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P S A M M O N A L I A

Newsletter of the Association of Meiofaunologists

Number 12

February 1971

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Yorkshire, ENGLAND.

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EDITORIAL

Plagued with a postal strike, (which is still in operation as this is written) the final version of the Constitution of the Association has not yet been sent to the members. Together with this issue you will receive a copy of the Constitution and also an up-to-date membership directory. The latter will probably be already out-dated in parts, but corrections will be added as I receive them.

In this issue, the paper on tabular keys used by Irv. Newell is cited. All of us who were at the Tunis conference were most impressed with the potential of this method. I trust that this paper will be widely read and digested as I have no doubt it is of fundamental importance to us all.

May I take this opportunity of wishing you all a Happy and Prosperous New Year with every success in your research programmes.

John S. Gray.
Editor.

FINANCIAL REPORT

	£. s. d.
Brought forward	28 0 7
Subscriptions received	33 10 6
Cash in hand	<u>2 15 0</u>
Total	<u>£ 53 6 1</u>

Cost of producing Issue No.11,
Constitution, Directory, Postage £ 23 13 8

Balance at 18/2/71 £29. 12. 5. = £29.00

The request for subscriptions for 1971 has fallen largely
on deaf ears ! PLEASE PAY UP.

Those of you who have paid their 1971 dues will receive
a receipt for payment. The receipt will register either
pounds sterling or dollars. The reason for this is that
pounds sterling we receive in toto whereas out of your
three dollars cheque we receive only 85p (Britain is
decimilised now, 100 = £1.). Thus some accounting needs
to be done to balance the loss on dollar cheques.

If you pay for two years in dollar cheques at one time,
we will lose 40p on two years subscription rather than
as now 40p on one years subscription.

KEYS TO MEIOFAUNA

The following have agreed to provide keys to their respective groups
and are additional to those recorded in issue No. 11.

<u>NAME</u>	<u>TAXA</u>
BODIN, P.	COPEPODA, HARPACTICOIDA Families & Genera
BUSH, L.	SCHIZORHYNCHIA all
CLAUSEN, C.	HYDROZOA
MONNIOT, F.	ASCIDIA

We still lack PROTOZOAN, GNATHOSTOMULID experts.

NEWS FROM THE MEMBERS

DUANE HOPE.

"First, a colleague, Dr. Donald G. Murphy, and I are continuing work on the systematics of Atlantic deep-sea marine nematodes. Three species from these collections have been described and a description of another is in preparation. The second project, also in collaboration with Dr. Murphy, is the compilation of a checklist of the genera and higher taxa of free-living marine nematodes. The first section of the check-list consists of a taxonomic hierarchy with the author, date, and page number of the original description of each taxon, as well as their respective synonyms and homonyms will also be given for each genus. The second section will be an alphabetical listing of doubtful taxa, and the third section will be an alphabetical index to all taxa listed in the first two sections. The fourth and final section consists of complete references to all literature relevant to the check-list.

DUANE HOPE.

The data for the check-list has been stored in a computer at Smithsonian Institution and a program has been devised to print the data in manuscript form. This will reduce the problems of editing and retyping once the data base is free of errors. Further, the data base will be kept current with changes in marine nematode systematics, and revisions of the checklist will be published as they become justified by sufficient change. It is also intended that future editions will include diagnosis of taxa down to the generic level, so that the checklist may be used as a key. Lists of valid nominal species will be included for each genus. The third area of current research is a revision of the genus *Synonchus*, which will be followed by further studies of the family Leptosomatidae.

Report on the informal colloquium on marine nematology held at the Second International Congress of Parasitology on September 11.

The program was chaired by Dr. Murphy who first asked each in attendance to introduce themselves and describe their research interests. This was followed by an informal discussion, led by Drs. John Lee and John Tietjen, on the food relationships and culturing of free-living marine nematodes. Midway through the colloquium Dr. Burr presented a formal paper entitled "The pigmented eyespot of a marine nematode, *Oncholaimum vesicarium* : light and electron microscope observations." The colloquium then closed with a lengthy discussion on the need for improved quality in marine nematode systematics."

DON ZINN.

"Mr. Bruce W. Found of the University of Rhode Island is presently working under the auspices of the Systematics-Ecology Program at the Marine Biological Laboratory in Woods Hole, Massachusetts on culturing method for mystaceocarids and on their possible vertical and horizontal migrations in Nebraska Beach (Woods Hole).

JEAN LOUP D'HONDT.

"I shall be working in the Universite' d'Oran, Algeria until 1972, on leave of absence from Paris. (Correspondence can still be sent to my Paris address), with a small research group we are hoping to look at the meiofauna of the Algerian coast."

CORRIGENDUM.

In Issue No.11 an unfortunate citation error occurred, for :

AX, P. 1970. 2. Morph Tiere

this should read as follows :

MENKER, D. & AX, P. 1970. Zur Morphologie von Arenodiplosoma migrans n.g. n.s.p., einer vagilen Ascidien-Kolonie aus dem Mesopsammal der Nordsee (Tunicata, Asciidae). Z. Morph. Tiere. 86 : 323-336.

