

# PSAMMONALIA

Newsletter of the International Association of Meiobenthologists



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FROM THE EDITOR

Election Results

CARLO HEIP was elected Chairperson of the IAM and will take office 1 January 1982, serving as both Chairperson and Editor for two years (1982, 1983).

CHRISTER ERSEUS and RICHARD WARWICK were elected to serve as Committee Members and will serve four years (1982-1985). Congratulations to these new officers and to the membership who established a record turnout at the polls. (93!). Thanks also to Duane Hope and Kristian Fauchald for tallying the ballots.

An Announcement from the Crustacean Society

This newly formed society will meet annually with the American Society of Zoologists. Scheduled activities for the 1981 and 1982 meetings include:

Dallas, 1981.--Symposium: Phylogeny within the Crustacea (Convener: F. R. SCHRAM); Workshop: SEM Application to Crustacean Morphology (Convener: L. WATLING).

Louisville, 1982.--Symposium: Crayfish Distribution Patterns (Convener: J. F. Payne); Symposium: Factors Influencing Crustacean Growth (Convener: A. M. WENNER).

Contributed paper sessions, some of which will supplement symposia or workshops, also are planned for these meetings. For further information, contact: Dr. PATSY A. MCLAUGHLIN, Program Chairperson, The Crustacean Society, Department of Biological Sciences Florida International University, Miami, FL 33199 USA.

FROM (OR ABOUT) THE MEMBERS

A Note to Authors Regarding Meiofaunal Abundances

Numbers per m<sup>2</sup>, cm<sup>2</sup> (no. X m<sup>-2</sup>, X cm<sup>-2</sup>) are unambiguous designations for abundances, but are based on units inappropriate for most meiofaunal sampling. For this reason, A. D. McIntyre (1969, Ecology of Marine Meiobenthos, Biol. Re. 44:245-290) proposed to express abundance in terms of "individuals on or below 1/1000 m<sup>2</sup> surface area, designated 'per 10 cm<sup>2</sup>'" (p. 250). I wholly approve of using this unit for meiofaunal abundance, but find that most of us quote the "per 10 cm<sup>2</sup>" portion without unambiguously indicating that we are referring to 10 sq. cm. and not to 10 cm. sq. (= 10 X 10 sq. cm.).

I confess to being suspicious of papers written by new meiofaunists which express abundance in terms of no. per 10 cm<sup>2</sup>, because I do not know unambiguously that they mean per 10 sq. cm. and not per 10 cm. sq. My suspicions are based in part on one paper which was nearly published using data based on the wrong interpretation of "per 10 cm<sup>2</sup>." My plea is that authors that use this unit indicate somewhere in the text unambiguously what they mean by "per 10 cm<sup>2</sup>." One way would be to specify the first time it is mentioned: no. / 10 cm<sup>2</sup> (= no./10 sq. cm.; X 10<sup>3</sup> = no. / m<sup>2</sup>). Editors who do not like such space-consuming clarifications must be made aware of the potential for confusion, not merely among authors but among readers as well.

--William D. Hummon

New Member working on North Adriatic Meiofauna

"I am working with a group carrying out marine benthos studies at the "Ruder Boskovic" Institute, Center for Marine Research, Rovinj, Yugoslavia.

Our project involves the study of inshore and off-shore areas in the North Adriatic Sea where there is considerable pollution in the form of domestic sewage and industrial waste.

Recently, my own interests have been directed towards the ecology of meiobenthos. Little work has been done on the meiofauna of the area and I am still dealing with various methodological problems. To this end, I am presently spending a period of six weeks with the Environmental Studies Group in the Marine Lab, Aberdeen, Scotland.

I hope that, by publicizing my interests, I can encourage the advise and cooperation of those engaged in similar studies. In particular I would be most grateful to receive reprints on pollution and related meiofaunal studies."

--Jasna Vidakovic

Reinhard Rieger Receives Humbolt Fellowship

Reinhard Rieger, University of North Carolina at Chapel Hill, NC, USA, has been awarded a Humbolt Fellowship to study interstitial sulfide system turbellarians with Peter Ax's group at the University of Gottingen, Federal Republic of Germany. Dr. Rieger will be at Dr. Ax's institute from 1 August 1981 to 31 July 1982.

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UNIFIED BIBLIOGRAPHY OF GASTROTRICHA:  
MARINE AND BRACKISH WATER: FRESHWATER AND SOIL

Supplementary Citations - August 1981

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Legend regarding contents of papers:

- \* Original description(s)
- (M-) Marine or Brackish Water
- (F-) Freshwater or Soil
- (S) Systematics and taxonomy
- (D) Distribution and biogeography
- (B) Biology and ecology
- (G) General and review
- (N) Reference without species designation

AMATO, A.J. & M.J. WEISS. 1980. Asymmetrical cuticular patterns and their heritability in a cell-constant micrometazoan, Lepidodermella squammata (Gastrotricha). Amer. Zool., 19:907 (Abstract). (F-B)

\*ANDERSON, M.T. & C.E. ROBBINS. 1980. A new species of gastrotrich from Illinois. Trans. Amer. Microsc. Soc., 99:225-227. (F-SBDG)

ANDERSON, R.S. & A.-M. DEHENU. 1980. An assessment of the meiobenthos from nine mountain lakes in western Canada. Hydrobiologia, 70:257-264. (F-DB)

ANON. 1976. McGraw-Hill Dictionary of the Life Sciences. McGraw-Hill, New York. 907 pp. (MF-N)

ANSARI, Z.A, A.H. PARULEKAR & T.G. JAGTAP. 1980. Distribution of sub-littoral meiobenthos off Goa Coast, India. Hydrobiologia, 74:208-214. (M-N)

AUSTIN, W.C. & M.M. DEUTSCH. 1978. Marine biota of the NE Pacific: A bibliography emphasizing systematics and distribution. Khoyatan Mar. Lab., Cowichan Sta., B.C. ? pp. (M-G)

AX, P. 1963. Das Hautgeisselepithel der Gnathostomulida. Verhandl. Deutsch. Ges. (München), 1963: 452-461. (M-N)

AX, P. 1965. Zur Morphologie und Systematik der Gnathostomulida. Z. Zool. Syst. Evolutionsforsch., 3:259-276. (M-G)

AX, P. 1966. Eine neue Tierklasse aus dem Litoral des Meeres - Gnathostomulida. Umschau Wiss. Tech., 66:17-22. (M-N)

BARNES, R.D. 1980. The Aschelminths. Pp. 263-315 in Invertebrate Zoology, 4th ed. Saunders, PA. (MF-G)

BARRINGTON, E.J.W. 1979. Invertebrate Structure and Function, 2nd ed. John Wiley, New York. 765 pp. (MF-N)

