue as a paying member.

#### Current Membership

As of this issue the membership of the IAM is 298. Eleven of the current members responded to the request for recertification that they wished to continue receiving free copies because of currency restrictions; three retired colleagues will continue to receive free copies; one member has honorary status.

FROM THE MEMBERS

#### Marine Meiofauna Research in South Africa

"Work on marine meiofauna is currently being undertaken at three centers in South Africa. At the University of Cape Town, Alex Fricke and Helmke Henning of the NRIO unit in the Department of Oceanography and Rod Bally of the Zoology Department are looking at sandy beach meiofauna particularly with regard to pollution monitoring. In Durban Tim McClurg at the National Institute for Water Research is also studying sandy beach meiofauna with regard to pollution monitoring. Much of this work consists of faunal surveys of the coastline. At the University of Port Elizabeth the Zoology Department still continues some meiofauna research. Johan Furstenberg is looking at the taxonomy and ecology of salt marsh nematodes from one of our local estuaries. Arthur Dye recently left us for the University of Transkei after completing his Ph.D. on benthic oxygen consumption in exposed sandy beaches in which he tried to partition interstitial oxygen demand between bacteria, protozoa and meiofauna. I am continuing work on experimental sand columns that I started with Arthur. This work is aimed at quantifying the breakdown of organic matter and the liberation of nutrients during the percolation of sea water through exposed sandy beaches. We are also looking at the effects of oil on these processes. I look forward to meeting fellow meiobenthologists at FIMCO." -- Anton McLachlan, University of Port Elizabeth.

#### Request for Information on Archiannelids and the Family Psammodrilidae

"I am currently writing the Archiannelid volume in the Linnean Society of London, Academic Press (New Series), Synopses of the British Fauna. I would like to ask members to send me reprints of any of their reprints dealing with, or containing reference to these polychaetes. I would also appreciate any information on species and habitat reports, including those in unpublished Marine Laboratory fauna lists. My thanks to those colleagues who have already sent such information to me." -- S. R. Gelder, Department of Zoology, University of Maine, Orono, ME 04469, USA.

#### Yoshihisa Shirayama, A New Member from Japan

Mr. Shirayama is a doctoral student at the Ocean Research Institute, University of Tokyo. As of April he has begun studies of the ecology of deep-sea meiobenthic organisms. He will be doing quantitative studies on meiofauna from the deep-sea areas of the Western Pacific Ocean and hopes to evaluate the effects of environmental factors, especially depth, surface productivity, distance from the mainland, and nature of sediment, on the structure of meiobenthos.

FROM THE MEMBERS (Continued)

"I use a Spade Corer (MK. III, Ocean Instruments) which can collect a large amount of undisturbed sediment (50 cm X 50 cm X 50 cm). The central part of the sample is divided into 16 subcores (10 cm X 10 cm X 50 cm) and from two of these 16 subcores, eight 10 cm<sup>2</sup> samples are collected for meiobenthic study. Eight of the remaining 14 subcores are used for macrobenthic study. The other 6 subcores are used for many purposes, for example, measuring the redox potential of sediments, grain size analysis,

estimating the bacterial activity, sedimentation rate and bioturbation rate, and also for describing sedimentary structures.

I've already collected 15 samples, 4 from Sagami Bay (1300-1600 m), 5 from the region off Mindanao (5500-5600 m), 3 from the ocean bottom near the Bonin Islands (5500-6000 m), and 3 from the Solomon Rise (2000-4000 m). I'm also intending to get from the Northwestern Pacific near the Shatsky Rise next August." -- Yoshihisa Shirayama, University of Tokyo.

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The Mystacocarida, an apparently conservative subclass of crustaceans, was originally described in 1943 by Pennak and Zinn for the species collected from intertidal beaches in Massachusetts and Connecticut, USA. No complete keys are available at present to

the 2 genera, 10 species and 3 subspecies. This bibliography is based on the records of the authors who would be most grateful to have their attention called to the titles of papers not included in this list.

Legend indicating the contents of papers:

- |                                      |   |
|--------------------------------------|---|
| (A) Anatomy                          | (N) Reference without species designation |
| (B) Biology and/or ecology           | (O) Original description(s)               |
| (D) Distribution and/or biogeography | (S) Systematics and/or taxonomy           |
| (E) Evolution                        | (T) Technique                             |
| (G) General and/or review            | [ ] Annotation                            |

- ANONYMOUS. 1943. A new order of Crustacea. [Mystacocarida]. Nature 152(3849):167-168. (O;S).
- ARMSTRONG, J.C. 1949. The systematic position of the Crustacean genus Derocheilocaris and the status of the subclass Mystacocarida. Amer. Mus. Novit., No. 1413:106. (S;G).
- AX, P. 1969. Populations dynamik, Lebenszyklen und Fortpflanzungsbiologie der Mikrofauna des Meeresandes. Zool. Anz. (Suppl.) 32:66-113. (D;B).
- BACCARI, S. & J. RENAUD-MORNANT. 1974. Anatomie du tube digestif de Derocheilocaris remanei Delamare et Chappuis, 1951. (Crustacés, Mystacocarida). Arch. Zool. exp. gén. 115:607-620. (A).
- BACCARI, S. & J. RENAUD-MORNANT. 1974. Étude du système nerveux de Derocheilocaris remanei Delamare et Chappuis, 1951 (Crustacea, Mystacocarida). Cah. Biol. Mar. 15:589-604. (A).
- BEKLEMISHEV, V.N. 1952. Bases d'Anatomie Comparée des Invertébrés. Sovetskaya nauka. Moscow. (in Russian). (S;A).
- BLACKWELDER, B. 1965. Distribution of Derocheilocaris typicus (Crustacea, Mystacocarida) on a North and South Carolina Beach. M.A. Thesis, Wake Forest College, Wake Forest, N.C., USA. (B).
- BROWN, G.G. & G.B. METZ. 1967. Ultrastructure studies on the spermatozoa of two primitive crustaceans, Hutchinsoniella macracantha and Derocheilocaris typicus. Z. Zellforsch. mikrosk. anat. 80:78-92. (A).
- BUCHHOLZ, H.A. 1953. Die Mystacocarida. Eine neue Crustaceenordnung aus dem Luckensystem der Meeressande. Microkosmos 43(1):13-16. (G).
- CALS, P., C. DELAMARE DEBOUTTEVILLE & J. RENAUD-MORNANT. 1968. Nature et adaptations à un mode de vie en milieu interstitiel des structures cuticulaires chez Derocheilocaris remanei Delamare, Deboutteville et Chappuis (Crustacea-Mystacocarida). C.R. Acad. Sci. Paris série D 266:126-129. (B;A).
- CALS, P., C. DELAMARE DEBOUTTEVILLE & J. RENAUD-MORNANT. 1971. Caractères anatomiques des Mystacocarides (Crustacea). Étude de Derocheilocaris remanei Delamare Deboutteville et Chappuis 1954. C.R. Acad. Sci. Paris 272:3154-3157. (A;S).
- CHAPPUIS, P.-A. & C. DELAMARE DEBOUTTEVILLE. 1954. Recherches sur les Crustacés souterrains. Arch. Zool. exp. et gén. 91(1):1-200. (G;D).
- CHAPPUIS, P.-A., A. REMANE & C. DELAMARE DEBOUTTEVILLE. 1951. Découverte, sur les côtes du Roussillon, d'un ordre de Crustacés nouveau pour l'ancien monde: les Mystacocarida. Vie et Milieu 2(1):129-130. (G).
- DAHL, E. 1952. A new species of the Mystacocaridea (Crustacea). [Derocheilocaris galverini]. Nature 170:75-76. (O).
- DAHL, E. 1952. Reports of the Lund University Chile Expedition 1948-1949. 7. Mystacocarida. [Derocheilocaris galverini]. Lunds Univers. Årsskrift. (New Ser.) (2)48(6):1-40. (O).
- DAHL, E. 1956. On the differentiation of the topography of the Crustacean head. Acta zool. Stockholm 37: 123-191. (A).
- DELAMARE DEBOUTTEVILLE, C. 1953. La Faune des eaux souterraines littorales des plages de Tunisie. Vie et Milieu 4(2):141-170. (B).