Apologies to Dr. Menker from the editor.

CHANGES OF ADDRESS (to Directory)

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Department of Zoology,
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and ecology kalyptorhynchia.

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Lab. de Biologie Marine,
Traverse de la Barasse,
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France.

Interests : Interstitial
Opisthobranchs Sedimentology.

POR, F.D.
Department of Zoology,
Hebrew University,
Jerusalem, Israel.

Interests · Harpacticoida.

BIOLOGICAL RHYTHMS STUDY GROUP

Set up originally in 1969, the study group has extended to cover interested workers in Belgium, Switzerland and more recently Italy. The group is interested in all aspects of rhythms, covering cellular biology to population biology and neurophysiology to marine ecology.

Interested persons are invited to communicate with the group at :
The Secretary, Study Group on Biological Rhythms, Laboratoire de Biologie Vegetale, 4 rue Ledru, F-63 Clermont Ferrand, France.

TABULAR KEYS

NEWELL, I.M. 1970. Construction and use of Tabular Keys. Pacific Insects. 12 (1) : 25-37.

Dr. Newell has added more information on the construction and use of tabular keys since the above paper. The additional information is available in photocopy form on writing to Dr. Newell at Department of Life Sciences, University of California, Riverside, California 92502, U.S.A.

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A BIBLIOGRAPHY OF INTERSTITIAL NEMERTEA
by Ernst Kirssteuer, Department of Living Invertebrates,
American Museum of Natural History,
New York, N.Y., 10024.

BACESCU, M. et al. 1965.
Recherches écologiques
sur les fonds sablonneux
de la Mer Noire (Côte
Roumaine). Trav. Mus.
Hist. Nat. "Gr. Antipa"
5:33-81. (Ecology).

BOADEN, P.J.S. 1963.
The interstitial fauna
of some North Wales
beaches. J. mar. biol.
Ass. U.K. 43 : 79-96.
(Ecology).

BÜRGER, O. 1895.
Nemertinen. - Fauna und
Flora des Golfs von
Neapel. 22. Monogr.,
743 pp. (Systematics,
Anatomy, Ecology).

BÜRGER, O. 1904.
Nemertini. - Das Tierreich.
20. Lieferung, 141 pp.
(Systematic, Distribution).

BÜRGER, O. 1897-1907.
Nemertini. - Brönn's
Klassen und Ordnungen des
Tierreichs. 4, Suppl.
542 pp. (Systematic,
Anatomy, Distribution).

BUSH, L.F. 1966.
Distribution of sand
fauna in beaches at
Miami, Florida. Bull.
Mar. Sci. 16 : 58-75.
(Ecology).

COE, W.R. 1940.
Revision of the nemertean
fauna of the Pacific coast of
North, Central and northern
South America. Allan Hancock
Pacific Exped. 2 : 247-322.
(Systematic, Anatomy).

COE, W.R. 1943.
Biology of the nemerteans of
the Atlantic coast of North
America. Trans. Connecticut
Acad. Arts Sci. 35 : 129-338.
(Systematic, Anatomy, Ecology,
Distribution).

COE, W.R. 1944.
Geographical distribution
of the nemerteans of the
Pacific coast of North America.
J. Washington Acad. Sci. 34 :
27-32. (Distribution).

CORREA, D.D. 1948.
Ototyphlonemertes from the
Brazilian coast. Comun. Zool.
Mus. Hist. Nat. Montevideo 2 :
1-12. (Systematic, Anatomy,
Biology).

CORREA, D.D. 1949.
Ecological study of Brazilian
Ototyphlonemertes. Comun.
Zool. Mus. Hist. Nat. Monte-
video 3 : 1-7. (Ecology).

- CORREA, D.D. 1950.
Sobre Ototyphlonemertes
do Brasil. Bol. Fac.
Filos. Cien; Letr.
Univ. S. Paulo, Zool.
15 : 203-233. (Systematic,
Anatomy, Histology).
- CORREA, D.D. 1953.
Sobre a neurofisiologia
locomotora de heptó-
nemertinos e a taxo-
nomia de Ototyphlo-
nemertes. An. Acad.
Brasil. Cien. 25 :
545-555. (Systematic,
Physiology).
- CORREA, D.D. 1955.
Nemertinos do litoral
brasileiro. Bol. Fac.
Filos. Cien. Letr.
Univ. S. Paulo, Zool.
19 : 1-119. (Systematic,
Anatomy, Ecology, Distribution).
- CORREA, D.D. 1956.
Aspectos da biologia e
da ecologia de alguns
nemertinos arenícolas.
An. Acad. Brasil. Cien.
28 : xxx-xxxii. (Biology,
Ecology).
- CORREA, D.D. 1958.
Nemertinos do litoral
brasileiro (VII). An.
Acad. Brasil. Cien.
29 : 441-455. (Systematic,
Anatomy).
- CORREA, D.D. 1961.
Nemerteans from Florida and
the Virgin Islands. Bull.
Mar. Sci. Gulf & Carib. 11 :
1-44. (Systematic, Anatomy,
Distribution).
- DELAMARE DEBOUTTEVILLE, CL.
1930. Biologie des eaux
souterraines littorales et
continentales. Hermann, Paris,
740 pp. (Distribution);
- DU PLESSIS, G. 1891.
Sur une nouvelle Oerstedia
aveugle mais portant une
paire de vésicules auditives
(otocytes). Zool. Anz. 14 :
413-416. (Anatomy).
- FRIEDRICH, H. 1933.
Morphologische Studien an
Nemertinen der Kieler Bucht,
I u. II. Zeitschr. wiss.
Zool. 144 : 493-509.
(Systematic, Anatomy).
- FRIEDRICH, H. 1935.
Beobachtungen über eigenartige
Bewegungsweisen bei Nemertinen.
Biol. Zbl. 55 : 84-86.
(Locomotion).
- FRIEDRICH, H. 1935.
Studien zur Morphologie,
Systematik und Ökologie der
Nemertinen der Kieler Bucht.
Arch. Naturgesch. Berlin,
N.F. 4 : 293-375. Systematic,
Anatomy, Ecology.