BENNETT, L.W. 1978. Lipid globules in freshwater Gastrotricha. Trans. Amer. Microsc. Soc., 97: 390-392. (F-B)

BENNETT, L.W. 1979a. Distributional ecology of selected marine meiobenthic metazoa. Trans. Amer. Microsc. Soc., 98:150 (Abstract). (M-N)

Previous issues available upon request:

- Unified: 1975, 1977, 1979
- Marine and Brackish Water: 1969, 1970, 1971, 1972, 1974
- Freshwater and Soil: 1972, 1974

BENNETT, L.W. 1979b. Experimental analysis of the trophic ecology of Lepidodermella squammata (Gastrotricha:Chaetonotida) in mixed culture. Trans. Amer. Microsc. Soc., 98:254-260. (F-BG)

BENSON, H.J. 1973. Microbiological Applications: A Laboratory Manual in General Microbiology. Wm. C. Brown, Dubuque, Iowa. 345 pp. (F-N)

BOADEN, P.J.S. 1980. Meiofaunal thionibios and "the Arenicola negation": case not proven. Mar. Biol., 58:25-29. (M-DB)

BRASIER, M.D. 1981. The cambrian radiation event. Pp. 103-160 in M.R. House, ed. The Origin of Major Invertebrate Groups. Academic Press, N.Y. (M-N)

CLARK, R.B. 1981. Radiation of the Metazoa. Pp. 55-102 in M.R. House, ed. The Origin of Major Invertebrate Groups. Academic Press, N.Y. (M-N)

COULL, B.C. & S.S. BELL. 1979. Perspectives of marine meiobenthic ecology. Pp. 189-216 in R.J. Livingston, ed. Ecological Processes in Coastal and Marine Systems. Plenum, N.Y. (M-N)

CRENSHAW, D.G. 1979. Low Reynolds number, hydrodynamics and biology of interstitial animals. J. Biomechanics, 12:624 (Abstract). (M-B)

CUENOT, L. 1952. Phylogenese due regne animal. Pp. 1-33 in P.-P. Grasse, ed. Traite de Zoologie, Volume 1. Masson, Paris. (MF-N)

DAVIS, C.C. 1969. Mechanism of hatching in aquatic invertebrate eggs. Oceanogr. Mar. Biol., 6: 325-376. (MF-G)

DHANAPATHI, M.V.S.S.S. 1976. Taxonomic notes on some gastrotrichs from coastal Andhra Pradesh. Mem. Soc. Zool. Guntur, 1:76-78. (F-SDB)

DICKINSON, J.C. 1948(1949). An ecological reconnaissance of the biota of some ponds and ditches in northern Florida. Quart. J. Florida Acad. Sci., 11(2-3):1-28. (F-N)

DILLON, L.S. 1980. Animal Variety: An Evolutionary Account, 4th ed. Wm. C. Brown, Dubuque, Iowa. 382 pp. (MF-N)

Bibliography of Gastrotricha (continued)

- DINET, A. 1979. A quantitative survey of meiobenthos in the deep Norwegian Sea. *Ambio Spec. Rep.*, 6: 75-77. (M-N)
- ECKBLAD, J.W. 1978. Laboratory Manual of Aquatic Biology. Wm. C. Brown, Dubuque, Iowa. ? pp. (F-N)
- EMBERTON, K.C. 1981. First record of Chaetonotus heideri (Gastrotricha: Chaetonotidae) in North America. *Ohio J. Sci.*, 81:95-96. (F-SDBG)
- ENGEL, L., ed. 1979. The Sea. Time-Life Books, Alexandria, VA. 128 pp. (MF-G)
- ENGEMANN, J.G. & R.W. HEGNER. 1981. Phylum Aschelminthes. Pp. 307-351 in Invertebrate Zoology, 3rd ed. MacMillan, N.Y. (MF-G)
- FRYER, G. 1979. Sperms in 'parthenogenetic' freshwater gastrotrichs. *Nature*, 280:722. (MF-G)
- GAGNE, G. 1980a. Ultrastructure of the anterior sensory devices in the phylum Gastrotricha. *Amer. Zool.*, 20:749 (Abstract). (M-N)
- GAGNE, G. 1980b. Ultrastructure of the sensory palps of Tetranchyroderma papii (Gastrotricha, Macro-dasyida). *Zoomorphologie*, 95:115-125. (M-BG)
- GEORGE, J.D. & J.J. GEORGE. 1979. Marine Life: An Illustrated Encyclopedia of Invertebrates in the Sea. Wiley Interscience, N.Y. 288 pp. (M-N)
- GIERE, O. 1979. The impact of oil pollution on intertidal meiofauna. Field studies after the La Coruna - spill, May 1976. *Cah. Biol. Mar.*, 20: 231-251. (M-DB)
- GREEN, R.H. 1979. Sampling design and Statistical Methods for Environmental Biologists. John Wiley, N.Y. 257 pp. (F-N)
- GOVAERE, J.C.R., D. VANDAMME, C. HEIP & L.A.P. DE CONINCK. 1980. Benthic communities in the southern bight of the North Sea and their use in ecological monitoring. *Helgoländer Meeresunters.*, 33:507-521. (M-N)
- GOZMANY, L. 1979. Vocabularium Nominum Animalium Europae Septem Linguis Redactum, Vols. 1, 2. Akad. Kiado, Budapest. 1171, 1015 pp. (F-G)
- \*GROSSO, L.E. 1973b. Notas sobre Gastrotricos Argentines. II. Neotropica, 19(59):87-89. (F-SDBG)
- HUMMON, M.R. 1980. Development and aging in eutelic animals: Rotifera. Unpubl. MS. 59 pp. (MF-N)
- HUMMON, M.R. & W.D. HUMMON. 1979. Reduction in fitness of the gastrotrich Lepidodermella squammata by dilute acid mine water and amelioration of the effect by carbonates. *Intern. J. Invert. Repro.*, 1:297-305. (F-BG)
- HUMMON, M.R. 1981. Spermiogenesis in a freshwater gastrotrich, Lepidodermella squammata. *Ohio J. Sci.*, 81 Suppl.:14 (Abstract). (F-B)
- HUMMON, W.D. 1979. Rates of change: measures of cyclic stability among communities of taxocenoses. Pp. 37-42 in E. Naylor & R.G. Hartnoll, eds. Cyclic Phenomena in Marine Plants and Animals. Pergamon, Oxford. (M-N)
- HUMMON, W.D. 1980. Sublittoral Gastrotricha from the Bristol Channel, U.K. *Amer. Zool.*, 19:864 (Abstract). (M-BG)
- HUMMON, W.D. 1981a. Extraction by sieving: a biased procedure in studies of stream meiobenthos. *Trans. Amer. Microsc. Soc.*, 100(3):278-284. (F-N)
- HUMMON, W.D. & W.A. EVANS. 1980. Effect of Hurricane Belle (1976) on subtidal meiobenthos in Delaware Bay, USA. *Ohio J. Sci.*, 80 Suppl.:92 (Abstract). (M-N)
- HUMMON, W.D., W.A. EVANS, M.R. HUMMON, F.G. DOHERTY, R.H. WAINBERG & W.S. STANLEY. 1978. Meiofaunal abundance in sand bars of acid mine polluted, reclaimed, and unpolluted streams in southeastern Ohio. Pp. 188-203 in J.H. Thorp & J.W. Gibbons, eds. Energy and Environmental Stress in Aquatic Ecosystems. DOE Symposium Series (CONF-771114). Nat. Tech. Info. Service, Springfield, VA. (F-N)
- JEUNIAUX, C. 1978. Distribution and quantitative importance of chitin in animals. Pp. 5-10 in Muzzarelli and Pariser, eds. Proc. First Intern. Conf. on Chitin/Chitosan. (M-N)
- KAMESWARA RAO, R. & P. CHANDRA MOHAN. 1977. New records of some Gastrotricha from India with notes on their ecology. *Geobios*, 4:204-206. (F-SDBG)
- \*KISIELEWSKI, J. 1979. New and insufficiently known freshwater Gastrotricha from Poland. *Annales Zoologicae (Warszawa)*, 34(13):415-435. (F-SDBG)
- \*KISIELEWSKI, J. 1981. Gastrotricha from raised and transitional peat bogs in Poland. *Monogr. Fauny Polski*, 11:1-143. (F-SDBG)
- KNAUSS, E.B. 1979. Indication of an anal pore in Gnathostomulida. *Zool. Scripta*, 8:181-186. (M-G)
- KNAUSS, E.B. & R.M. RIEGER. 1979. Fine structure of the male reproductive system in two species of Haplognathia Sterrer (Gnathostomulida, Filospermoidea). *Zoomorphologie*, 94:33-48. (M-N)
- KORSCHULT, E. 1890. C. Zelinka: Die Gastrotrichen. Eine monographische Darstellung ihrer Anatomie, Biologie und Systematik. *Naturwiss. Rundsch.*, 5(16):199-202. (F-G)
- KOZLOFF, E.N. 1974. Keys to the Marine Invertebrates of Puget Sound, the San Juan Archipelago and Adjacent Regions. Univ. of Washington Press, Seattle. 226 pp. (M-G)
- LANG, K. 1953. Die Entwicklung des Eies von Priapulus caudatus Lam. und die systematische Stellung der Priapuliden. *Ark. Zool. (N.S.)*, 5: 321-348. (M-N)

