

June 1975

This time the Newsletter is fortunately not quite so voluminous, as it follows quite closely on A.N. 5. Also I have not yet been able to get any response from Leningrad, and surprisingly and somewhat disappointingly, no further reactions on Jerry Barnard's essay and David Wildish rejoinder in A.N. 4 and 5. For A.N. 7, I have been promised an essay on Black Sea amphipods and work being carried out in this area, by Iraida Greze and I shall also try to get an eyewitness report from the forthcoming Gammarus and Niphargus symposium in Schlitz.

Again I must ask for extra assistance in the preparation of the bibliography, for many probably the most useful part of the Newsletter. I shall probably be away from Tromsø from mid-september to early november and thus can not scan the literature in this period.

No news about the financial aspects of the Newsletter; many subscribers have paid DM 8-, which means A.N. 2-5, and I hope you will again pay your subscription in advance. Dr. W.D. Williams (Dept of Zoology. Univ. of Adelaide, Adelaide, S.Austr. 5001) has kindly offered to coordinate payments for the Australian region, and I hope you'll keep him busy.

The deadline for A.N. 7 will be 1. december 1975.

Tromsø Museum  
9000 Tromsø  
Norway

June 1975

  
Wim Vader

GAMMARUS and GROUNDWATER SYMPOSIUM SCHLITZ

(22-27 September 1975)

Preliminary program

Sunday, 21st: Arrival and informal meeting

Monday, 22nd: Adresses

TZVETKOVA, N.L., Leningrad

Seasonal alterations of the heatresistance (of peraeopods and of whole organisms) of Gammarus ssp. from the White Sea.

STEELE, D.H., St. Johns. Newfoundland

The effect of photoperiod on the reproductive cycle of Gammarus setosus.

HUSMANN, S., Schlitz

Aktivitätsperiodik bei Niphargus und anderen Grundwassertieren.

GOEDMAKERS, A.M., Amsterdam

Observations on the migration of three fresh water Gammarids.

MEIJERING, M. Schlitz

Quantitative relationships between drift and upstream migration of Gammarus fossarum Koch.

KOCH, M.E., Schlitz and MEIJERING, M., Schlitz

Duration of instars and praecopulae in Gammarus pulex and Gammarus roeseli under semi-natural conditions.

DORGELLO, J., Amsterdam

Comperative ecophysiology of Chaetogammarus marinus and C. obtusatus, exposed to the influence of salinity-temperature combinations (tolerance-preference, blood sodium regulation).

GRAF, F., Dijon

Evolution du stockage de calcium et des cellules à urates chez Niphargus schellenbergi.

VADER, W., Tromsø

Occurrence and biotope of Gammarus zaddachi s.s. in northern Norway.

GREZE, I.I., Sevastopol

Life cycle of Gammarus aequicauda MART in the Black Sea.

ALOUF, N.J., Hadath-Beyrouth

Cycle de reproduction de deux espèces parentés de Gammarus (Crustaces,

BULNHEIM, H.P., Hamburg

Affects of inbreeding on the fitness of the Amphipod Gammarus duebeni

GOURBAULT, N., Moulis

Recent Karyological research on cave Planarians form Europe

Short Notes

Discussion-groups

Tuesday, 23rd:

INSTINSKY, T., Mainz

(Versuche mit *Gammarus* in einer Salinitätsorgel)

GEORGIADIS, G., Mainz

(Temperatur-Toleranz-Versuche an *Gammarus fossarum* und *Gammarus roeseli*)

PINKSTER, S., Amsterdam

The introduction of the alien amphipod *G. tigrinus* in the Netherlands and its competition with local species.

KARAMAN, G.S., Titograd

*Gammarus pulex*-group in Europe, Nord Africa and Asia Minor.

SKALSKI, A.W., Czestochowa

Note on some *Niphargus* species from Caucasus.

SKET, B., Ljubljana

*Niphargen* in Vrackwasser

KARAMAN, G.S., Titograd

Genus *Niphargus* in Italy.

BOUSFIELD, E.L., Ottawa

A new look at the systematics of fresh-water gammaroidean amphipods of the world.