- DELAMARE DEBOUTTEVILLE, C. 1953. Recherches sur l'écologie et la repartition du Mystacocaride Derocheilocaris remanei Delamare et Chappuis en Méditerranée. Vie et Milieu 4(3):321-380. (B;D).
- DELAMARE DEBOUTTEVILLE, C. 1953. Description d'un appareil pour la capture de la faune des eaux souterraines littorales sous la mer. Vie et Milieu 4(3):411-422. (T).
- DELAMARE DEBOUTTEVILLE, C. 1953. Revision des Mystacocarides du genre Derocheilocaris Pennak et Zinn. Vie et Milieu 4(3):459-469. (S).
- DELAMARE DEBOUTTEVILLE, C. 1953. La faune des eaux souterraines littorales en Algérie. Vie et Milieu 4(3):470-503. (B).
- DELAMARE DEBOUTTEVILLE, C. 1954. L'écologie du mystacocaride, Derocheilocaris remanei f. biscayensis Del. sur la côte du Golfe de Gascogne. Vie et Milieu 5(3):310-329. (B).
- DELAMARE DEBOUTTEVILLE, C. 1954. L'écologie et la Repartition du Mystacocaride Derocheilocaris remanei Delamare et Chappuis. Rassegna speleologica italiana 4(3):119-122. (B;D).
- DELAMARE DEBOUTTEVILLE, C. 1954. Developpement postembryonnaire des Mystacocarides. Arch. Zool. exp. gén. 91:25-34. (B).
- DELAMARE DEBOUTTEVILLE, C. 1954. Eaux souterraines littorales de la côte catalane française (Mise au point faunistique). Vie et Milieu 5(3):408-452. (G;B).
- DELAMARE DEBOUTTEVILLE, C. 1954. Premières recherches sur la faune souterraine littorale en Espagne. Inst. Biol. Aplic., Barcelona 17:119-129. (G).
- DELAMARE DEBOUTTEVILLE, C. 1956. L'écologie et la répartition du Mystacocaride Derocheilocaris remanei Delamare et Chappuis. Proc. XIV Int. Cong. Zool. Copenhague:504-505. (B;D).
- DELAMARE DEBOUTTEVILLE, C. 1957. Le mystacocaride Derocheilocaris biscayensis sur les côtes du Portugal. Vie et Milieu 8(1):110. (D).
- DELAMARE DEBOUTTEVILLE, C. 1960. Biologie des eaux souterraines littorales et continentales. Hermann et Cie. Paris. 740 pp. (Suppl. Vie et Milieu 9:1-740). (S;D;B;G;A).
- DELAMARE DEBOUTTEVILLE, C. & A. de BARRES MACHADO. 1954. Presence de la sous-classe des Mystacocarides (Crustacea) sur les côtes de l'Angola. Subsidios para o estudo da biologia na Lunda, Lisbonne 23:119-124. (D).
- DELAMARE DEBOUTTEVILLE, C. & P.-A. CHAPPUIS. 1951. Présence de l'Ordre des Mystacocarida Pennak et Zinn dans le sable des plages du Roussillon: Derocheilocaris remanei n. sp. C.R. Acad. Sci. Paris 233:437-439. (O).
- DELAMARE DEBOUTTEVILLE, C. & P.-A. CHAPPUIS. 1954. Recherches sur les Crustacés souterrains. II. Morphologie des Mystacocarides. Arch. Zool. exp. gén., 91:7-24. (A).
- DELAMARE DEBOUTTEVILLE, C. & P.-A. CHAPPUIS. 1952. Constitution à l'étude de la faune interstitielle marine des côtes d'Afrique. I. Mystacocarides, Copepods et Isopodes. Bull. I.F.A.N. XIX, A(2): 491-500. (D).
- DELAMARE DEBOUTTEVILLE, C., S. GERLACH & R. SIEWING. 1954. Recherches sur la faune des eaux souterraines littorales du Golfe de Gascogne, littoral des Landes. Vie et Milieu 5(3):373-407. (B;D).
- FIZE, A. 1964. Contribution à l'étude de la micro-faune des sables littoraux du Golfe d'Aigues-Mortes. Vie et Milieu 14(4):667-774. (D;G).
- FOUND, B.W. 1971. An investigation of preference by Derocheilocaris typicus (Crustacea; Mystacocarida) for size of sand grains. M.S. Thesis, Univ. of Rhode Island, Kingston, R.I., USA. (B).
- FRIAUF, J.J. & L. BENNETT. 1974. Derocheilocaris hessleri: A new Mystacocarida (Crustacea) from the Gulf of Mexico. Vie et Milieu 24(Ser. 3A): 487-496. (O).
- GRIMALDI, P. 1963. Primo rinvenimenti di Derocheilocaris remanei Del. e Chapp. nel Mediterraneo orientale (Crust. Mystacocarida). Ann. Instit. Mus. Zool. Univ. Napoli 15(2):1-7. (B).
- GRUNER, H.E. & K. DECKERT. 1956. Krebse in Das Tierreich 4(1) Sammlung Göschen 448:63-177. (S).
- HALL, J.R. 1967. Introduction to the ecology of Derocheilocaris typicus Pennak and Zinn (Mystacocarida). Reports of Student Research Projects: Marine Ecology Training Program, Marine Biological Laboratory, Woods Hole, Mass. pp. 30-38. (B).
- HALL, J.R. 1971. An autecological study of Derocheilocaris typica Pennak and Zinn (Crustacea, Mystacocarida). Ph.D. dissertation, University of North Carolina, Chapel Hill, N.C., USA. (B).
- HALL, J.R. 1972. Aspects of the biology of Derocheilocaris typica (Crustacea:Mystacocarida) II. Distribution. Marine Biology 12(1):42-52. (D).
- HALL, J.R. & R.R. HESSLER. 1971. Aspects in the population dynamics of Derocheilocaris typica (Mystacocarida; Crustacea). Vie et Milieu 22 fasc. 2, série A:305-326. (B).
- HESSLER, R.R. 1964. The Cephalocarida, comparative skeletomusculature. Mem. Conn. Acad. Arts and Sci. 16:1-97. (A).
- HESSLER, R.R. 1969. A new species of Mystacocarid from Maine. [Derocheilocaris ingens]. Vie et Milieu 20 fasc. 1, série A:105-116. (O).
- HESSLER, R.R. 1971. Biology of the Mystacocarida: a prospectus: IN Hulings, N.C. (ed.) Proceedings of the First International Conference on the Meiofauna. Smithson. Contr. Zool. No. 76:87-90. (G).
- HESSLER, R.R. 1972. New species of Mystacocarida from Africa. [Derocheilocaris angolensis and D. delamarei]. Crustaceana 22(3):259-273. (O;S).