Bibliography of Gastrotricha (continued)

- LANG, K. 1963. The relationship between the Kinorhyncha and Priapulida and their connection with the Aschelminthes. Pp. 256-262 in E.C. Dougherty, ed. The Lower Metazoa. Univ. of California Press, Berkeley. (MF-N)
- LASSERRE, P. 1976. Metabolic activities of benthic microfauna and meiofauna: recent advances and review of suitable methods of analysis. Pp. 95-142 in I.N. McCave, ed. The Benthic Boundary Layer. Plenum Press, N.Y. (M-G)
- LAVERACK, M.S. & J. DANDO. 1979. Phylum Gastrotricha. Pp. 55-56, back cover in Essential Invertebrate Zoology, 2nd ed. John Wiley, N.Y. (MF-G)
- LEFTWICH, A.W. 1973. A Dictionary of Zoology, 3rd ed. Constable, London. 478 pp. (MF-N)
- LEVY, D.P. & M.J. WEISS. 1980. Sperm in the life cycle of the freshwater gastrotrich, Lepidodermella squammata. Amer. Zool., 20:749 (Abstract). (F-B)
- LINCOLN, R.J. & J.G. SHEALS. 1979. Invertebrate Animals: Collection and Preservation. Cambridge Univ. Press, London. 150 pp. (MF-N)
- MCINTYRE, A.D. 1977b. Sandy foreshores. Pp. 31-47 in R.S.K. Barnes, ed. The Coastline. John Wiley, London. (M-N)
- MARCOLOGO, I. 1914. I Gastrotrichi del lago-stagno craterico di Astroni. Soc. Reale de Napoli. Atti della Reale Acad. Sci., Fisichi e Matem. Ser. Seconde. 15(6):1-24; Tav. 1-3. (Identical with an article of the same title in: Annu Museo Zool. R. Univ. Napoli (N.Ser.), Suppl. Fauna degli Astroni, 2:1-24; Tav. 1-3, dated 1912). (F-SDBG)
- MARGULIS, L. & K.V. SCHWARTZ. 1981. Phyla of the Five Kingdoms. W.H. Freeman, San Francisco, ? pp. (MF-G)
- MARTIN, E.A. 1976. A Dictionary of Life Sciences. MacMillan, London. 374 pp. (MF-N)
- \*MOCK, H. 1979. Chaetonotoidea (Gastrotricha) der Norseeinsel Sylt. Mikrofauna Meeresbodens, 78: 1-107. (M-SDBG)
- MOORE, C.G. 1979. The distribution and ecology of psammolittoral meiofauna around the Isle of Man. Cah. Biol. Mar., 20:383-415. (M-DBG)
- MOSS, B. 1980. Ecology of Fresh Waters. John Wiley, N.Y. (F-N)
- NICHOLAS, W.L. 1975. The Biology of Free-Living Nematodes. Oxford Univ. Press, London. 219 pp. (MF-N)
- PEARSE, A.S., H.J. HUMM & G.W. WHARTON. 1942. Ecology of sand beaches at Beaufort, North Carolina. Ecol. Monogr., 12:135-190. (M-N)
- PENNAK, R.W. 1978. Gastrotricha. Pp. 147-156 in Fresh-water Invertebrates of the United States, 2nd ed. John Wiley, N.Y. (MF-N)
- PEQUAGNAT, W.E. 1975. Meiofaunal ecosystems as indicators of the effects of dredging. Pp. 573-583 in L.E. Cronin, ed. Estuarine Research, Vol. 2, Geology and Engineering. Academic Press, N.Y. (M-N)
- REISE, K. & P. AX. 1979. A meiofaunal "thiobios" limited to the anaerobic sulfide system of marine sand does not exist. Mar. Biol., 54:225-237. (M-DBG)
- REISE, K. & P. AX. 1980. Statement on the thiobios-hypothesis. Mar. Biol., 58:31-32. (M-G)
- REISINGER, E. 1978. Strukturanalyse der Bewegungsformen bei Gastrotrichen. Zool. Jb. Anat., 99: 23-24. (M-N)
- REMANE, A. 1967. Gastrotricha. Pp. 67-72 in J. Illies, ed. Limnofauna Europaea. Gustav Fischer, Stuttgart. (F-g)
- RESECK, J. 1979. Marine Biology. Reston Publ. Co., Reston, VA. 257 pp. (M-N)
- RIEDL, R.J.M. 1970. On Labidognathia longicollis, nov. gen., nov. spec., from the West Atlantic Coast (Gnathostomulida). Intern. Rev. Ges. Hydrobiol., 55:227-244. (M-N)
- RIEDL, R. & E.A. MCMAHAN. 1974. High energy beaches. Pp. 180-251 in H.T. Odum, B.J. Copeland & E.A. McMahan, eds. Coastal Ecosystems of the United States, Vol. 1. Conservation Foundation, Washington, D.C. (M-G)
- RIEGER, G.E. & R.M. RIEGER. 1980. Fine structure and formation of egg shells in marine Gastrotricha. Zoomorphologie, 96:215-230. (M-B)
- RIEGER, R.M. 1980. A new group of interstitial worms, Lobatocerebridae nov. fam. (Annelida), and its significance for metazoan phylogeny. Zoomorphologie, 95:41-84. (M-N)
- RIEGER, R. & S. TYLER. 1979. The homology theorem in ultrastructural research. Amer. Zool., 19: 655-664. (M-B)
- ROBBINS, C.E. 1973. Gastrotricha from Illinois. Trans. Illinois State Acad. Sci., 66(3/4): 124-126. (F-DBG)
- \*RUPPERT, E.E. 1979. Morphology and systematics of the Xenotrichulidae (Gastrotricha, Chaetonotida) Mikrofauna Meeresbodens, 79:1-56. (M-SDBG)
- RUPPERT, E.E. 1980. Myoepithelial pharynges in Gastrotricha and aspects of muscle and cell evolution. Amer. Zool., 20:749 (Abstract). (MF-N)
- RUSSELL-HUNTER, W.D. 1979. A Life of Invertebrates. MacMillan, N.Y. 650 pp. (MF-N) (Unchanged from the account in: 1968. A Biology of Lower Invertebrates. MacMillan, N.Y. 181 pp.)
- SCHIEMER, F. 1979. The benthic community of the open lake. Pp. 337-384 in H. Löffler, ed. Neusiedlersee: The Limnology of a Shallow Lake in Central Europe. Junk, The Hague. (F-DB)