JAZDZEWSKI, K., Lodz

Remarks on the morphology of *Gammarus fossarum* KOCH 1835 and *Gammarus kischineffensia* SCHELLENBERG 1937.

BERNER, L., Marseille

Les *Gammariens* de la France Continentale.

STOCK, J.H., Amsterdam

Comparison of populations of *Niphargus kochianus* from England, Ireland and the European continent.

HOLSINGER, J.R., Washington

A review of the systematics of North American subterranean amphipods of the *Crangonyx* group (*Gammaridae* s. lat.).

Short Notes

Discussion-groups

Wednesday, 24th:

SCHMINKE, H.K., Kiel

Systematische Untersuchungen an Grundwasserkrebsen- eine Bestandsaufnahme.

GLEDHILL, T., Wareham

Numerical fluctuations of four species of subterranean amphipods during a five year period.

MAGNIEZ, G., Dijon

Remarques sur la biologie et l'écologie de Stenasellus virei Dollfus (Crustacea, Isopoda, Asellota) des eaux souterraines.

LATTINGER-PENKO, R., Sveucilista Zagreb

Cycle de la reproduction chez Proasellus slavus ssf. u. (Crustacé Isopode) d'hyporhéique de la riviere Drava.

Fulda-Excursion- River, Valley and Ancient Town

Thursday, 25th:

JANKOWSKAJA, A., Leningrad

The distribution of the order Bathynellacea (Malacostraca) and Limnohalacaridae (Acaria) of the Groundwaters of the Middle Asia.

SCHMINKE, H.K., Kiel

Bathynellacea (Crustacea, Syncarida) von Madagaskar.

DANIELOPOL, D., Wien

The distribution of the fauna in the interstitial habitat of riverine gravel and sand of Danube and Piesting (Austria).

JAKOBI, H., Curitiba

Über ökologische und biogeographische Trends innerhalb der Harpacticoiden (Copepoda-Crustacea).

BOTOSANEANU, L., Bucuresti

Remarks on the occurrence of eyeless and depigmented animals in habitats other than Subterranean in Romania.

SKALSKI, A.W., Cvestochowa

Groundwater inhabitants in Poland.

BREHM, J., Schlitz

Grundwasserstudien an Quellen.

Short Notes

Discussion-groups

DANIELOPOL, D.L., Wien

Données comparatives sur la biologie de quelques ostracodes Candoninae épigées et hypogées.

PIEPER, H.G., Schlitz

Das hyporheische Intersitial eines Urgebirgsbaches unter dem Einfluss von allochthoner Nährstoffzufuhr.

CVETKOV, L., Sofia

Resultats des recherches sur faune phréatique en Bulgarie.

BOTOSANEANU, L., Bucuresti

Some observations on marine and freshwater interstitialfaunas in Cuba.

MIKHALEVICH, V.I., Leningrad

New data on the foraminifera of the groundwaters of the Middle Asia.

MATSUMOTO, K., Tokyo

An introduction to the Japanese Groundwater animals with reference to their ecology and hygienic significance

MESTROV, M., Zagreb

La dynamique des populations de crustacé isopode Proasellus slavus ssp. u. et des larves des Chironomides dans l'hyporhéique de Drave.

LEE, D.R., Blacksburg

The Role of Groundwater in Eutrophication of a Lake in Glacial Outwash Terrain.

LÜBKES, G., Schlitz

Vertikale Verteilung stygorhithraler Ciliaten.

RITTERBUSCH, B., Berlin

Untersuchungen zur Funktion des Mesopsammon bei der Reinigung von infiltriertem Oberflächenwasser.

Discussion-groups

Final Session

For Saturday 27th we will try to organize a post-colloquium excursion to the water-works of Wiesbaden.