- HESSLER, R.R. & W.A. NEWMAN. 1975. A trilobitomorph origin for the Crustacea. *Fossils and Strata* 4: 437-459. (E).
- HESSLER, R.R. & H.L. SANDERS. 1966. *Derocheilocaris typicus* Pennak and Zinn (Mystacocarida) revisited. *Crustaceana* 10(2):141-155. (S;A;E).
- HULINGS, N.C. & J.S. GRAY, 1971. A Manual for the Study of Meiofauna. *Smithson. Contrib. Zool.* No. 78, pp.84. Washington, D.C. (T).
- JANSSON, B.-O. 1966. On the ecology of *Derocheilocaris remanei* Delamare and Chappuis (Crustacea, Mystacocarida). *Vie et Milieu sér A*, 17(1):143-186. (B).
- JANSSON, B.-O. 1967. The importance of tolerance and preference experiments for the interpretation of mesopsammon field observation. *Helgo. Wiss. Meeresunt.* 15:41-58. (N;B).
- JANSSON, B.-O. 1968. Studies on the ecology of the interstitial fauna of marine sandy beaches. Thesis of Dept. of Zoology and Askö Laboratory, University of Stockholm, Stockholm, Sweden. (B;N).
- JANSSON, B.-O. 1968. Quantitative and experimental studies of the interstitial fauna in four Swedish sandy beaches. *Ophelia* 5:1-71. (B;N).
- KRAUS, M.G. 1980. Factors correlated with the intertidal distribution of meiofauna along a Rhode Island estuary. Ph.D. Dissertation, University of Rhode Island, Kingston, R.I. 02881, USA. (B).
- KRAUS, M.G. & B.W. FOUND. 1975. Preliminary observations on the salinity and temperature tolerances and salinity preferences of *Derocheilocaris typica* Pennak and Zinn 1943. *Cah. Biol. Mar.* 16: 751-762. (B).
- LASSERRE, P. & J. RENAUD-MORNANT. 1971. Consommation d'oxygène chez un crustacé meiobenthic-interstitiel de la sous-class des Mystacocarides. [*Derocheilocaris remanei biscayensis*]. *C.R. Acad. Sci. (Paris), série D* 272:1011-1014. (B).
- LASSERRE, P. & J. RENAUD-MORNANT. 1971. Interprétation écophysiological des effets de température et de salinité sur l'intensité respiratoire de *Derocheilocaris remanei biscayensis* Delamare. 1953 (Crustacea, Mystacocarida). *C.R. Acad. Sci. (Paris), série D*, 272:1159-1162. (B).
- LASSERRE, P. & J. RENAUD-MORNANT. 1973. Resistance and respiratory physiology of intertidal meiofauna to oxygen-deficiency. *Neth. J. Sea Res.* 7:290-302. (B;N).
- MASRY, D. 1970. Ecological study of some sandy beaches along the Israeli Mediterranean coast, with a description of the interstitial harpacticoids (Crustacea, Copepoda). [*Derocheilocaris remanei f. akhziyi* and *D. tehiyae*]. *Cah. Biol. Mar.* 11:229-258. (B;D).
- MASRY, D. & F.D. POR. 1970. A new species and a new subspecies of Mystacocarida (Crustacea) from the Mediterranean shores of Israel. [*Derocheilocaris tehiyae* n. sp.; *D. remanei akhziyi* n. ssp.] *Israel J. Zool.* 19(2):95-103. (O).
- McINTYRE, A.D. 1969. Ecology of marine meiobenthos. *Biol. Rev.* 44:245-290. (G;N).
- McLACHLAN, A. 1977. The larval development and population dynamics of *Derocheilocaris algoensis* (Crustacea, Mystacocarida). *Zool. Afr.* 12(1): 1-14. (B).
- McLACHLAN, A. 1977. Studies on the psammolittoral meiofauna of Algoa Bay, South Africa. II. The distribution composition and biomass of the meiofauna and macrofauna. *Zool. Afr.* 12:33-60. (D;B).
- McLACHLAN, A. 1977. Composition, distribution, abundance and biomass of the macrofauna and meiofauna of four sandy beaches. *Zool. Afr.* 12(2):270-306. (D;B).
- McLACHLAN, A. 1978. A temporal study of niche breadth and overlap in two sympatric species of Mystacocarida (Crustacea). *Zool. Afr.* 13(2): 351-353. (B;D;E).
- McLACHLAN, A. & J.B. FURSTENBERG. 1977. Studies on the psammolittoral meiofauna of Algoa Bay. III. A quantitative analysis of the nematode and crustacean communities. *Zool. Afr.* 12:61-71.
- McLACHLAN, A. & J.R. GRINDLEY. 1974. A new species of Mystacocarida (Crustacea) from Algoa Bay, South Africa. [*Derocheilocaris algoensis*]. *Ann. S. Afr. Mus.* 66(8):169-175. (O).
- NOODT, W. 1954. Crustacea Mystacocarida von Süd-Afrika. [*Derocheilocaris remanei f. katessae*]. *Kieler Meeresforsch.* 10(2):243-246. (O).
- NOODT, W. 1961. Estudios sobre crustaceos chilenos en aguas subterráneas. IV-Nuevo hallazgo de *Derocheilocaris galvarini* Dahl en Chile Central (Crustacea, Mystacocarida). *Investnes. Zool. Chil.* 7:97-99. (B).
- PENNAK, R.W. 1960. Mystacocarida. McGraw-Hill Encyclopedia of Science and Technology 8:685. N.Y. City. (G).
- PENNAK, R.W. & D.J. ZINN. 1943. Mystacocarida, a new order of Crustacea from intertidal beaches in Massachusetts and Connecticut. *Smithson. Misc. Coll.* 103:1-11. (O).
- POCHON-MASSON, J., J. RENAUD-MORNANT & P. CALS. 1975. Contribution à la connaissance des glandes tegumentaires metameriques d'un Crustacé meiobenthonique interstitiel (Crustacea, Mystacocarida). *Cytologie structurale et infrastructurale. Arch. Zool. exp. gén.* 116(1):123-146. (A).
- POCHON-MASSON, J., J. RENAUD-MORNANT & P. CALS. 1975. Les Glandes Metameriques: un caractère adaptatif des Mystacocarides (Crustacés). *Cah. Biol. Mar.* 16: 763-764. (A;E).
- REMANE, A. 1951. Die Besiedlung des Sandbodens im Meere und die Bedeutung der Lebensformtypen für die Ökologie. *Verh. d. Dt. Zool. Ges. in Wilhelmshaven.* 35:327-359. (B;D;E;N).
- REMANE, A. 1952. Unterirdisches Leben am Meerestrand. *Die Umschau.* 52:486-487. (Die Umschau in Wissenschaft und Technik, 16:486-487). (G).