Bibliography of Gastrotricha (continued)

- SHARMA, B.K. 1980. Taxonomic notes on some freshwater Gastrotricha from West Bengal, India. *Hydrobiologia*, 70:265-267. (F-SDB)
- SHELFORD, V.E. & M.W. BOESEL. 1942. Bottom animal communities of the island area of western Lake Erie in the summer of 1937. *Ohio J. Sci.*, 5:179-190. (F-D)
- SIEWING, R. 1978. Bewegungsmechanismen bei niederen Wirbellosen. *Zool. Jb. Anat.*, 99:40-53. (MF-N)
- SIMS, R.W., ed. 1980. Animal Identification: A Reference Guide. Vol. 1. Marine and Brackish Water Animals, Vol. 2. Land and Freshwater Animals. British Museum, London and John Wiley, Chichester. ?, 120 pp. (MF-N)
- SPEARMAN, R.I.C. 1973. The Integument. Cambridge Univ. Press, London. 208 pp. (M-N)
- STANLEY, S.M. 1979. Macroevolution: Pattern and Process. W.H. Freeman, San Francisco. 332 pp. (MF-N)
- STEEN, E.B. 1971. Dictionary of Biology. Barnes & Noble, N.Y. ? pp. (MF-N)
- STEINBÜCK, O. 1963. Origin and affinities of the lower metazoa: the "acoeloid" ancestry of eumetazoa. Pp. 40-54 in E.C. Dougherty, ed. The Lower Metazoa. Univ. of California Press, Berkeley. (MF-N)
- STERRER, W. 1965. Gnathostomula axi Kirsteuer und Austrognathia (ein weiteres Gnathostomuliden-Genus) aus der Nordadria. *Z. Morph. Ökol. Tiere*, 55:783-785. (M-N)
- STERRER, W. 1972. Systematics and evolution within the Gnathostomulida. *Syst. Zool.*, 21:151-173.
- SUDZUKI, M. 1977. Recent portraits of wild biota in Japan. III. A man-made sand beach constructed in the Bay of Tokyo. *Öbun Ronsō*, 8:221-239. (M-N)
- SUDZUKI, M. 1978. Some approaches to the estimation of the biomass for microfauna communities. II. Difference in the occurrences of microbiota inhabiting litters, mosses especially soils from four terrestrial ecosystems. Pp. 181-125. Environmental Agency Annual Report, Tokyo. (F-N)
- SUDZUKI, M. 1979. Some aspects of the haline interstitial biota from Ryuku Shoto, subtropical chain islands, southwest Japan. *Sesoko Mar. Sci. Lab. Tech. Rep.*, 6:37-50; Pl I-IV. (M-SD)
- SUMICH, J.L. 1980. An Introduction to the Biology of Marine Life, 2nd ed. Wm. C. Brown, Dubuque, Iowa. 359 pp. (M-N)
- TEUCHERT, G. & A. LAPPE. 1980. Zum sogenannten "Pseudocoel" der Nematelminthes. Ein Vergleich der Leibeshöhlen von Mehreren Gastrotrichen. *Zool. Jb. Anat.*, 103:424-438 (M-SBG)
- TIETJEN, J.H. 1980. Microbial-meiofaunal interrelationships: a review. *Microbiology*. ? :335-338. (M-N)
- TYLER, S. & L. MELANSON. 1980. Cytochemistry of adhesive organs in lower metazoans. *Amer. Zool.*, 19:985 (Abstract) (M-N)
- TYLER, S., L.A. MELANSON & R.M. RIEGER. 1980. Adhesive organs of the Gastrotricha. II. The organs of Neodasys. *Zoomorphologie*, 95:17-26. (M-G)
- TYLER, S. & G.E. RIEGER. 1980. Adhesive organs of the Gastrotricha. I. Duo-gland organs. *Zoomorphologie*, 95:1-15. (MF-DBG)
- VANDAMME, D. & C. HEIP. 1976. Het meiobenthos in de zuidelijke Noordzee. Pp. 1-113 in J.C.J. Nihoul & L. deConinck, eds. Inventaris Van de Fauna en Flora. Projekt Zee, Boek 7 Eindverslag Nat. Onderzoeken Ontwikkelingsprog. (Leefmilieu Water), Brussel, België. (M-N)
- VIVIER, M.-H. 1976(1978). Conséquences d'un deversement de boue rouge d'alumine sur le meiobenthos profond (Canyon de Cassidaigne, Méditerranée). *Tethys*, 8:249-262. (M-B)
- WALLWORK, J.A. 1976. The Distribution and Diversity of Soil Fauna. Academic Press, N.Y. 355 pp. (F-N)
- WARWICK, R.M. 1980. Population dynamics and secondary production of benthos. Pp. 1-24 in K.R. Tenore and B.C. Coull, eds. Marine Benthic Dynamics. Univ. of South Carolina Press, Columbia. (M-G)
- WEISS, M.J. & D.P. LEVY. 1979. Sperm in "parthenogenetic" freshwater gastrotrichs. *Science*, 205:302-303. (F-BG)
- WEISS, M.J. & D.P. LEVY. 1980. Hermaphroditism and sperm diversity among freshwater Gastrotricha. *Amer. Zool.*, 20:749 (Abstract). (F-DBG)
- WETZEL, R.G. 1975. Limnology. Saunders, Philadelphia. 743 pp. (M-N)
- YONGUE, W.H. 1979. The microbiota associated with standing water of a swamp. *Trans. Amer. Microsc. Soc.* 98:150-151 (Abstract) (F-N)