- FRIEDRICH, H. 1936.
Nemertini. In :
Tierwelt der Nord- und
Ostsee, IV : 1-89.
(Systematic, Anatomy,
Ecology, Distribution).
- FRIEDRICH, H. 1949.
Über zwei bemerkenswerte
neue Nemertinen der Sand-
fauna. Nieler Meeresforsch.,
G : 68-72. (Systematic,
Anatomy).
- FRIEDRICH, H. 1950.
Zwei neue Bestandteile in
der Fauna der Nordsee (Die
Gattung Ototyphlonemertes).
Neue Ergebni. u. Probleme d.
Zool. Leipzig, 171-177.
(Systematic, Distribution).
- FRIEDRICH, H. 1955.
Beiträge zu einer Synopsis
der Gattungen der Nemertini
monostilifera nebst Bestim-
mungsschlüssel. Zeitschr.
wiss. Zool. 158 : 183-192.
(Systematic, Anatomy, Key).
- GERNER, L. 1969.
Nemertinen der Gattungen
Cephalothrix und Ototyphlo-
nemertes aus dem marinen
Mesopsammal. Helgoländer
wiss. Meeresunters. 19 +
68-110. (Systematic,
Anatomy, Distribution).
- GONTCHAROFF, M. 1955.
Inventaire de la faune marine
de Roscoff. Nemertes. Trav.
Stat. Biol. Roscoff, suppl.
7 : 1-15. (Distribution).
- HYLBOM, R. 1957.
Studies on palaeonemerteans
of the Gullmar Fjord area
(West coast of Sweden). Ark.
Zool. 10 : 539-582.
(Systematic, Anatomy, Ecology).
- KARLING, T.G. 1933.
Ein Beitrag zur Kenntnis der
Nemertinen des Finnischen
Meerbusens. Mem. Soc. Fauna
et Flora Fennica 10 : 76-90.
(Systematic, Anatomy).
- KIRSTEUER, E. 1967.
Marine, benthonic nemerteans :
How to collect and preserve
them. Amer. Mus. Novit. no.
2290 : 1-10. (Methods).
- MÜLLER, G.J. 1965.
Beitrag zur Kenntnis der
Ökologie der Nemertinen des
Schwarzen Meeres (Rumanischer
Küstenbereich). Rapp. Proc.-
verb. C.I.E.S.M.M. 16 : 139-
142. (Ecology).
- MÜLLER, G.J. 1966.
Analiza zoogeografica a faunei
de nemertieni din Marea Neagra.
Hidrobiologia (Bucuresti) 7 :
131-140. (Ecology, Distri-
bution).

MÜLLER, G.J. 1968.
Betrachtungen über die
Gattung Ototyphlonemertes
DIESING 1863 nebst Bestim-
mungsschlüssel der validen
Arten (Hoploneuriini).
Senckenbergiana biol.
49 : 461-468. (Systematics,
Ecology, Key).

MÜLLER, G.J. 1968.
Ototyphlonemertes antipai.
sp., ein neues Mitglied
des mediolitoralen Mesop-
sammals des Schwarzen
Meeres. Trav. Mus. Hist.
Nat. "Gr. Antipa" 2 :
343-348. (Systematics,
Anatomy, Ecology).

OXNER, M. 1907.
Quelques observations sur
les nématopes de Roscoff et
de Ville-franche-sur-Mer.
Arch. Zool. Expér. Génér.
6 : Notes et Revues 22-92.
(Systematic, Anatomy).

REMANE, A. 1933.
Verteilung und Organi-
sation der benthonischen
Mikrofauna der Lielter Bucht.
Wiss. Meeresunters. Abt.
Kiel, N.F. 21 : 161-221.
(Ecology, Distribution).

REMANE, A. 1940.
Einführung in die zoolo-
gische Ökologie der Nord-
und Ostsee. In : Tierwelt
der Nord- und Ostsee, 1a :
1-258. (Ecology).

REMANE, A. 1952.
Die Besiedlung des Sandbodens
im Meer und die Bedeutung der
Lebensformtypen für die
Ökologie. Zool. Anz., Suppl.
10 : 327-359. (Ecology).