#### LAST SECOND ADDITIONS

KRAPP-SCHICKEL, G., 1974 Camill HELLERS Sammlung adriatischer Amphipoda-1866 und heute. \_\_\_\_\_ Ann. Naturhistor. Mus. Wien 78: 319-379. (An important paper; see abstract in A.N.3. p.36. The author removes Nicea plumicornis and Amphithoe aquilina Costa (with Nicea fasciculata, N. nudicornis and N. rudis as synonyms) to Parhyale and describes a new Parhyale species, P. eburnea, from Italy. She has further separated Hyale stebbingi from H. nilssonii (here called H. nilsoni), and elucidated the position of three related species in the H. perieri group: viz. H. perieri (with Nicea macronyx), H. crassipes (with Nicea bucchichi and H. gulbenkiani) and H. minor (= H. perieri minor). Coboldus nitior is a n.g.n.sp. in the Acanthonotozomatidae. Also Lysi-anassa pilicornis, Tryphosella similis and T. nardonis are fully illustrated).

LOWRY, J.K., 1974. Key and checklist to the gammaridean amphipods of Kaikoura. \_\_\_\_\_ Mauri Ora 2: 95-130. (An illustrated key is provided to 63 of the 69 amphipods known from the Kaikoura Peninsula. A most informative paper).

REQUESTS FOR INFORMATION etc.

Behaviour of Tubicolous Amphipods

We are interested in the ecology, behaviour and physiology of tubicolous amphipods. At the moment we are trying to accumulate all references which deal with behaviour and the list below reveals our progress so far. If anyone knows of any work, including unpublished theses, not mentioned below, would they please let us know.

P.G. MOORE & R.O. SHILLAKER  
Marine Station  
Millport, Isle of Cumbrae  
KA 28 OEG  
Scotland

- BARRETT, B.E., 1966. A contribution to the knowledge of the amphipodous crustacean Amphithoe valida Smith 1873. \_\_\_\_\_ Ph. D.thesis, Univ. N. Hampshire, U.S.A.
- CONNELL, J.H., 1963. Territorial behaviour and dispersion in some marine invertebrates. \_\_\_\_\_ Res. Popul. Ecol. 5: 87-101.
- ENEQUIST, P., 1950. Studies on the soft-bottom amphipods of the Skagerrak. \_\_\_\_\_ Zool. Bidr. Uppsala 28: 297-492.
- GOODHART, C.B., 1939. Notes on the bionomics of the tube-building amphipod Leptocheirus pilosus Zaddach. \_\_\_\_\_ J. mar. biol. Ass. U.K. 23: 311-325.
- HART, J.J., 1930. Preliminary notes on the bionomics of the amphipod Corophium volutator Pallas. \_\_\_\_\_ J. mar. biol. Ass. 16: 761-789.
- HOLMES, S.J., 1901. Observations on the habits and natural history of Amphithoe longimana Smith. \_\_\_\_\_ Biol. Bull. 2: 165-193.
- INGLE, R.W., 1966. An account of the burrowing behaviour of the amphipod Corophium arenarium. \_\_\_\_\_ Ann. Mag. nat. Hist. (13) 9: 309-317.
- LAKSHAMANA RAO, M.V. & K. SHYAMASUNDARI, 1966. Tube building habits of the fouling amphipod Corophium triaenonyx Stebbing at Visakhapatnam harbour. \_\_\_\_\_ J. zool. Soc. India 15:134-140.
- MEADOWS, P.S. & A. REID, 1966. The behaviour of Corophium volutator \_\_\_\_\_ J. Zool. London 150:387-400.
- MILLS, E.L., 1967. The biology of an ampeliscid amphipod crustacean sibling species pair. \_\_\_\_\_ J. Fish. Res. Bd. Can. 24:

- MORGAN, E., 1965. The activity rhythm of the amphipod Corophium volu-  
tator (Pallas) and its possible relationship to changes in  
hydrostatic pressure associated with the tides. \_\_\_\_\_  
J. Anim. Ecol. 34: 731-746.
- SALFI, M., 1939. Ricerche etologiche ed ecologiche sugli Amfipoda  
tubiculo del Canale delle Saline di Cagliari. \_\_\_\_\_  
Arch. zool. Ital. 27: 31-62.
- SKUTCH, A.F., 1926. On the habits and ecology of the tube-building  
amphipod Amphithoe rubricata Montagu. \_\_\_\_\_ Ecology 7:  
481-502.
- ZAVATTARI, E., 1920. Observazione etologiche sopra l'amphipoda tubiculo.  
Ericthonius brasiliensis (Dana). \_\_\_\_\_ Mem. Com. talasso-  
graf. ital. 77: 1-25.