RECENT LITERATURE

- ABRAMS, B.J. & M.J. MITCHELL. 1980. Role of nematode-bacterial interactions in heterotrophic systems with emphasis on sewage sludge decomposition. *Oikos*, 35:404-410.
- ALEKSEEV, V.M. & Z.A. DIZENDORF. 1981. Redescription of a rare species Adoncholaimus islandicus (Nematoda, Oncholaimidae) from the South Sakhalin. *Zool. Zhur.*, 9(2):301-304.
- ALLER, R.C. & J.Y. YINGST. 1980. Relationships between microbial distributions and the anaerobic decomposition of organic matter in surface sediments of Long Island Sound, USA. *Mar. Biol.*, 56:29-40.
- AMSELLEM, J. & P. CLEMENT. 1980. A simplified method for the preparation of rotifers for transmission and scanning electron microscopy. *Hydrobiologia*, 73:119-132.
- ANDERSON, M.T. & C.E. ROBBINS. 1980. A new species of gastrotrich from Illinois. *Trans. Amer. Microsc. Soc.*, 99(2):225-227.
- APOSTOLOV, A.G. 1980. Deux formes nouvelles du genre Nitocra Boeck (Copepoda, Harpacticoida) de la mer Noire (côte bulgare). *Acta zool. Bulgarica*, 15:36-42.
- APOSTOLOV, A.G. & T.P. PETKOVSKI. 1980. Copépodes Harpacticoides de la mer Adriatique (Région de Rovigne). *Acta zool. Bulgarica*, 15:24-35.
- ARANUVACHAPUN, S. 1979. Beach profiles at Gorleston and Great Yarmouth. *Coast. Engineering*, 2:201-213.
- ARLT, G., T. RADZIEJEWSKA & L. ROBERTUS. 1980. Vorläufige Mitteilung über Untersuchungen zur Vertikalwanderung der Meiofauna in einem Flachwassergebiet der Darß-Zingster Boddenkette. *Wiss. Zeitschr. Wilhelm-Pieck-Univ. Rostock*, 29:123-125.
- ASS, M.Y. 1980. On methods for studying microbenthos. *Mar. Ecol. (Kiev)*, 4:78-79.
- BALSAMO, M. 1980. Spectral sensitivity in a freshwater gastrotrich, Lepidodermella squammatum Dujardin. *Experientia*, 36(7):830-831.
- BATTISH, S.K. 1981. Two new species of Centrocypris Vávra, 1895 (Crustacea: Ostracoda) from Punjab, India. *J. nat. Hist.*, 15:135-143.
- BELOGUROV, O.I. 1979. To the Knowledge of Calyptronema Marion, 1870 (Nematoda, Enoplida). *Biol. Nauki*, 1979(5):53-59.
- BELOGUROV, O.I. 1980. Pandolaimidae fam. n. (Nematoda, Enoplida) and comments on morphology and taxonomic status of Pandolaimus ponticus. *Zool. Zhur.*, 59(10):1566-1568.
- BELOGUROV, O.I. & L.S. BELOGUROVA. 1980. Morphology of Belbolla intarma sp. n. diagnosis and table for species determination of the genus Belbolla. *Biol. Morya*, 4:74-77.
- BONADUCE, G., M. MASOLI, G. MINICHELLI & N. PUGLIESE. 1980. Some new benthic marine ostracod species from the Gulf of Aquaba (Red Sea). *Boll. Soc. paleontol. ital.*, 19:143-178.
- BOTTOM, M.L. 1979. Effects of sewage sludge on the benthic invertebrate community of the inshore New York Bight. *Estuar. cstl. mar. Sci.*, 8:169-180.
- BOUWMAN, L.A. 1979. Investigations on Nematodes in the EMS-Dollart Estuary. *Ann. Soc. R. Zool. Belg.*, 108(1978), fasc. 1-2:103-105.
- BOVEE, F. de, J. Soyer & D. Delille. 1979. Essai d'analyse en composantes principales des relations entre densités en meiofaune et facteurs du milieu dans l'Archipel de Kerguelen. *Mem. Mus. nat. Hist. natur.*, C 43:197-210.
- BRAWLEY, S.H. & W.H. ADEY. 1980. The effect of micrograzers on algal community structure in a coral reef microcosm. *Mar. Biol.*, 61(2/3):167-178.
- BROWN, D.J.F., P.B. TOPHAM & C.E. TAYLOR. 1978. Data base management for nematological surveys. *Nemat. Medit.*, 6(2):175-186.
- BRÜGGEMANN, J. & U. EHLERS. 1981. Ultrastruktur der Statocyste von Ototyphlonemertes pallida (Keferstein, 1862) (Nemertini). *Zoomorphology*, 97:75-87. (English Abstract).
- BUNKE, D. 1981. Ultrastruktur der Schalendrüsen von Microdalyellia fairchildi (Turbellaria, Neorhabdocoela). *Zoomorphology*, 97:101-119. (English Abstract).
- BURTON, R.S., M.W. FELDMAN & J.W. CURTSINGER. 1979. Population genetics of Tigriopus californicus (Copepoda:Harpacticoida): I. population structure along the central California coast. *Mar. Ecol. Progr. Ser.*, 1:29-39.
- CHAPMAN, R.M. 1981. Measurement of the short term stability of interstitial salinities in subtidal estuarine sediments. *Estuar. cstl. shelf Sci.*, 12:67-81.
- CHAPMAN, P.M. & R.O. BRINKHURST. 1981. Seasonal changes in interstitial salinities and seasonal movements of subtidal benthic invertebrates in the Fraser River estuary, B.C. *Estuar. cstl. shelf Sci.*, 12:49-66.
- COFFIN, W.L. 1978-1979. A list of harpacticoid copepods from Northern New England, U.S.A. *Vie Milieu*, 27-29(sér. AB):589-595.
- COLEMAN, N. 1980. More on sorting benthic samples. *Mar. Pollut. Bull.*, 11(6):150-152.
- DETCHEVA, R.B. 1980. Composition et repartition des Cilies mesopsammiques des plages bulgares. *Hydrobiologia*, 11:29-38.
- DRISCOLL, J.N. 1980. A Description of the Nematode Filoncholaimus propinquites n. sp. from the Fosa de Cariaco. *Carib. Jour. Sci.*, 16(1-4):33-37.