- REMANE, A. 1959. Die Interstitielle Fauna des Meeressandes. Proc. XV Int. Cong. Zool. 320-323. (G;B).
- RENAUD-DEBYSER, J. 1959. Contribution a l'étude de la faune interstitielle du bassin d'Arcachon. Proc. XV Int. Cong. Zool.: 323-326. (B;G).
- RENAUD-DEBYSER, J. 1963. Recherches écologiques sur la faune interstitielle des sables (Bassin d'Arcachon, île de Bimini, Bahamas). Vie et Milieu. Suppl. 15:1-157. (B).
- RENAUD-MORNANT, J. 1976. Un nouveau genre Crustacé Mystacocaride de la zone néotropicale Ctenocheilocaris claudiae n.g., n. sp. C.R. Acad. Sci. (Paris) série D, 282:863-866. (O).
- RENAUD-MORNANT, J. & C. DELAMARE DEBOUTTEVILLE. 1976. L'originalité de la sous-classe des Mystacocarides (Crustacea) et la problême de leur répartition. Ann. Spéol. 31:75-83. (D;E).
- RENAUD-MORNANT, J., J. POCHON-MASSON & J. CHAIGNEAU. 1977. Mise en évidence et ultrastructure d'un organe de Bellonci chez un Crustacé Mystacocaride. Annals. Sci. Nat. Zool. Biol. Anim. 19(4):459-478. (A).
- RIEGER, R.M. & E. RUPPERT. 1978. Resin embedments of quantitative meiofauna samples for ecological and structural studies - description and application. Mar. Biol. 46:223-235. (T).
- SANDERS, H.L. 1959. The significance of the Cephalocarida in crustacean phylogeny. Proc. XV Int. Cong. Zool.: 337-340. (E;A).
- SWEDMARK, B. 1964. The interstitial fauna of marine sand. Biol. Rev. 39:1-42. (G).
- TIEGS, O.-W. & S.-M. MANTON. 1958. The evolution of the Arthropoda. Biol. Rev. 33(3):255-337. (E;N).
- TUZET, O. & A. FIZE. 1958. La spermatogénèse de Derocheilocaris remanei Delamare et Chappuis (Crustacea, Mystacocarida). C.R. Acad. Sci. (Paris) 246(26):3669-3671. (B).
- UHLIG, G., H. THIEL & J.S. GRAY. 1973. The quantitative separation of meiofauna. Helgolander wiss. Meeresunters. 25:173-195. (T).
- WELLS, J.B. & M.E. CLARK. 1965. The interstitial crustacea of two beaches in Portugal. [Derocheilocaris remanei f. biscayensis]. Revta. Biol., Lisb. 5:87-108. (B).
- ZAFFAGNINI, F. 1969. Quelques observations sur l'appareil reproducteur mâle et femelle de Derocheilocaris remanei Delamare et Chappuis (Crustacea, Mystacocarida). Cah. Biol. Mar. 10: 103-107. (A).
- ZINN, D.J. 1942. An ecological study of the interstitial microfauna of some marine sandy beaches with special reference to the Copepoda. Ph.D. Dissertation, Yale University, New Haven, Connecticut, USA. (G;N).
- ZINN, D.J. 1966. A new method for extraction of living thalassosammon from intertidal and subtidal marine beaches. Biol. Bull. 131:413 (abstract). (T).
- ZINN, D.J. 1967. Preliminary analysis of thalassosammon along a transect from HTL to a point 650 feet directly southwest off Nobska Beach. Biol. Bull. 133:492 (abstract). (B).

-----

ABSTRACTS OF MEIOFAUNA PAPERS PRESENTED AT THE AMERICAN SOCIETY OF ZOOLOGISTS MEETING,  
TAMPA, FLORIDA, 27-30 DECEMBER 1979

- AMATO, A.J. & M.J. WEISS. 1979. Asymmetrical cuticular patterns and their heritability in a cell-constant micrometazoan, Lepidodermella squammata (Gastrotricha). Amer. Zool., 19:907.
- CORLISS, J.O. 1979. Is (was) there (ever) a truly homokaryotic member of the phylum Ciliophora? Amer. Zool., 19:894.
- X FERRARIS, J.D. & B. SCHMIDT-NIELSEN. 1979. The influence of decerebration on water and ion regulation in an intertidal oligochaete. Amer. Zool., 19:936.
- FRANSEN, M.E. 1979. Ultrastructure of coelomic organization in interstitial polychaetes and archiannelids. Amer. Zool., 19:868.
- HUMMON, W.D. 1979. Sublittoral Gastrotricha from the Bristol Channel, U.K. Amer. Zool., 19:864.
- NEWTON, W.D. 1979. The motile apparatus of the aflagellate spermatozoon of Macrostomum tubum. Amer. Zool., 19:998.
- RUPPERT, E.E. & S. SCHREINER. 1979. Fine structure and potential significance of the cerebral light refracting bodies of Stentostomum virginianum (Turbellaria, Catenuvida). Amer. Zool., 19:908.
- THISTLE, D. 1979. Deep sea diversity maintenance: evidence from harpacticoid copepods. Amer. Zool., 19:864.
- TYLER, S. & L. MELANSON. 1979. Cytochemistry of adhesive organs in lower metazoans. Amer. Zool., 19:985.