RIEEL, R. 1965.
Vierzehn für die Adria neue
Tiergruppen. Bull. Sci. Cons.
Acad. RSF Jugoslavie, Sect.A,
Zagreb, 10 : 374. (Distr-
bution).

ULJANIN, W. 1870.
Turbellaria from the Bay of
Sevastopol. Second Congress
of Russian Naturalists in
Moscow, Zoology, 2 : 1-95.
(In Russian). (Systematic,
Distribution).

ZINN, D.J. 1900.
A new method for the extraction
of living Thalassopsammon from
intertidal and subtidal marine
sands. Biol. Bull. 181 : 413.
(Method).

OMISSIONS AND ADDITIONS TO THE BIBLIOGRAPHY
ON TARDIGRADA (PSAMMONALIA NO.8). LELAND W. POLLOCK.

- IX, F. 1969.
Populationdynamik,
Lebenszyklen und Fort-
pflanzungsbioologie der
Microfauna des Meeres-
sandes. Verhandl.
Deutsch. Zool. ges.
Innsbruck, 1968 : 66-
118 (B. mirus).
- BAREL, C.D.H. &
P.G.N. KRAMERS, 1970.
Notes on associates of
echinoderms from Plymouth
and the coast of Brittany.
Koninkl. Nederl. Akademie
van Wetenschappen-Amsterdam.
Proc. Ser. 3, 73 (3) :
159-170. (T. synaptae).
- BOADEN, P.J.S. 1966.
Interstitial fauna from
northern Ireland. Veröff.
Inst. Meeresforsch.
Bremher. Sonderbd. 2 :
125-130 (B. mirus).
- DRAGESCO, J. 1960.
Ciliates mesopsammiques
littoraux. Trav. Sta.
Biol. Roscoff (NS) 12:
1-358 (B. mirus).
- FENCHEL, T. 1969.
The ecology of marine
microbenthos IV.
Structure and function
of the benthic eco-
system, its chemical
and physical factors
and the microfauna com-
munities with special
reference to the ciliated
protozoa. Ophelia, 6 :
1-162 (B. mirus).
- FREIDRICH, H. 1968.
Kurze Notizen zur marinen
Fauna der Assenweser.
Veröff. Inst. Meeresforsch.
Bremher., 8 : 109 (B. mirus).
- GEDDES, D.C. 1968.
A note on the marine
tardigrade Hypsibius
(Isohypsicibus) stenostomus
(Richters) from the Trømso
area, Northern Norway.
Astarte, No.33 : 1-4
(H. stenostomus).
- D'HONDT, J.L. 1970.
Inventaire de la faune
marine de Roscoff - Gastro-
triches - Kinorhynques -
Rotifers - Tardigrades.
Ed, sta. Biol. Roscoff :
1-29 (Hal. guiteli,
B. pennaki, B. mirus,
B. littoralis var submersus,
S. bradyus, E. sigismundi).
- IHAROS, G. 1968.
The scientific results of the
Hungarian soil zoological
expeditions to South America.
6. Eine neue Tardigraden-
Gattung von mariner Verwandt-
schaft aus dem chilenischen
Altiplano. Uroscula Zool.
Budapest, 8(2) : 357-361
(Echinurusellus longiunguis).
- LAMEERE, 1895. ????
Man. Faune Belgique, 1 :
379 (E. sigismundi).

- MARCUS, E. 1934.
Tardigrada. In :
Dorschelt, E. et al
(eds). Handwörterbuch
der Naturwissenschaften
9 : 859 (B.mirus).
- MCGINTY, M.M. 1969.
Batillipes gilmartini,
a new marine tardigrade
from a California
Beach. Pacif. Sci.,
23 : 394-396
(B.gilmartini, Hal romanei)
- MEYER, H.E. 1967
Some tardigrades from
San Diego County,
California. Published
by the author, 3018 E
Valley Parkway,
Escondido, Calif. 92025.
pp.1-10 (B.mirus).
- POLLOCK, L.W. 1970a.
Batillipes dicrocercus
n.sp., Stygarctus
granulatus n.sp., and
other Tardigrada from
Woods Hole, Massachusetts,
USA. Trans. Amer. Microsc. Soc.,
89: 38-52 (B.pennaki,
B.mirus, B.bullacaudatus).
- POLLOCK, L.W. 1970b.
Reproductive anatomy
of some marine Hetero-
tardigrada. Trans. Amer. Microsc. Soc.,
89 : 308-316 (B.mirus,
B.pennaki, S.granulatus).
- POLLOCK, L.W. 1970c.
Distribution and dynamics
of interstitial Tardigrada
at Woods Hole, Massachusetts,
USA. Ophelia, 7 : 145-165
(B.pennaki, B.bullacaudatus,
B.mirus, B.dicrocercus,
S.granulatus, E.sigismundi).
- RAMAZZOTTI, G. 1969.
II Phylum Tardigrada (2°
Supplemento) con la nuova
tabella per la determinazione
dei generi. Mem. Ist. Ital.
Idrobiol., 25 : 65-80.
- REMANE, A. 1940.
Einführung in die zoologische
Ökologie der Nord- und
Ostsee. In : Grimpe &
Wagler, Tierwelt N.-U.
Ostsee, 1a: 1-232 (B.mirus).
- RENAUD-MORNANT, J. &
M.N. ANSELME-MOIZAN. 1969.
Stades larvaires du tardi-
grade marin Stygarctus
bradyurus Schulz et position
systematique des Stygarctidae.
Bull. Mus. Nat. Hist. Natur.,
41 : 833-893.
- RENAUD-MORNANT, J. &
L.W. POLLOCK. 1971.
A review of the systematics
and ecology of marine Tardi-
grada. Proc. 1st Confer.
Meiobenthos, Tunis. Smithsonian Contrib. Zool., 76,
In Press.