Amphipoda of Chile

Recently I got a letter from Dr. S. Carlos VARELA, Instituto de Zoologia,  
Universidad Austral de Chile, Valdivia, Chili, who hopes to  
come in contact with colleagues working on the amphipod fauna  
of his area and would be most grateful for relevant reprints.

Wim Vader

Acanthonotozoma

Jean Just tells me that he has not got any responses after his request  
for material of Acanthonotozoma from Arctic and N. Pacific waters. Too  
bad, for his review is a very comprehensive one otherwise, and it would  
be a great pity if our colleagues in Leningrad, Murmansk, Vladivostok,  
Korea, Japan and Alaska had material of Acanthonotozoma, which can not  
be included in Just's revision, just because they have forgotten to send  
the information. It is for requests like this one that I hoped the  
Newsletter could be an important vehicle, but of course it only works  
if everybody cooperates.

Wim Vader

NEWS FROM COLLEAGUES

Hans-Georg ANDRES: Sie haben angefragt, in welcher Zeitschrift meine  
Arbeit über Nicippe buchi nov. spec. (from Jameos del Agua,  
Lanzarote) erscheint. Es sind die Mitt. Hamburg Zool. Mus. Inst.  
Ercheinungstermin ist wahrscheinlich 1975.

Anastasiou ELEFTHERIOU: Quite soon I hope to be able to work up some of the colossal amount of material we have from Scottish waters and let people know about our activities. In addition I have also managed to salvage most of two old but extremely interesting collections of amphipods from British, North Atlantic and Icelandic waters. One of these was Thomas Scott's collection which includes some very interesting specimens. Further information on these collections will be provided as soon as I find time to catalogue them properly.

Tony FINCHAM: I am sorry to trouble you with yet another change of address but, hopefully, the Museum address above is permanent. I am working on larval rearing of prawns at the Museum, but I still have N.Z. data on amphipods to prepare for two papers. One will be jointly with Bob Cooper describing new species of phoxocephalids and oedicerotids, the other will be North Island amphipod ecology of sandy beaches.

Mitsuo FUKUCHI: I should like to introduce my past research works. Graduation thesis \_\_\_\_\_ Studies on Euphausiacea and Amphipoda collected by High-speed sampling from the northern North Pacific and Bering Sea ("Oshoru Maru" on Cruise 32, June-August, 1969). Masters thesis - Relationship between the excretion and grazing rates and the body size of zooplankton. And now, I am preparing a Ph. D. thesis entitled "Bioenergetics of walleye pollock larvae (Theragra chalcogramma Pallas) in coastal water". After completing my Ph. D. thesis, I will publish my graduation and master's thesis. I will engage in a biological research especially on ecology of marine organisms, in connection with Japanese Antarctic Research Expedition. I am interested in the studies on amphipoda, especially their biological significance in marine production systems, and in the energy in marine ecosystems.

Traudl KRAPP-SCHICKEL. The following publication are in press or submitted for publication:

①. Krapp-Schickel, G., 1975. Neues über die Lilljeborgiiden des Mittelmeeres (Crustacea, Amphipoda). \_\_\_\_\_ Memorie Mus. Civ. Stor. Nat. Verona, in press. Describes 2 new species from the Adriatic: L. psaltrica and Idunella pirata, the first Mediterranean Idunella (also found in the Gulf of Naples). These and 2 new Listriella species described by Schiecke (1973) from Naples necessitate a revised family diagnosis and new key to the genera. A key to Mediterranean Lilljeborgiidae is also provided.

②. Krapp-Schickel, G. & U. Schiecke, 1975. Microjassa cumbrensis im Mittelmeer. \_\_\_\_\_ ibid., in press. Detailed descrip-

tion of different growth stages of M.c. Ischyrocerus constantinopolitanus (young stage) and Podocerus falcatiformis (hyperadult male) of Sowinsky, 1897, may be synonyms of this species.