RECENT LITERATURE

- ACHUTKANKUTTY, C.T., A. STIRLING, S. NAIR, P.A. BHARATI & M.R. MENZES. 1978. Sandy beach at Baina, Gao: Its ecology and production. *Indian J. mar. Sci.*, 7(1):23-29.
- ADMIRAAL, W. & H. PELETIER. 1980. Influence of seasonal variations of temperature and light on the growth rate of cultures and natural populations of intertidal diatoms. *Mar. Ecol. Prog. Ser.* 2, 2:35-43.
- ÅKESSON, B. 1979. Ethological isolation in the polychaete genus *Ophryotrocha*. *Zool. Ser.* 8, p. 313.
- ALDRED, R.G., K. RIEMANN-ZÜRNECK, H. THIEL & A.L. RICE. 1979. Ecological observations on the deep-sea anemone *Actinoscyphia aurelia*. *Oceanol. acta*, 2(4):389-395.
- ALLEN, M.W. & E.M. NOFFSINGER. 1978. A revision of the marine nematodes of the superfamily Draconematoidea Filipjev, 1918 /Nematoda: Draconematina/. *Univ. Calif. Publ. Zool.*, 109: 1-133.
- ALTHERR, E. 1977. Contribution à la connaissance des nematodes de l'estuaire de l'Amazone. II. *Amazonia*, 6(2):145-159.
- ANDERSSON, A. 1980. The fine structure of a sensory organ of a cladocop ostracod (Crustacea) belonging to the organ of Bellonsi (sensory pore) complex. *Acta Zool. (Stockh.)* 61:51-58.
- ANDRÁŠY, I. 1978. Evolution as a basis for the systematization of nematodes. Reviewed by T.A. Platanova. *Zool. Zhur.*, 57(3):467-468.
- BAILEY-BROCK, J.H. 1979. Sediment trapping by chaetopterid polychaetes on a Hawaiian fringing reef. *J. Mar. Res.*, 37:643-656.
- BARTSCH, I. 1979. Halacaridae (Acari) aus der Subantarktis. *Cah. Biol. Mar.*, 20:325-339.
- BECKER, K.-H. & G. SCHRIEVER. 1979. Eidonomie und Taxonomie abyssaler Harpacticoidea (Crustacea, Copepoda) Teil III. 13 neue Tiefsee-Copepoda Harpacticoidea der Familien Canuellidae, Cerviniidae, Tisbidae, Thalestridae, Diosaccidae und Amerriidae. *Meteor Forsch.-Ergebnisse, Ser. D*, 31:38-62.
- BECKER, K.-H., W. NOODT & G. SCHRIEVER. 1979. Eidonomie und Taxonomie abyssaler Harpacticoidea (Crustacea, Copepoda). Teil II. Paramesochridae, Cylindropsyllidae und Cletodidae. "Meteor" *Forsch.-Ergebnisse, Ser. D*, 31:1-37.
- BECKLEY, L.E. & A. McLACHLAN. 1979. Studies on the littoral seaweed epifauna of St. Croix Island. I. Physical and biological features of the littoral zone. *S. Afr. J. Zool.*, 14:175-182.
- BELOGUROV, O.I. & L.S. BELOGUROVA. 1979. On morphological abnormalities (deformities) in nematodes and their possible evolutionary value. *Zool. Zh.*, 58(11):1730-1732 (In Russian).
- BERGMANS, M. 1979. Waterboatmen and testing for Lotka-Volterra-type interactions. *Am. Nat.*, 113(5): 759-762.
- BIRD, A.F. 1979. A method of distinguishing between living and dead nematodes by enzymatically induced fluorescence. *J. Nematol.*, 11(1):103-105.
- BODIN, P. 1977. Copepodes Harpacticoidea marins des environs de la Rochelle 5 - Espèces nouvelles ou incertaines. *Vie Milieu*, 27(A):311-357.
- BODIQUO, J.-Y. & L. VILLIERS. 1978-79. La prédation de la méiofaune par les formes juvéniles de *Deltentosteus quadrimaculatus* (Teleostei, Gobiidae). *Vie Milieu Ser. AB*, 28-29:143-156.
- BOVEE, E.C. & T.K. SAWYER. 1979. Protozoa: Sarcodina: Amoeba Marine flora and fauna of the Northeastern United States. NOAA Technical Rept. NMFS Circ. No. 419, 56 pp.
- BRUCE, N.L. 1979. Preliminary diagnosis of a new genus of marine isopod (*Flabellifera*, Cirolanidae). *Crustaceana*, 37(1):112.
- BUNKE, D. 1979. Ein Dopa-oxidierendes Ferment in den Schalendrüsen von *Microdalyellia fairchildi* (Turbellaria, Neorhabdocoela). *Zoomorph.* 93: 153-170.
- CAMMEN, L.M. 1980. Ingestion rate: An empirical model for aquatic detritus feeders and detritivores. *Oecologica*, 44:303-310.
- CANDIA CARNEVALI, M.D. & M. FERRAGUTI. 1979. Structure and ultrastructure of muscles in the priapulid *Halicryptus spinulosus*: functional and phylogenetic remarks. *J. Mar. Biol. Assoc. U.K.*, 59(3):737-744.
- CANTELMO, F.R., M.E. TAGATZ & K. RANGA RAO. 1979. Effect of barite on meiofauna in a flow-through experimental system. *Mar. Env. Res.*, 2(4):301-310.
- CARLI, A. & A. FIORI. 1977. Morphological analysis of the two *Tigriopus* species found along the European coasts (Copepoda, Harpacticoidea). *Natura (Milano)*, 68(1-2):101-110.
- CASTEL, J. 1980. Description des peuplements de copépodes méiobenthiques dans un système lagunaire du Bassin d'Arcachon. Utilisation de modèles de distributions d'abondance. *Cah. Biol. Mar.*, 21: 73-89.
- CASTEL, J. & P. LASSERRE. 1979. Opportunistic copepods in temperate lagoons of Arcachon Bay: differential distribution and temporal heterogeneity. *Est. Cstl. Mar. Sci.*, 9(4):357-368.
- CECHERELLI, V.U. & G.G. FABBRI. 1978. Sampling efficiency of three different types of corers on meiofauna of muddy bottom. *Archo. Oceanogr. Limnol.*, 19:85-98.
- CHRISTIANSEN, B.O. 1979. Different behaviour in related species of Foraminifera (Protozoa, Foraminiferida). *Zool. Scr.* 8, p. 314.

RECENT LITERATURE (continued)