RIEMANN, F. 1966.
Die interstitielle Faune
in Elbe-Aestuar. Verbreit-
ung und Systematik. Arch.
Hydrobiol., Suppl. 31 :
1-279 (B.phreaticus, B.sp.).

SALVAT, B. &
J.RENAUD-MORVANT. 1969.
Etude écologique du macro-
benthos et du meiobenthos
d'un fond sableux du
lagon de Mururoa (Tuamotu-
Polynésie). Cah. Pacifique,
13 : 159-179 (Hal. perfectus).

SCHMIDT, P. 1966.
Die quantitative
Verteilung und Popula-
tionsdynamik des
Mesopsammens am
Gezeiten-Sandstrand
der Nordseeinsel Sylt
I. Faktorengeuge
und biologische
Gliederung des
Lebensraumes. Int.
Rev. ges. Hydrobiol.,
53 : 733-779.

SCHMIDT, P. 1969.
Die quantitative Verteilung
und Populationsdynamik des
Mesopsammens am Gezeiten-
Sandstrand der Nordseeinsel
Sylt II. Quantitative
Verteilung und Populations-
dynamik einzelner Arten.
Int. Rev. ges. Hydrobiol.,
54 : 95-174 (B.mirus,
S.bradypus).

SCHUSTER, R.O. &
A.A.GRIMARICK. 1966.
Tardigrada from the
Galapagos and Cocos
Islands. Proc. Calif.
Acad. Sci., 34 : 315-328
(E.sigismundi, Arch. marci).

THANE-FENCHEL, A. 1968.
Distribution and ecology of
non-planktonic brackish-water
rotifers from Scandinavian
waters. Ophelia, 5 :
273-297 (B.mirus).

ADDITIONAL OR LITTLE KNOWN REFERENCES ON
HARPACTICOID COPEPODS by PH.BODIN.

BATTAGLIA (B.) et
VOLLMANN-ROCCO (B.).
1970. Espèce nouvelle
du genre Tisbe de
Banyuls-sur-Mer. Vie
et Milieu, XX (2-A) :
421-437.

BOZIC (B.), 1969 a -
Latiremus eximius, n.gen.,
n.sp. à position systématique
incertaine (Copépode Harpacti-
oide) : données pour une
nouvelle famille. Bull. Soc.
Zool. France, 94 (2) : 309-316.

BOZIB (B.), 1969 b -
Copépodes Harpacticoides
de la Réunion. VI.
Bull. Mus. Nat. Hist. nat.,
41 (4) : 867-882.

BRODSKAYA (V.A.), 1963 -
A survey of the family
Cervinidae (Crustacea,
Copepoda). Zool. Zhurnal,
43 (12) : 1785-1803.
(in Russian).

COTTARELLI (V.), 1969.
Un nuovo Crostacea di
acque interstiziali
Italiane : Psammop-
syllus pasquinni n.sp.
(Harpacticoida,
Cylindropsyllidae).
Istituto Lombardo
(Rend. Sc.), B, 103 :
8-21.

COULL (B.C.), 1970 -
Two new species of
Phyllopodopsyllus
(Copepoda, Harpacti-
coidea) from Bermuda.
Crustaceana, (in press).

COULL (B.C.), 1970 b,
Meiobenthic Harpacti-
coidea (Crustacea,
Copepoda) from North
Carolina continental
shelf. Cahiers de
Biologie Marine, (in
press).

GAMO (S.), 1969 a -
Notes on three species
harpacticoid copepoda,
Forcellidium sp.,
Peltidium ovale
Thompson et A. Scott,
and Dactylopusia (?)
platysoma Thompson et
A. Scott, from Tanabe
Bay. Pub. Seto Mar.
Lab., XVI (5) : 345-361.

GAMO (S.), 1969 b -
Further notes on
Paramenophia platysoma
(Thompson et A. Scott)
(= Dactylopusia platysoma
Thompson et A. Scott),
harpacticoid Copepoda
from Tanabe Bay, Kii
Peninsula. Proc. Jap.
Soc. Syst. Zool., 5 :
19-22.

GEDDES (D.C.), 1969 -
Marine biological investi-
gations in the Bahamas 9.
Harpacticoid copepods
belonging to the family
Thalestridae Sars. Sarsia,
39 : 1-16.