Recent Literature (Continued)

- EAKIN, R.M. & J.L. BRANDENBURGER. 1981. Unique eye of probable evolutionary significance. *Science*, 211: 1189-1190.
- EHLERS, U. & B. EHLERS. 1981. Interstitielle Fauna von Galapagos. XXVII. Byrsophlebidae, Promesostomidae Brinkmanniellinae, Kytorhynchidae (Turbellaria, Typhloplanoida). *Mikrofauna Meeresboden*, 83:1-35. (English Abstract).
- ERSEUS, C. 1981. Taxonomic studies of Phalloporinae (Oligochaeta, Tubificidae) from the great Barrier Reef and the Comoro Islands with descriptions of ten new species and one new genus. *Zool. Scr.*, 10:15-31.
- FAUBEL, A. 1981. *Promesostoma ericae* n. sp. (Turbellaria, Typhloplanoida), a new eulittoral species from the North Sea, with remarks on its ecology. *Senckenbergia marit.* 12:257-267.
- FENCHEL, T. 1980. Suspension feeding in ciliated protozoa: feeding rates and their ecological significance. *Microb. Ecol.*, 6(1):13-25.
- GAL'TSOVA, V.V., T.A. PLATONOVA, S.I. STREL'TSOVA & V.A. PETUKHOV. 1980. Fauna of free-living nematodes from the littoral of the Barents Sea. *Sov. J. Mar. Biol.*, 6(4):195-202.
- GERAERT, E., P. GROOTAERT & W. DECRAEMER. 1980. Structure of the female reproductive system in some Dorylaimida and Enoplida (nematoda). *Nematologica*, 26(2):255+.
- GOODELL, P. & H. FERRIS. 1980. Graphic techniques for illustrating distribution data. *J. Nematol.*, 12(2):151-152.
- GORDON, G. 1979. Notes on sea beach ecology. Food sources on sandy beaches and localized diatom blooms bordering Gulf beaches. *Gulf. Res. Repts.* 6(3):305-307.
- GRASSLE, J.F., R. ELMGREN & J.P. GRASSLE. 1981. Response of benthic communities in MERL ecosystems to low level chronic additions of No. 2 Fuel Oil. *Mar. Environ. Res.* 4:279-297.
- HALLERMEIER, R.J. 1981. A profile zonation for seasonal sand beaches from wave climate. *Coastal Engineering*, 4:253-277.
- HARPER, R.M., J.C. FRY & M.A. LEARNER. 1981. Digestion of bacteria by *Nais variabilis* (Oligochaeta) as established by autoradiography. *Oikos*, 36:211-218.
- HEYNS, F. & A. COOMANS. 1980. Freshwater nematodes from South Africa. S. *Chronogaster* Cobb, 1913. *Nematologica*, 26:187-208.
- HOCKIN, D.C. 1981. An apparatus to study the colonization of sediments by the meiofauna. *Estuar. cstl. shelf Sci.*, 12:119-120.
- HOCKIN, D.C. & J.G. OLLASON. 1981. The colonization of artificially isolated volumes of intertidal estuarine sand by harpacticoid copepods. *J. exp. mar. Biol. Ecol.*, 53:9-29.
- HULBERG, L.W. & J.S. OLIVER. 1980. Caging manipulations in marine soft-bottom communities: importance of animal interactions or sedimentary habitat modifications. *Can. J. Fish. Aquat. Sci.*, 37:1130-1139.
- HUMMON, W.D. & D.P. BEVELHYMER. 1980. Life table demography of the rotifer *Lecane tenuiseta* under culture conditions, and various age distributions. *Hydrobiologia*, 70(1-2):25-28.
- ITÔ, T. & T. TAKASHIO. 1981. The larval development of *Canthocamptus mirabilis* Sterba (Copepoda, Harpacticoida), with reference to the bionomics. *J. Fac. Sci. Hokkaido Univ.*, 22(Ser.6):279-300.
- JENSEN, P. 1981. Phyto-chemical sensitivity and swimming behaviour of the free-living nematode *Chromadorita tenuis*. *Mar. Ecol. Progr. Ser.*, 4: 203-206.
- JOUIN, C. 1978-1979. Spermatozoide non flagellé et fécondation externe chez *Protodriloides symbioticus* (Giard) (Annélides Polychaetes, Archiannelides). *Vie Milieu*, 27-29(Sér. AB):473-487. (English Abstract).
- KAUTSKY, H., B. WIDBOM & F. WULFF. 1981. Vegetation macrofauna and benthic meiofauna in the phytal zone of the archipelago of Lulea-Bothnian Bay. *Ophelia*, 20:53-77.
- KISIELEWSKI, J. 1981. Gastrotricha from raised and transitional peat bogs in Poland. *Monografie Fauny Polski*, 11, 143 pp.
- KITO, K. 1981. Studies on the free-living marine nematodes from Hokkaido, IV. *J. Fac. Sci. Hokkaido Univ. Ser. 6, Zoology*, 22(3):250-278.
- KOLASA, J. 1981. New *Stenostomum* species (Turbellaria, Catenulida) from an Italian submontane stream. *Bull. Acad. Polon. Sci.*, 28:305-310.
- KOLASA, J. 1981. New Dalyellidae (Turbellaria) from a submontane stream. *Bull. Acad. Polon. Sci., Sér. Sci. biol.*, 28:311-315.
- KONNERTH-IONESCU, A. 1979. Halacarus (Halacarellus) procerus Viets (Acari, Halacaridae), un Halacaride nouveau pour le littoral roumain de la Mer Noire. *Trav. Mus. hist. natur. Gr. Antipa*, 20(1):121-123.
- KORNICKER, L.S., & F.E. CARAION. 1980. *Nealella*, a new genus of myodocopid Ostracoda (Sarsiellidae: Dantyiinae). *Smiths. Contr. Zool.*, 309:27 pp.
- LAZZARETTO-COLOMBERA, I. 1981. Karyological comparison between three sibling species of the *Tisbe reticulata* group (Copepoda, Harpacticoida). *Zool. Scr.*, 10:33-36.
- LORENZEN, S. 1981. Entwurf eines phylogenetischen Systems der freilebenden Nematoden. - Veröff. Inst. Meeresforsch. Bremerhaven, Suppl. 7:1-472.
- MAIOLINA, B. & S. MARCHETTI. 1978. Sulla presenza di *Parastenocaris italica* (Crustacea-Copepoda) nell'Alto Sarca (Trentino). *Studi trentini sci. natur. Acta biol.*, 55:153-156.