- COULL, B.C. & Z. ZO. 1980. Revision of Laophontina (Copepoda: Harpacticoida), including three new species and a key. Trans. amer. micros. Soc., 99(1):32-43.
- DALLA VENEZIA, L. 1979. Short- and long-term effects of some pollutants on benthic copepods of genus Tisbe (Copepoda, Harpacticoida). Ives Journées etud. pollut. mar. Mediterr., Antalya 1978, Monaco, 439-443.
- DANIELPOL, D.L. & L. CVETKOV. 1979. Three new species of Mixtacandona (Ostracoda, Cypridiidae, Candoninae). Hydrobiologia, 67(3):249-266.
- D'APOLITO, L.M. & STANCYK, S.E. 1979. Population dynamics of Euterpina acutifrons (Copepoda: Harpacticoida) from North Inlet, South Carolina, with reference to dimorphic males. Mar. Biol. Berl., 54:251-260.
- DETHIER, M.N. 1980. Tidepools as refuges: predation and the limits of the harpacticoid copepod Tigriopus californicus (Baker). J. exp. mar. Biol. Ecol., 42:99-112.
- DOWDS, R.E. 1979. References for identification of marine invertebrates on the southern Atlantic coast of USA. NOAA Tech. Rep. NMFS SSRF (Spec. Sci. Rep. Fish) 0 (729):1-38.
- DOWNING, J.A. 1979. Aggregation, transformation, and the design of benthos sampling programs. J. Fish. Res. Bd. Canada, 36:1451-1463.
- DYE, A.H. 1979. Measurement of biological oxygen demand in sandy beaches. S. Afr. J. Zool., 14: 55-60.
- ELMGREN, R. & H. CEDERVALL. 1979. Monitoring the Baltic ecosystem by means of benthic macrofauna sampling. Pp. 159-163 in The Use of Ecological Variables in Environmental Monitoring, the National Swedish Environment Protection Board, Report PM 1151.
- ERSÉUS, Ch. 1980. A new species of Grania (Oligochaeta, Enchytraeidae) from Ascension Island, South Atlantic. Sarsia, 65:27-28.
- ERSÉUS, Ch. 1980. New species of Phallogrilus (Oligochaeta, Tubificidae) from the Arctic Deep Sea and Norwegian fjords. Sarsia, 65:57-60.
- FELLER, R.J., G.L. TAGHON, E.D. GALLAGHER, G.E. KENNY & P.A. JUMARS. 1979. Immunological methods for food web analysis in a soft-bottom benthic community. Mar. Biol., 54:61-74.
- FINLAY, B.J. 1980. Temporal and vertical distribution of ciliophoran communities in the benthos of a small eutrophic loch with particular reference to the redox profile. Freshwat. Biol., 10(1):15-34.
- FLEEGER, J.W. 1980. Community structure of an estuarine meiobenthic copepod assemblage. Est. and coast. mar. Sci., 10:107-118.
- FLEEGER, J.W. 1980. Morphological variation in Cletocamptus (Copepoda: Harpacticoida), with description of a new species from Louisiana salt marshes. Trans. amer. Micros. Soc., 99(1)-25-31.
- FORWARD, R.B. JR. 1980. Phototaxis of a sand - beach amphipod: physiology and tidal rhythms. J. Comp. Physiol., 135:243-250.
- FOSTER, W.A., J.E. TREHERNE, P.D. EVANS & C.N.E. RUSCOE. 1979. Short-term changes in activity rhythms in an intertidal arthropod (Acarina: Bdella interrupta Evans). Oecologia, 38(3):291-301.
- FRENZEL, P. 1979. Canthocamptus staphylinus (Jurine) (Copepoda, Harpacticoida). Die Populationsdynamik und räumliche Verteilung im Vergleich mit anderen benthischen Copepoda. Verh. Dtsch. Zool. Ges., 1979, p. 259.
- GAGARIN, V.G. 1978. Benthic nematodes of some Volga reservoirs. Hydrobiological Journal, 14(5):24-27.
- GAGARIN, V.G. 1979. Nematode life forms. The Soviet Journal of Ecology, 10(1):51-55.
- GAGARIN, V.G. & L.V. LEMZINA. 1980. A new species of free-living nematodes from the family Monohysteridae. Zool. Zh., 59(1):137-138. (In Russian).
- GERAERT, E. 1979. Growth and form in nematodes: IV. Tail length and vulva position. Nematologica, 25(4):439-444.
- GERLACH, S., M. SCHRAGE & F. RIEMANN. 1979. Die Gattung Acantholaimus (Nematoda, Chromadoridae) and Beobachtungen über einen mutmasslichen Transportmechanismus für Spermien bei A. calathus sp. n. Veröff. Inst. Meeresforsch. Bremerh., 18: 35-67.
- GIERE, O. 1980. The impact of crude oil and oil dispersants on the marine oligochaete Marionina subterranea. Cah. Biol. Mar., 21:51-60.
- GOSELCK, F. & P. SPITTLER. 1979. Age structure, growth and weight of Branchiostoma senegalense (Acrania, Branchiostomidae) off North-West Africa. Int. Revue ges. Hydrobiol., 64:541-550.
- GOURBAULT, N. 1980. Nématodes abyssaux (Campagne Walda du Navire Océanographique Jean-Charcot). I. Espèces nouvelles de Cytholaimidae. Cah. Biol. Mar., 21:61-71.
- GRELL, K.G. 1979. Cytogenetic systems and evolution in Foraminifera. J. Foram. Res., 9(1):1-13.
- HAEGGSTRÖM, C.A. & J. TERHIVUO. 1979. The Lumbricidae (Oligochaeta) in the archipelago of Åland, SW Finland. Memoranda Soc. Fauna Flora Fennica, 55(1):17-32.
- HALLOCK, P. 1979. Trends in test shape with depth in large, symbiont-bearing Foraminifera. J. Foram. Res., 9(1):61-69.
- HEALY, M.C. 1980. Utilization of the Nanaimo River Estuary by juvenile chinook salmon, Oncorhynchus tshawytscha. Fish. Bull., 77:653-668.
- HEITKAMP, U. 1979. Der Einfluss endosymbiotischer Zoochlorellen auf die Respiration von Dalyellia viridis (G. Shaw, 1791) (Turbellaria Neorhabdo-coela). Arch. Hydrobiol., 86:499-514.

RECENT LITERATURE (continued)

- HEITKAMP, U. 1979. Die Respirationsrate neorhabdo-coeler Turbellarien mit unterschiedlicher Temperaturvalenz. Arch. Hydrobiol., 87:95-111.
- HERRING, P.J. 1979. Some features of the bioluminescence of the Radiolarian Thalassicolla sp. Mar. Biol., 53(3):213-216.
- HICKS, G.R.F. 1980. Seasonal and geographic adaptation to temperature and salinity in the harpacticoid copepod Zaus spinatus spinatus Goodsir. J. exp. mar. Biol. Ecol., 42:253-266.
- HIRAYAMA, K., K. TAKAGI & H. KIMURA. 1979. Nutritional effect of eight species of marine phytoplankton on population growth of the rotifer, Brachionus plicatilis. Bull. Japan. Soc. Scient. Fish., 45(1):11-16.
- HIRUTA, S. 1979. Redescription of Asteropteron fuscum (G. W. Müller) from Amakusa, Kyushu, with reference to the larval stages (Ostracoda: Myodocopina). Proc. Japan. Soc. syst. Zool., 17:15-30.
- HIRUTA, S. 1979. A new species of the genus Bathleberis Kornicker from Hokkaido with reference to the larval stages (Ostracoda: Myodocopina). J. Fac. Sci., Hokkaido Univ., ser. VI (Zoology), 22(1):99-121.
- HORN, T. 1978. The distribution of Echinoderes coulli (Kinorhyncha) along an interstitial salinity gradient. Trans. amer. microsc. Soc., 97(4):586-589.
- HURME, A.K., R.M. YANCEY & E.J. PULLEN. 1979. Sampling Macroinvertebrates on high-energy sand beaches. Coastal Engineering Technical Aid No. 79-3, pp. 1-37. U. S. Army Corps of Engineers, Coastal Engineering Research Center, Kingman Bldg., Ft. Belvoir, VA. 22060 U.S.A.
- IMAMURA, T. 1979. A new subgenus and a new species of the genus Chappuisides (Acari: Hydrachnellae) from Japan. Annot. Zool. Japan., 52(4):257-260.
- ITÔ, T. & J.J.S. BURTON. 1980. A new genus and species of the family Canthocamptidae (Copepoda, Harpacticoida) from a hot spring at Dunsun Tua, Selangor, Malaysia. Zool. Jb. Syst. 107: 1-31.
- IVANEGA, I.G. 1978. Composition and distribution patterns of the nematode fauna in water bodies of the Kilian Danube delta. Zool. Zhur., 57(2): 292-294.
- IVANOVA-KASAS, O.M. 1979. Analysis of cleavage in Nematoda and Gastrotricha. Zool. Zh., 58(12): 1765-1777. (In Russian).
- JAMIESON, B.G.M. 1977. Marine meiobenthic Oligochaeta from Heron and Wistari Reefs (Great Barrier Reef) of the genera Clitella, Limnodriloides and Phalldrilus (Tubificidae) and Grania (Enchytraeidae). Zool. J. Linn. Soc., 61(4):329-349.
- JANKOWSKAJA, A.I. 1978. The first finding of the ultra-abysal Halacaridae (Acaria) in the Pacific. Zool. Zhur., 57(2):295-298.
- JENSEN, P. 1979. Nematodes from the brackish waters of the southern archipelago of Finland. Benthic species. Ann. Zool. Fennici, 16:151-168.
- JENSEN, P. 1979. Nematodes from the brackish waters of the southern archipelago of Finland. Phyta species. Ann. Zool. Fennici, 16(4):281-286.
- JENSEN, P. 1979. Coexistence of epigrowth feeding aquatic species of the genus Chromadorita (Nematoda) from the southern archipelago of Finland. Zool. Sc. p. 315.
- JENSEN, P. 1979. The absence of a permanent nematode fauna in Baltic rock pool ecosystems. Est. Coast. Mar. Sci., 9:797-800.
- JOUIN, C. 1979. Description of a free-living polychaete without gut: Astomus taenioides n. gen., n. sp. (Protodrilidae, Archannelida). Can. J. Zool., 57:2448-2456.
- KHAN, W. & M.S. JAIRAJPURI. 1979. Studies on Monochida of India XII. Genus Mylonchulus (Cobb, 1916) Altherr, 1953 with descriptions of three new species. Nematologica, 25(4):406-418.
- KISIELEWSKI, J. 1979. New and insufficiently known freshwater Gastrotricha from Poland. Ann. Zool. (Warszaura), 34(13):415-435.
- KITO, K. 1978. Studies on the free-living marine nematodes from Hokkaido, III. J. Fac. Sci., Hokkaido Univ., Ser. VI (Zoology), 21(2):248-261.
- KNÜPLING, J. 1979. Ökologische Untersuchungen an Aufwuchsciliaten Brackwasserbereich des Elbe-Aestuars. Arch. Hydrobiol. Supplementbd., 43(2-3): 273-288.
- LALANA, R.R. & S.G. GONZALEZ. 1978. Estudio comparativo de dos metodos de mustreo del micro- y mesobentos con una descripción de un nuevo modelo de tubo mustreador. Ciencias, Ser. 8, 40(2):23-30.
- LEE, J.J., M.E. McENERY, M. SHILO & Z. REISS. 1979. Isolation and cultivation of diatom symbionts from larger Foraminifera (Protozoa). Nature, 280 (5717):57-58.
- LINDEGAARD, C. 1979. The invertebrate fauna of Lake Myvatn, Iceland. Oikos, 32(1-2):151-161.
- LOEUFF, P. de & A. Intes. 1979. Principes d'une methode d'étude simple des peuplements benthiques: L'analyse par les valeurs centrales. Première application à la faune de polychètes du plateau continental de Coté d'Ivoire. J. Rech. Oceanogr., 4(1):31-41.
- LORENZEN, S. 1979. Marine monohysteridae (sensu stricto, nematodes) from the southern Chilean coast and from offshore benthos of the North Sea. Stud. Neotrop. Fauna. Environ., 14(4):203-214.
- MALAKHOV, V.V. 1978. The structure of skin-nerve-muscle sack in a free-living marine nematode Pontonema vulgare. Zool. Zhur., 57(1):5-18.