③. Krapp-Schickel, G. & F. Krapp, 1975. Quelques traits de l'ecologie d'amphipodes et de pycnogonides provenant d'un flot nord-adriatique. \_\_\_\_\_ Vie Milieu, in press. Intertidal samples from among algae of the islet Banjole (northern Adriatic) with a gradient from exposed to protected localities. Detailed autecological data for 7 species of Amph. (of the 92 found).

④. Krapp-Schickel, G., 1975. Revision of mediterranean Leucothoe species (Amphipoda, Crustacea). \_\_\_\_\_ Memorie Mus. Civ. Stor. Nat. Verona, in press. 10 Leucothoe-species occur in the Mediterranean: L. spinicarpa, L. venetiarum, L. richiardii, L. euryonyx (with L. quadrimana and L. dentitelson as synonyms) L. lilljeborgii, L. incisa, L. oboa, L. pachycera, L. serraticarpa Della Valle and L. occulta n.sp.

⑤. Krapp-Schickel, G., manuscript. Die Gattung Stenothoe im Mittelmeer. A complete revision, dealing with the following species: S. antennulariae, S. bosporana (with S. dactylipotens as synonym), S. cavimana, S. dollfusi, S. eduardi n.sp. (= S. cattai C & F, non. cattai Stebbing), S. elachista n.sp. (the so-called petite forme de S. monoculoides'), S. gallensis, S. marina (inclusive S. marina mediterranea Ledoyer), S. monoculoides, S. tergestina and S. valida.

⑥. Krapp-Schickel, G., manuscript. Amphipods from Pantelleria and Catania (Sicily). 48 samples from algal zones and sand, which yielded 90 species of Amphipoda. Many ecological data, and systematic notes on Gammaropsis cf. erythrophthalma, Gammaropsis n.sp., Lysianassa pilicornis, Microjassa cumbrensis, Panoplea minuta and Photis longipes.

(And still Traudl complains that she does not have time for her amphipod work. W.V.)

Amilcar MATEUS: We have been very busy with making the new structure of our University. I am going to Mexico where I present my work about the phylogeny of the genus Hadzia (Congresso Latino-Americano de Zoologie).

Andrew MILLS: I am working with Dr. John Fish and am interested in the biology of Corophium volutator and C. arenarium in the Dovey estuary.

Wim VADER: When in Holland a short trip this spring I worked up a small collection of amphipods from the light-vessel "Noordhinder" (51° 39'N, 02° 34'E), collected in the winter of 1956. To my surprise this ship had a most interesting fouling community, with Stenothoe valida, Jassa marmorata and Caprella tuberculata as dominating species. Does anybody know of earlier collections of S. valida in the North Sea? A short paper on occurrence and ecology of the 2 Gammarellus species in Holland will appear in De Levende Natuur this summer.

#### MAJOR AMPHIPOD COLLECTIONS

After your positive reaction to the contributions by Torben Wolff (AN 3) and Hans Eckhard Gruner (AN 4) I wrote to a number of museums and solicited further information of this type. Three curators reacted promptly and their notes follow below, while notes from the Hamburg and Oslo Museums are promised for AN 7. I did not know where the major amphipod collections in India, Japan, Australia, New Zealand and South America were located, but hope that our subscribers there will react spontaneously.

#### Institut Océanographique, Monaco

La collection d'Amphipodes du Musée Océanographique de Monaco a été publiée par Ed. Chevreux en 1900, en 1935, et par J.M. Pirlot en 1939.

La plupart d'entre eux ont été décrits par Ed. Chevreux dans:

- Le Bulletin de la Société Zoologique de France
- Le Bulletin de l'Institut Océanographique de Monaco et les Résultats des Campagnes Scientifiques de S.A.S. le Prince Albert I<sup>er</sup> de Monaco.
- Quelques-uns par J.M. Pirlot dans Le Bulletin de l'Institut Océanographique de Monaco. La plus grande partie de ces Amphipodes ont été récoltés au cours des Campagnes Scientifiques du Prince Albert I<sup>er</sup> de Monaco. Une petite collection provient de la campagne de Ed. Chevreux à bord de son navire la "Melita" sur les côtes d'Algérie et de Tunisie. Une autre collection provient des pêches effectuées dans la région de Monaco, par le Musée Océanographique.