HAMOND (R.), 1970 -
On a harpacticoid copepod
of the genus Orthopsyllus
Brady et Robertson from
West Runton, Norfolk,
England. Crustaceana,
18 (2) : 209-217.

IKUE MOTOO et
MITSUYOSHI AOKI, 1969 -
Reproduction of Copépoda
Tisbe furcata cultured
with sea-water acclimatized
Chlorella, at a basic diet.
Bull. Jap. Soc. Scient.
Fish., 35 (9) : 335-337.

ITO, (T.) 1968 -
Descriptions and records
of marine harpacticoid
copepods from Hokkaido.
Journ. Fac. Sci.
Hokkaido Univ.,
ser. VI, 16 (3) :
369-381.

ITO (T.), 1968 -
Descriptions and records
of marine harpacticoid
copepods from Hokkaido. II.
Journ. Fac. Sci. Hokkaido
Univ., ser. VI, 17 (1) :
58-77.

MARCUS (A.), 1968 -
Copepoda from the mid-
littoral zone of the
Black Sea-Romanian
shore. I. *Nitocra*
elongata n. sp. Trav.
Mus. Hist. nat. "Gr.
Antipa", IX : 15-24.

MASRY (D.), 1969 -
Ecological study of
some sandy beaches
along the Israeli
mediterranean coast
with a description of
the interstitial har-
pacticoids (Crustacea,
Copepoda). Cahiers de
Biologie Marine, XI (3) :
229-258.

MONCHENKO (V.I.), 1967 -
Observations sur la faune
des Palmipèdes et des
Crustacés des limons des
rivières Dniepr et Bug.
Journal hydrobiol., III
(1) : 70-73.

MONCHENKO (V.I.) et
POLISCHUK (V.V.) 1969 -
On Harpacticoida (Crustacea)
in the Soviet part of the
lower Danube and its delta.
Bull. zool., no. 3 : 50-64
(in Russian).

PALLARES (R.E.), 1968 -
El genere Scutellidium
en la Ria Feseado (Crustacea,
Copepoda). Physics,
Argentina, 79 (78) : 51-71.

SOMOLOVA (M.N.), 1970 -
Weight characteristics
of Meiobenthos from
different parts of the
deep-sea trophic regions
of the Pacific Ocean.
Oceanology, 2 : 342-354.

SOYER (J.), 1969 -
Contribution à l'étude des
Copépodes Harpacticoides de
Méditerranéeoccidentale. 1.-
Cerviniidae Sars, Lan. Vie
et Milieu, XX (7-8) :
877-886.

- VILELA (M.H.), 1965 -
Copépodes da Ria de
Faro-Olhao. Notas e
Estudos Inst. Biol. Marit.,
31 : 1-38 (14 pl.).
- VILELA (M.H.), 1968 -
Copépodes da Campanha
do N.R.P. "faial",
1958-1959. Notes e
Estudos Inst. Biol.
Marit., 35 : 1-40 (17 pl.)
- VILELA (M.H.), 1969 -
The life cycle of
Tisbe sp. (Copepoda,
Harpacticoida) under
laboratory conditions.
Notas e Estudos Inst.
Biol. Marit., 36 :
1-16 (5 pl.).
- VOELKMAN-ROCCO (B.),
1969 - Tisbe pontina
n. sp., a harpacticoid
copepod from the island
Ponza. Arch. Oceanogr.
Limnol., 16 (2) :
117-128.
- WELLS (J.B.L.), 1970 -
The marine flora and
fauna of the Isles of
Scilly. Crustacea :
Copepoda : Harpacticoida.
J. nat. Hist., 4 :
255-260.
- WEATHAN (H.C.O.), 1970 -
Copepods from Chesapeake
Bay sponges including
Asterocheres jeanyeatmanae
n. sp. Trans. Amer.
Microsc. Soc., 89 (1) :
27-38.
- BODIN (PH.), 1970 -
Copépodes Harpacticoides
marins des environs de la
Rochelle. 1. Espèces de
la vase intertidale de
Chatelaillon. Téthys,
(sous presse).
- BODIN (PH.), 1971 -
Catalogue des nouveaux
Copépodes Harpacticoides
marins. Additif no.1 ;
à paraître in Téthys.
- BODIN (PH.), 1971 -
Copépodes Harpacticoides
marins des environs de
La Rochelle. 2. Espèces
de la zone intertidale
d'Yves. (en préparation).

RECENT LITERATURE

AKESSON, B. 1970.
Ophryotrocha labronica
as test animal for the
study of marine pollution.
Helgo. Wiss. Meeresunters.
20: 293-303.

BACCETTI, B. &
F.ROSATI. 1969.
Electron microscopy
on tardigrades. J.
Submicro. Cytol. 1 :
197-205.

BAREL, C.D.N. &
P.G.N.Kramers. 1970.
Notes on associates
of Echinoderms from
Plymouth and the coast
of Brittany. Proc. (K.)
Nederlandse Akad.
Wetensch., Ser. C,
73(2) : 159-170.

BARR, M.W. 1969.
Culturing the marine
harpacticoid copepod,
Tisbe furcata (Baird,
1837). Crustaceana,
16 : 95-97.