RECENT LITERATURE (continued)

- MARQUES, E. 1977. On the presence on Saint Helena Island of the harpacticoid copepod Porcellidium clavigerum Pesta. Rev. Zool. Afr., 91(4):1057-1059.
- McLACHLAN, A. 1979. The identity of Derocheilocaris remanei Katesae (Mystacocarida) from South Africa. Crustaceana, 37:223.
- MIKHALEVICH, V.I. 1979. Vertical distribution and ecology of bottom Foraminifera. Sov. J. mar. Biol., 5(3):161-167.
- MONTGOMERY, J.R., C.F. ZIMMERMAN & M.T. PRICE. 1979. The collection, analysis and variation of nutrients in estuarine pore water. Est. coastl. mar. Sci., 9:203-214.
- MOORE, C.G. 1979. The distribution and ecology of psammolittoral meiofauna around the Isle of Man. Cahiers de Biologie Marine, 20(4):383-415.
- MUUS, B.J. 1979. General aspects of the estuarine fauna. Pp. 214-227 in R.T. Severn, D.L. Dineley & L.E. Harker (eds.) Tidal power and estuary management. Sciencetechnica, Bristol.
- NAGESWARA, R.J. & R.M. SUBBA. 1978. Living benthonic Foraminifera from the inner shelf sediments at Visakhapatnam. Curr. Sci. (India), 47(12):426-427.
- NAIDU, K.V. & K.A. NAIDU. 1979. Some freshwater Oligochaeta from Kashmir, India. Proc. Ind. Acad. Sci., Sect. B., 88(6):411-420.
- NICHOLS, J.A. & M.R. MUSSELMAN. 1979. Free-living marine nematodes from sandy sediments off the coast of Peru. Cah. Biol. Mar., 20(4):449-460.
- ONBE, T. 1978. Sugar flotation method for sorting the resting eggs of marine cladocerans and copepods from sea-bottom sediment. Bull. Jap. Soc. Fish., 44(2):1411.
- OSTERROHT, C. & V. SMETACEK. 1980. Vertical transport of chlorinated hydrocarbons by sedimentation of particulate matter in Kiel Bight. Mar. Prog. Ser. 2, 2:27-34.
- PARKER, J.G. 1979. Toxic effects of heavy metals upon cultures of Uronema marinum (Ciliophora: Uronematidae). Mar. Biol., 54:17-24.
- PATERSON, C.G. & R.K. MACLEOD. 1979. Observations on the life history of the water mite, Unionicola formosa (Acari: Hydrachnellae). Can. J. Zool., 57(10):2047-2060.
- PEARSON, T.H. & S.O. STANLEY. 1979. Comparative measurement of the redox potential of marine sediments as a rapid means of assessing the effect of organic pollution. Mar. Biol., 53(4):371-379.
- PECHENIK, J.A. 1979. Role of encapsulation in invertebrate life histories. Amer. Natur., 114: 859-870.
- PIMM, S.L. 1979. Complexity and stability: another look at MacArthur's original hypothesis. Oikos, 33:351-357.
- PLATANOVA, T.A. 1978. Marine nematodes of the order Enoplida from the coastal waters of the South Sakhalin. Zool. Zhur., 57(4):495-504.
- PLATANOVA, T.A., O.I. BELOGUROV & P.S. SHEENKO. 1979. On the structure of the cephalic end and female genital system in marine nematodes of the genus Anticoma Bastian 1865. Biologiya Morya (Vladivostok), 5:49-59 (In Russian).
- POR, F.D. 1978. Lessepsian migration. Ecological Studies. Vol. 23. x + 228 pp. W.D. Billings et al (eds). Springer-Verlag, Berlin, Heidelberg, New York.
- PRICE, R. & R.M. WARWICK. 1980. The effect of temperature on the respiration rate of meiofauna. Oecologia (Berl.), 44:145-148. X
- RADZIEJEWSKA, T. & M. STANKOWSKA-RADZIUM. 1979. Intertidal meiofauna of Recherche fjorden and Malbukta, Vestspitsbergen. Sarsia, 64:253-258.
- RAJAN, K.C. & N.B. NAIR. 1979. Colonization of graded sand by the interstitial fauna of monazite sands. Indian J. Mar. Sci., 8(3):180-181.
- REDDY, R.Y. & K.Y. RADHAKRISHNA. 1979. A new record of Cletocamptus deitersi (Richard, 1895) (Copepoda, Harpacticoida) from India. Curr. Sci. (India), 48(1):45.
- REDDY, R.Y. & K.Y. RADHAKRISHNA. 1980. Report on the male along with a redescription of the female of Stenhelia (Delavalia) longifurca Sewell, 1934 (Copepoda, Harpacticoida). Crustaceana, 38(1): 87-93.
- REUSBACH, N.P., B.B. JORGENSEN & T.H. BLACKBURN. 1980. Oxygen in the sea bottom measured with a micro-electrode. Science, 207:1355-1356. X
- RJUNTJU, J.M. & G.I. SOLVJEVA. 1979. Peculiarities of the cuticle structure of Aporcelamellus obtusicaudatus at the mechanical injury. Parazitologiya, 13(4):397-401.
- RØED, K.H. 1979. The effects of interacting salinity, cadmium, and mercury population growth of an archannelid, Dinophilus gyrotiliatus. Sarsia, 64:245-252.
- ROSSET-MOULINIER, M. 1979. Limites microfaunistiques en Manche. Leurs rapports avec l'hydrologie et la sedimentologie. C.R. Acad. Sci., D282(11):943-945.
- RUSS, G.R. 1980. Effects of predation by fishes, competition, and structural complexity of the substratum on the establishment of a marine epifaunal community. J. exp. mar. Biol. Ecol., 42: 55-70.
- SALEMAA, H. 1979. Ecology of Idotea spp. (Isopoda) in the northern Baltic. Ophelia, 18(1):133-150.
- SÁLY, A. 1979. Frielebende Nematoden auf dem Gebiet des Wasserkraftwerkes Cierny Vah. Biologia (Bratislava), 34(11):869-877.