Tous les Amphipodes sont classés par nom de genre et d'espèce. Je joins à la lettre une photocopie de l'index bibliographique des travaux concernant les publications d'Ed. Chevreux, et de J.M. Pirlot, sur les Amphipodes, provenant des Croisières du Prince Albert I<sup>er</sup> de Monaco (This list I have not copied, as most of the papers are well-known. Those

interested can get a copy. W.V.)

Les Amphipodes sont fichés dans la nomenclature generale des Collections Zoologiques. Sur chaque fiche figurent le nom de genre et d'espèce, le numero de la Station (lieu de travail et de récolte en mer), la date, la localité, la profondeur, etc.

Exemple:            Cyclocaris guilelmi, Chevreux  
                         Stn. 945- 21-VII-1908  
                         Iles Lofoten; Profondeur: 1095 m

G. TESTA  
Conservateur des Collections

Smithsonian Institution, Washington, D.C. 20560

The amphipod collections of the USNM occupy about 3000 square feet of shelf space. From 1910 until 1958 curation of this collection was carried out by the late Clarence R. Shoemaker, and it is largely thru his efforts that the collection is so well organized and cared for. A summary of his work on amphipods is given by Bowman and Peterson, 1965, *Crustaceana* 9: 309-316. When amphipod collections were received, Shoemaker sorted them by family or genus and geographic region. Thus material for family or generic revisions is conveniently available. The largest part of our collections is from Atlantic and Pacific coasts of North America, but we have reasonably good coverage of some other regions. Historically, the USNM amphipod collection was build up from the material accumulated during cruises of the U.S. Fish Commission vessels Fish Hawk and Albatross, to which have been added the amphipods from various expeditions, some of them sponsored by the Smithsonian Institution, and the contributions of a number of individuals and institutions. The USNM collections include type material of about 500 species. We are working to expand our holdings so that amphipod taxa will be represented on a world-wide basis, and we welcome the donation of specimens from amphipod specialists and will be happy to consider exchanges of specimens. We would be grateful if authors would send copies of their publications for our divisional reprint library.

Specimens in our collections are available on loan to specialists. Inquiries on Gammaridea may be made to Barnard, on Hyperiidea to Bowman. Those who are able to come to Washington can be accommodated in our visitors' laboratory as space permits.

Thomas E. Bowman

LIST OF SUBSCRIBERS (SUPPLEMENT 4)

Subscription terminated:

- 63. Barry Hargrave
- 189. E. Emrys Watkin

Changes of address

- 205. Henk Dennert. New address: Rademakerstr. 18,  
Ouderkerk/Amstel, Holland
- 39. M.J. Dunbar, New address: Marine Sciences Centre,  
McGill University, P.O. Box 6070, Montreal 101,  
Quebec, Canada.
- 48. Tony Fincham. New address: British Museum, (Natural History),  
Department of Zoology, Cromwell Road, London SW 7 5 BD,  
England
- 62. Eiji Harada. New address: Seto Marine Biological Laboratory,  
Sirahama, Wakayamaken, Japan.

New subscribers:

- 247. V. Bryazgin, Laboratory of Marine Hydrobiology, Knipovich  
Polar Institute of Marine Fisheries and Oceanography,  
6 Knipovich Street, Murmansk 183063, USSR.
- 248. Mitsuo Fukuchi, National Institute of Polar Research, 9-10,  
Kaga 1- Chome, Itabaschi-ku, Tokyo 173, Japan.
- 249. H. Junera (♀), Laboratoire Sexualité et Reproduction des  
Invertébrés, 4, Place Jussieu, Bat. G- Tour 32, 75230  
Paris Cedex 05, Frankrike.
- 250. The Library, Gulf Coast Research Lab., Ocean Spring,  
Mississippi 39564, U.S.A.
- 251. A. Mills, Department of Zoology, The University College of  
Wales. Penllais. Aberystwyth. Wales

BIBLIOGRAPHY

As usual, this bibliography owes much to the help of Claude de Broyer and Jan Stock. Again I have a few important data on Corophium, this time contributed by Dang Ngoc Thanh and Donald McLusky. The latter sent the following two references:

- L. BROWN, 1971. The effect of salinity/temperature combinations on Corophium volutator. \_\_\_\_\_ Unpublished Honours thesis, Univ. of Stirling, Scotland.
- M. McLEOD, 1975. Ecological study of Island Form brackish pond. Unpublished Honours thesis, Univ. of Stirling. (Includes data on the effect of low oxygen concentration on survival and respiration in Corophium).