Recent Literature (Continued)

- MALAKHOV, V.V. & S.E. SPIRIDONOV. 1980. Examination of fine morphology of Pycnophyes kielensis (Kinorhyncha, Homalorhagida). Mar. Biol., Vladivostok, 5:80-81.
- MALAKHOV, V.V. 1981. Embryogenesis of free-living marine nematodes from the orders Chromadorida and Desmodorida. Zool. Zhur., 60(4):485+.
- MALZ, H. 1980. Foveoleberis n. gen. aus dem Pazifik (Ostracoda: Cytheridae: Xestoleberidinae) Senckberg. biol., 60(5-6):413-425.
- MCLACHLAN, A., A. DYE & B. HARTY. 1981. Simulation of the interstitial system of exposed sandy beaches. Estuar. cstl. shelf Sci., 12(3):267-278.
- MCLUSKY, D.S., M. TEARE, & P. PHIZACKLEA. 1980. Effects of domestic and industrial pollution on distribution and abundance of aquatic oligochaetes in the Forth Estuary. Helgoländ. wiss. Meeresunters., 33:384-392.
- MENON, P.G., M. MADHUPRATAP, P. HARIDAS, P. VENUGOPAL & T.S.S. RAO. 1979. Faunal composition in polluted nearshore environment. Indian J. Mar. Sci., 8(3):146-149.
- MOCK, H. 1981. Zur Kenntnis von Diurodrillus subterraneus (Polychaeta, Dinophilidae) aus dem Sandhang der Nordseeinsel Sylt. Helgoländer Meeresunters., 34:329-335. (English Abstract).
- MUCHINA, T.I. 1980. Multidens montanus Gen. Et. Sp. N. (Nematoda, Tripylidae) from Primorsky District. Zool. Zhur., 57(7):1087-1090.
- MURINA, G.-V.V. 1980. The first information about finding of Halicryptus in the waters of the Soviet Far East. Mar. Biol., Vladivostok, 5:75.
- OKUBO, I. 1980. Taxonomic studies on recent marine podocopid Ostracoda from the Island Sea of Seto. Publ. Seto Mar. Biol. Lab., 25:389-443.
- PAASIVIRTA, L. & J. SÄRKKÄ. 1978. Effects of pulp mill and municipal effluents and humus load on the macro- and meiozoobenthos of some Finnish lakes. Verh. int. Ver. Theor. angew. Limnol., 20:1779-1788.
- PALMER, A.R. & R.R. STRATHMANN. 1981. Scale of dispersal in varying environments and its implications of life histories of marine invertebrates. Oecologia, 48:297-307.
- PETTER, A.J. 1980. Une nouvelle famille de Nématodes parasites d'Invertébrés marins, les Penthimermithidae. Ann. Parasit., 55(2):209-224.
- PLATONOVA, T.A. 1979. The structure of the head of Synonchinae (Nematoda, Enoplida, Leptosomatidae) and the classification of the subfamily. Zool. Zhur., 58(8):1117-1129.
- RAFFAELLI, D.G. & C.F. MASON. 1981. Pollution monitoring with meiofauna, using the ratio of nematodes to copepods. Mar. Poll. Bull., 12(5):158-163.
- RANGA, R.Y. & Y. RADHAKRISHNA. 1980. Report on the male with the redescription of the female of Limnocletodes secundus Sewell, 1934 (Copepoda, Harpacticoida). Crustaceana, 380(3):247-252.
- RENAUD-MORNANT, J. 1978-1979. Mystacocarides du Brésil description de deux espèces nouvelles du genre Ctenocheilocaris Renaud-Mornant, 1976 (Crustacea). Vie Milieu, 28-29(Sér. AB):393-408. (English Abstract).
- RENAUD-MORNANT, J. 1980. Description de trois espèces nouvelles du genre Tanarctus Renaud-Debyser, 1959, et création de la sous-famille des Tanarctinae, subfam. nov. (Tardigrada, Heterotardigrada). Bull. Mus. nat. hist. natur. Zool., 2:129-141.
- REVSBECK, N.P., B.B. JØRGENSEN, & T.H. BLACKBURN. 1980. Oxygen in the sea bottom measured with a microelectrode. Science, 207:1355-1356.
- RICE, S.A. 1981. Spermatogenesis and sperm ultrastructure in three species of Polydora and in Streblospio benedicti (Polychaeta: Spionidae). Zoomorphology, 97:1-16.
- RIEDL, R. 1980. Marine ecology - a century of changes. P.S.Z.N. I. Mar. Ecol., 1:3-46.
- ROGAAR, H. 1980. The morphology of burrow structures made by tubificids. Hydrobiologia, 71(1-2):107-124.
- RUBTSOV, I.A. 1977. Mermithidae (Nematoda) of Lake Kubenskoe in Ozero Kubenskoe. Chast' 3, Zoologiya. Leningrad, USSR; "Nauka". 93-126.
- RUBTSOV, I.A. & M.Y. BEKMAN. 1979. Mermithids from gammarids in Lake Baikal. Zool. Zhur., 58(5):751-754.
- SARMA, A.L.N., S. SATAPATHY & D.G. RAO. 1981. Phytal macro and meiofauna of Chilka Lake. Indian J. Mar. Sci., 10(1):61-65.
- SCHEIBEL, W. 1981. Zur Nahrung von Nephtys ciliata (O.F. Müller, 1776) (Polychaeta, Nephtyidae) aus der westlichen Ostsee (Kieler Bucht). Zool. Anz., 206:171-177. (English Abstract).
- SCHMINKE, H.K. 1980. Agnathobathynella ecclesi gen. n., sp. n. aus Malawi und die Formenvielfalt der Familie Bathynellidae (Crustacea, Bathynellaceae). Bijdr. tot de Dierk., 50:145-154.
- SCHMINKE, H.K. 1980. Zur Systematik der Stygocariidae (Crustacea, Syncarida) und Beschreibung zweier neuer Arten (Stygocarella pleotelson gen. n., sp. n. un Stygocaris giselae sp. n.). Beaufortia, 30(6):139-154.
- SCHRIEVER, G. 1979. Inventory of the K.-H. Becker deep-sea Harpacticoida (Crustacea, Copepoda) types and specimens held at the Zoologisches Museum Kiel. Mittl. zool. Mus. Univ. Kiel, 1(1):2-8.