RECENT LITERATURE (continued)

- SANDERS, H.L. 1979. Evolutionary ecology and life-history patterns in the deep sea. *Sarsia*, 64(1-2): 1-8.
- SANTANGELO, G. 1978. Ciliati delle lagune di Orbetello. *Boll. zool.*, 45 suppl.:45.
- SAUER, M.R., R.N. CHAPMANN & M.W. BRZESKI. 1979. External morphology of some Acrobelinae. *Nematologica*, 25(4):482-486.
- SCHEIBEL, W. & H. RUMOHR. 1979. Meiofaunaentwicklung auf künstlichen Weichböden in der Kieler Bucht. *Helgoländer wiss. Meeresunters.*, 32(3): 305-312.
- SCHIEMER, F., A. DUNCAN & R.Z. KLEKOWSKI. 1980. A bioenergetic study of a benthic nematode, Plectus palustus de Man 1880, throughout its life cycle. II. Growth, fecundity and energy budgets at different densities of bacterial food and general ecological considerations. *Oecologia (Berl.)* 44: 205-212.
- SCHMINKE, H.K. 1979. Über die Entstehung der Bathynellacea (Crustacea, Syncarida) durch Neotonie. *Verh. Dtsch. Zool. Ges.* 1979:262.
- SHEN, C.-J. & A.-Y. TAI. 1979. On two new species of fresh water Copepoda (Crustacea, Harpacticoida). *Acta zootaxon. Sinica*, 4:233-237.
- SMALDON, G. & E.W. LEE. 1979. A synopsis of methods for the narcotisation of marine invertebrates. *Inf. Ser. R. Scott. Mus. Nat. Hist.*, 6, 96 pp.
- STOCK, H.J. 1979. Amsterdam expeditions to the Indian Islands, report 2. New data on taxonomy and zoogeography of ingolfiellid Crustacea. *Bijdragen Dierk.*, 49:81-96.
- SUDZUKI, M. 1979. Some aspects of the haline interstitial biota from Ryukyu Shotō, subtropical chain islands, southwest Japan. *Sesoko Mar. Sci. Lab, Tech. Rep. No.* 6:37-50.
- SUDZUKI, M. 1979. Marine Testacea of Japan. *Sesoko Mar. Sci. Lab, Tech. Rep. No.* 6:51-61.
- SWANSON, K.M. 1979. Recent Ostracoda from Port Pegasus, Stewart Island, New Zealand. *N. Z. J. mar. freshwat. Res.*, 13:151-170.
- TCHESUNOV, A.V. 1978. New nematodes of the order Araeolaimida from the Caspian Sea. *Zool. Zhur.*, 57(1):19-25.
- TCHESUNOV, A.V. 1978. New free living nematodes from the Caspian Sea. *Zool. Zhur.*, 57(4):505-511.
- TCHESUNOV, A.V. 1979. A contribution to the study of the genus Nudora (Nematoda, Desmodorida). *Zool. Zhur.*, 58(10):1457-1463.
- THIEL, H. & H. RUMOHR. 1979. Photostudio am Meeresboden Neue Erkenntnisse für das Verhalten von Meerestieren. *Umschau*, 15:469-472.
- THISTLE, D. 1979. Harpacticoid copepods and biogenic structures: implications for deep-sea diversity maintenance. Pp. 217-231 in R.J. Livingston (ed), *Ecological Processes in Coastal and Marine Systems*, Plenum Publishing Corp., New York.
- TIETJEN, J.H. 1980. Population structure and species composition of the free-living nematodes inhabiting sands of the New York Bight apex. *Est. coast. mar. Sci.*, 10:61-73.
- VLADIMIRSKAYA, E.V. 1978. Age composition of the populations of mass copepod species in the southern part of the Scotia Sea. *Okeanologiya*, 18(2):307-311.
- VRANOVSKY, M. 1979. Zur Kenntnis der mesofauna des interstitiellen wassers in den sedimenten des Flusses Bela. *Biologia (Bratislava)*, 34(11):861-867.
- WALKER, I. 1979. Mechanisms of density dependent population regulation in the marine copepod Amphiascoides sp. (Harpacticoida). *Mar. Ecol. Prog. Ser.*, 1:209-222.
- WARWICK, R.M., I.R. JOINT & P.J. RADFORD. 1979. Secondary production of the benthos in an estuarine environment. Pp. 429-450 in R.L. Jefferies & A.J. Davy (eds), *Ecological Processes in Coastal Environments*. Blackwell Scientific Publ., Oxford
- WATERS, T.F. 1979. Influence of benthos life history upon the estimation of secondary production. *J. Fish. Res. Bd. Can.*, 36:1425-1430.
- WEBER, R.E., R. FÄNGE & K.K. RASMUSSEN. 1979. Respiratory significance of priapulid hemerthyrin. *Mar. Biol. Letters*, 1:87-97.
- WESTHEIDE, W. 1979. Unusual granules in the ejaculatory duct of a Microphthalmus species (Polychaeta, Annelida). *Cell Tissue Res.*, 197: 61-68.
- WILSON, W.H. JR. 1979. Community structure and species diversity of the sedimentary reefs constructed by Petaloproctus socialis (Polychaeta: Maldanidae). *J. Mar. Res.*, 37:623-664.
- YEATES, G.W. 1979. Nine new Dorylaimida (Nematoda) from the New Zealand region. *Nematologica*, 25(4): 419-438.
- ZMORAY, I. & A. GUTTEKOVA. 1979. Notes on the muscular ultrastructure of some free-living nematodes from the genus Eudorylaimus. *Biologia*, 34(7):593-606.
- ZULLINI, A. & C. RICCI. 1980. Bedelloid rotifers and nematodes in a small Italian stream. *Freshwat. Biol.*, 10(1):67-72.

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