X BATTAGLIA, B. 1970.
Cultivation of marine
copepods for genetic
and evolutionary re-
search. Helgo. wiss.
Meeresunters. 20:
385-392.

BAUMANN, H. 1970.
Lebenslauf und Lebens-
weise von Macrobiotus
hufelandii Schultze
(Tardigrada). Veroff.
Uberseemus. Bremen.
4 (6) : 29-43.

BOUSFIELD, E.L. 1970.
Adaptive radiation in
sand-burrowing Amphipod
crustaceans. Ches. Sci.
11 : 143-154.

BRADFORD, J. 1969.
New genera and species of
benthic calanpid copepods
from the New Zealand slope.
New Zeal. J. Mar. and
Freshw. Res. 3 (4), 473-505.

CROKER, R.A. 1970.
Intertidal sand macrofauna
from Long Island, New York.
Ches. Sci. 11 : 134-137.

CROWE, J.H., I.M.NE WELL,
& W.W.THOMSON. 1970.
Echiniscus viridis (Tardi-
grada). Fine structure of
the cuticle. Trans. Amer.
Microsc. Soc., 89 : 316-324.

CUBIT, J. 1969.
Behaviour and physical
factors causing migration
and aggregation of the
sand crab Emerita analoga.
Ecol. 50: 118-123.

DAVIES, R.W. 1969.
The production of
antisera for detecting
specific triclad antigens
in the gut contents of
predators. *Oikos* 20:
248-260.

EL-WAKEEL, S.K. &
S.D.W/HBY. 1970.
Texture and chemistry
of Lake Maryut sedi-
ments. *Arch. Hydro-
biol.* 67 : 388-395.

FISH, S. 1970.
The biology of
Eurydice pulchra
(Crustacea: Isopoda)
J. Mar. Biol. Ass. U.K.
50: 753-768.

FOSSHAGEN, A. 1970.
Stephidae (Copepoda,
Calanoida) from the
Bahamas. With re-
marks on Stephos
sinuatus Willey and
S. arcticus Sars. *Sarsia*
41, 37-48.

GAMBLE, J.C. 1970.
Anaerobic survival
of the crustaceans
Corophium volutator,
C. Arenarium, and
Tanais cherreuxi. *J.
Mar. Biol. Ass. U.K.*
50 : 657-671.

X GIERE, O. 1970.
Investigations on the
micro-zonation and
ecology of marine
Oligochaetae in the
flats of the Isle of
Sylt. *Veroff. Inst.
Meeresforsch. Bremerh.*
12 : 491-529.

GRAY, J.S. &
R.M.JOHNSON. 1970.
The bacteria of a sandy
beach as an ecological
factor affecting the
interstitial gastrotrich
Turbanella hyalina
Schultze. *J. exp. mar.
Biol. Ecol.* 4 : 119-133.

GRAY, J.S. &
RIEGER, R.M. 1971.
A quantitative study of the
meiofauna of an exposed
sandy beach at Robin Hood's
Bay, Yorkshire. *J. mar.
biol. Ass. U.K.* 51 : 1-19.

HARGRAVE, B.T. 1969.
Similarity of oxygen
uptake by benthic communi-
ties. *Limnol. Oceanogr.*
14 : 801-805.

HARGRAVE, B. 1970.
The effect of a deposit-
feeding amphipod on the
metabolism of benthic
microflora. *Limnol.
Oceanogr.* 15 : 21-30.

- HERRIVE, B.T. 1970.
Distribution, growth,
and seasonal abundance
of Hyalella azteca
(amphipoda) in re-
lation to sediment
microflore. *J. Fish.*
Res. Bd. Canada 87 :
685-699.
- HOPPER, B.E. 1970.
Diplolaimelloides
bruciei n. sp.
(Nonhysteridae:
Nematoda), prevalent
in marsh grass,
Spartina alterni-
flora Loisel.
Canadian Journal
of Zoology, Volume
48, Number 3,
573-575.
- ITO, T. 1969.
The biology of a
harpacticoid cope-
pod, Tigriopus
japonicus Mori. *J.*
Fac. Sci. Hokkaido
Univ. 17(3) :
474-500.
- ✗ JENNINGS, J.B. &
J.B. COLAN, 1970.
Gut structure, di-
gestive physiology,
and food storage in
Pontonema vulgaris
(Nematoda : Enoplia)
J. Zool. Lond. 161:
211-221.
- JOHNSON, R.G. 1970.
Variation in diversity
within benthic marine
communities. *The Amer.*
Nat. 104 : 285-300.
- JONES, D.A. 1970.
Factors affecting the
distribution of the inter-
tidal isopods Eurydice
pulchra Leach and E. affinis
Hansen in Britain. *J. Anim.*
Ecol. 39 : 455-472.
- JONES, D.A. 1970.
Population densities and
breeding in Eurydice
pulchra and Eurydice
affinis in Britain. *J.*
Mar. Biol. Ass. U.K. 50:
635-655.
- KARLING, T.G. 1969.
Ein iiberzahliger Genital-
apparat bei einen rhabdo-
coelen Turbellar, *Z. Morph.*
Tiere 65: 202-8.
- KARLING, T.G. 1970.
Bothriomolus balticus
Meixner 1938 (Turbellaria)
in dem schwedischen Binnensee
Vöttern. *Zool. Anz.* 184 :
120-121.
- KARLING, T.G. 1970.
On Pterastericola
fedotouii (Turbellaria)
Commensal in sea stars.
Z. Morph. Tiere. 67 :
29-39.