Recent Literature (continued)

- SCHWINGHAMER, P. 1981. Extraction of living meiofauna from marine sediments by centrifugation in a silica sol-Sorbitol mixture. *Can. J. Fish. Aquat. Sci.*, 38:476-478.
- SHARMA, J. B.E. HOPPER & J.M. WEBSTER. 1979. Benthic nematodes from the Pacific coast with special reference to the Cyatholaimids. *Ann. Soc. Roy. Zool. Belg.* 1978(1979), 108(1-2):47-56.
- SHARMA, R.K. & V. SAXENA. 1980. A new soil nematode *Ironus indicus* n. sp. (Nematode:Ironidae) from India. *Phytophylactica*, 12(1):1-3.
- SOCIEDADE BRASILEIRA DE NEMATOLIGIA. Dr. Luiz Gonzaga E. Lordello, ed. 1980. IV Reuniao Brasileira de Nematologia. Publicacao No. 4, i-215.
- STACHOWITSCH, M. 1980. The epibiotic and endolithic species associated with the gastropod shells inhabited by the hermit crabs *Paguristes oculatus* and *Pagurus cuanensis*. *P.S.Z.N. I: Mar. Ecol.*, 1:73-101.
- STONER, A.W. 1981. Occurrence of the cephalocarid crustacean *Lightiella floridana* in the northern Gulf of Mexico with notes on its habitat. *North-east Gulf Science*, 4(2):105-107.
- SUREY-GENT, S.C. 1981. Distribution of *Anoplostoma viviparum* (Nematoda) in Southampton water sediments. *Mar. Biol.*, 62(2/3):157-160.
- TANDROS, M.S. & E.S.F. MASHAAL. 1981. The use of microfauna as an indicator of soil biological activity with reference to accompanying microflora. *Zool. Anz.*, 206:234-236.
- TENORE, K.R. 1981. Organic nitrogen and caloric content of detritus. I. Utilization by the deposit-feeding polychaete, *Capitella capitata*. *Estuar. cst. shelf Sci.*, 12:39-47.
- TENSEN, P. 1981. Phyto-chemical sensitivity and swimming behaviour of the free-living marine nematode *Chromadorita tenuis*. *Mar. Ecol. Progr. Ser.* 4:203-206.
- THISTLE, D. 1980. *Enhydrosoma* (Copepoda, Harpacticoida): An update and two new species. *Trans. Amer. Microsc. Soc.*, 99:384-397.
- TIEMANN, H. & K.-H. BETZ. 1979. Elutriation: theoretical considerations and methodological improvements. *Mar. Ecol. Progr. Ser.*, 1:277-281.
- TOUBERT, A.P. & T. HEYNS. 1980. Freshwater nematodes from South Africa and the genus *Monhystera* Bashau 1865. *S. Afr. J. Zool.*, 15:190-197.
- TSALOLIKLINA, S.Y. 1980. Free-living nematodes of Lake Baikal. *Tsdatelstvo "Nauk" Novosibirsk* 1980, 119 pp. (In Russian).
- UHLIG, G. & S.H.H. HEIMBERG. 1981. A new versatile compression chamber for examination of living microorganisms. *Helgoländer Meeresunters.*, 34: 251-256.
- UNI, S., K. SHOHO & S. TAKADA. 1978. Scanning electron microscopy (SEM) in nematode taxonomy. Abstracts of the Asian Congress of Parasit., 23-26 Feb. Bombay. Bombay, India. 216.
- VERMA, K.K. & P. DEVENDRA. 1980. A simple technique to prepare permanent mount of nematodes. (3rd Nat. Congr. Parasit., Haryana Agric. Univ., Hissar, 24-26 Apr. 1980. Abstract E41). *Indian J. Parasit.*, 3 (Suppl.), 111.
- WALKER, I. 1979. Mechanisms of density-dependent population regulation in the marine copepod *Amphiascoides* sp. (Harpacticoida). *Mar. Ecol. Progr. Ser.*, 1:209-221.
- WALLACE, R.L. 1980. Ecology of sessile rotifers. *Hydrobiologia*, 73:181-193.
- WALTON, T.E., JR. 1980. Littoral sand transport from longshore currents. *J. of Waterway Port Coastal and Ocean Division. Proc. Amer. Soc. Civil Engineers*, 106(WW4):483-487. (Proc. Paper 15793).
- WHITLATCH, R.B. 1981. Animal-sediment relationships in intertidal marine benthic habitats: some determinants of deposit-feeding species diversity. *J. exp. mar. Biol. Ecol.*, 53:31-45.
- WILSON, C.A. & L. H. STEVENSON. 1980. The dynamics of the bacterial population associated with a salt marsh. *J. exp. mar. Biol. Ecol.*, 48:123-138.
- WOOD, D.C. & S.S. MAYASAKA. 1981. Chemotaxis of rhizoplane bacteria to amino acids comprising eelgrass (*Zostera marina* L.) root exudate. *J. exp. mar. Biol. Ecol.*, 50:153-162.
- WOODIN, S.A. & J.B.C. GACKUSON. 1979. Interphyletic competition among marine benthos. *Amer. Zool.*, 19(4):1029-1043.
- YAMANSAKI, S. & J.T. CANTO. 1980. Culture experiments on the harpacticoid copepod, *Tisbintra elongata* Mori, and evaluation of the species as a food organism for milkfish larvae. *Mem. Fac. Fish., Kagoshima Univ.*, 29:275-291.
- YOSHIKOSHI, K. 1980. On the structure and function of alimentary canal of *Tigriopus japonicus* (Copepoda:Harpacticoida) II. Cellular renewal in the mid-gut epithelium. *Bull. Jap. Soc. Sci. Fish.*, 46(6):705-710.
- ZENGEL, J.M. & H.F. EPSTEIN. 1980. Identification of genetic elements associated with muscle structure in the nematode *Caenorhabditis elegans*. *Cell Motility*, 1:73-97.
- ZENGEL, J.M. & H.F. EPSTEIN. 1980. Mutants altering coordinate synthesis of specific myosins during nematode muscle development. *Proc. Natl. Acad. Sci.*, 77(2):852-856, Feb., Biochemistry.
- ZHUCHKOVA, N.I. & B.A. SHISHOV. 1979. Stability and conservativeness of cell composition of the nervous system in nematodes catecholaminergic neurones. *Zhur. obshchei Biol.*, 40(2):259-270.

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