LEACH, J.H. 1970.

Epibenthic algal production in an intertidal mudflat.
Limnol. Oceanogr.
15 : 514-521.

LIE, U. & J.C.KELLEY. 1970. Benthic infauna communities off the coast of Washington and in Puget Sound : Identification and distribution of the communities. J. Rish. Res. Bd. Canada 27:621-651.

MCCLOSKEY, L.R. 1970. The dynamics of the community associated with a marine scleractinian coral. Int. Rev. ges. Hydrobiol. 55 : 13-81.

MCGINTY, M.M. 1969. Batillipes gilmartini, a new marine tardigrade from a California Beach. Pacif. Sci. 23 : 394-398.

MCINTYRE, A.D. 1970. The range of biomass in intertidal sand, with special reference to the bivalve Tellina tenuis. J. mar. Biol. Assoc. U.K. 50:561-576.

MCLEAN, R.F. 1970.

Variations in grain-size and sorting on two Kaikoura Beaches. New Zealand J. Mar. Freshw. Res. 4 : 141-164.

MCLUSKY, D.S. 1970. Salinity preference in Corophium volunator. J. Mar. Biol. Ass. U.K. 50 : 747-752.

MORGAN, E. 1970. The effect of environmental factors on the distribution of the amphipod Pectenogammarus planicrurus, with particular reference to grain size. J. Mar. Biol. Ass. U.K. 50 : 769-785.

NEWELL, I.M. 1970. Construction and use of tabular keys. Pacif. Insects 12 : 25-37.

X PANIKKAR, B.M. & S.RAJAN. 1970. Observations on the ecology of some sandy beaches of the southwest coast of India. Proc. Ind. Acad. Sci., B, 72: 247-260.

POLLOCK, L.W. 1970. Reproductive anatomy of some marine Heterotardigrada. Trans. Amer. Microsc. Soc. 89:308-316.

- POLLOCK, L.W. 1970.
Distribution and
dynamics of inter-
stitial Tardigrada
at Woods Hole,
Massachusetts, U.S.A.
Ophelia 7 : 145-165.
- RIEMANN, F. 1970.
Das Seitenorgan von
Halalaimus. Zur
Morphologie eines
vermutlich senorischen
Organs von freilebenden
Nematoden. Veroff.
Inst. Meeresforsch.
Bremerh. 12 : 429-442.
- RWDESCU, L. 1969.
Die Tardigraden des
Schwarzen Meeres.
Hidrobiol. 10: 3-12.
- SAMEOTO, D.D. 1969.
Comparative ecology,
life histories, and
behaviour of inter-
tidal sand-burrowing
amphipods (Crustacea:
Haustoriidae) at Cape
Cod. *J. Fish. Res.*
Bd. Canada 26 : 361-382.
- SANDBURG, P.A. 1970.
Scanning electron
microscopy of freeze-
dried Ostracoda (Crus-
tacea). *Trans. Amer.*
Microsc. Soc. 89:
113-124.
- X SAYRE, R.M. 1969.
A method for culturing
a predaceous tardigrade
on the nematode Panagrellus
redivivus. *Trans. Amer.*
Micro. Soc. 88:266-274.
- STRAARUP, B.S. 1970.
On the ecology of
Turbellarians in a
sheltered brackish
shallow-water bay.
Ophelia 7: 185-216.
- THANE-FENCHEL, A. 1970.
Interstitial gastrotrichs
in some South Florida
beaches. *Ophelia* 7:
113-133.
- YEATES, G.W. 1970.
Studies on laboratory
cultures of dune sand
nematodes. *J. Natur.*
Hist. 4: 119-136.
- VITIELLO, P. 1969.
Linhomoeidae (Nematoda)
des Vases Profondes du
Golfe du Lion. Extrait
de *Tethys*, volume 1,
numero 2.
- WARWICK, R.M. 1970.
The genus Paramesocanthion
Wieser (Nematoda, Enoplidae)
off the coast of Northum-
berland. *Cahiers de Biologie*
Marine, Tome XI, pp.187-194.

WRIGHT, K.A. 1970.
Some Neuron-hypodermis
Relationships in the
Parasitic Nematode
Trichuris myocastoris
Enigk. Journal of
Nematology, Volume 2,
Number 2, pp.159-160.

ZAFFAGNINI, F. 1969.
Quelques observations
sur l'appareil reprod-
ucteur male et female
de Derocheilocaris
remanei Delamare et Chappuis
(Crustacea:Mystacocarida).
Cah. Biol. mar. 10:
103-107.

ZILLIOUX, E.J. 1969.
A continuous recirculating
culture system for
planktonic copepods.
Mar. Biol. 4 : 215-218.