I'll be most happy to take in further data on unpublished theses, dealing with amphipods.

Dr. Dang has kindly sent me French diagnoses of three amphipod species described by him in 1965 and 1967 in Vietnamese in the North-Vietnamese periodical Tập San Sinh Vật Địa Học (= Journal biologique et géologéographique, Hanoi). In his 1965-paper (Volume 4: 146-152) Dang described, besides Apseudes vietnamensis and Cyathura truncata, 2 Corophium species about which Dang gives the following data:

1. Corophium intermedium Dang, 1965 (p.149) Diagnose: Rostrum spiniforme, lobes lateraux arrondis, égaux à rostrum. Yeux visibles. Ant. I longues, flagellum avec 17 articles (♂) ou 15 art. (♀), dépassant l'article 4 du ped. ant. II. Ant. II robustes, article basal 2 court avec 2 épines inégales, art. 3 quadrangulaire, art. 4 renflé avec un crochet et un tubercule pres de l'extrémité distale, le coté interne garni de 2 rangs de 3 et 4 spinules (2 spinules seulement chez la femelle). Art. 5 cylindrique, avec 2 tubercules dentiformes placés dans une échancrure située au 1/3 de l'extrémité proximale. Palpes mandibulaires avec 2 articles, le second nettement plus long que le premier. L'article distal de l'uropode III en forme ovale, telson élargi a la region centrale, l'extrémité distale échancree.

Dimension: ♂: 8 mm ♀: 5 mm

Habitat. Dans les eaux saumâtres et eaux douces de la region cotière du Nord-Vietnam.

Affinités. Forme voisine de Corophium homoceratum Yu (Yu, S.C., 1938. Bull. Fan mem. Inst. Biol., Peiping 8: 83-108), distincte par la forme et l'armature de l'article basal, 3 et 4 de l' ant. II du mâle, l'inegalité des 2 articles du palpe mandibulaire, et la forme caracteristique de l'article distal de l'uropode III et du telson.

2. Corophium minutum Dang, 1965 (p.151). Diagnose: Rostrum spiniforme chez le mâle et triangulaire chez la femelle. Lobes lateraux arrondis. Yeux visibles. Ant. I dépassant le bout de l'art. basal 4 de l'ant. II, flagellum 8 art. (♂) ou 9 art. (♀). Art. basal 4 de l'ant. II renflé avec 1 épine et 1 crochet à la face inferieure de l'article. Art. basal 5 cylindrique avec 1 tubercule spiniforme distal et une petite dent proximale. Palpes mandibulaires à 2 articles egaux. Urop. III ont leur art. basal quadrangulaire atteignant le bout distal du telson, article distal en forme bâtonnet court, dépassant le bout du telson. Telson très court, en forme semicirculaire.

Dimensions: Taille (♂ et ♀) 3.5 mm.

Habitat: Dans les eaux saumâtres et eaux douces de la region cotière du Nord Vietnam.

Affinites: Corophium minutum se distingue nettement de toutes les autres espèces connues du genre Corophium ayant l'urosome segmenté, par la forme caracteristique de l'ant. II, de l'urop. III et du telson.

(The Vietnamese description of these species is apparently somewhat more extensive, and both species are illustrated. Reprints of this paper are in the possession of Wim Vader and Nina Tzvetkova, a copy is in the library of the British Museum.)

In a paper in vol. 6 (1967) of the same journal Dang described a further new amphipod species, viz. Melita vietnamica, on which he gives the following data:

3. Melita vietnamica Dang, 1967 (p.157, fig. 3 ) Diagnose: Plaques coxales developpées. Segment II de l'urosome avec 2 epines dorsales. Ep. III l'angle posterieur pointu. Ant. I mesurant 2/3 de la longueur du corps, flag. avec 15 articles (8 articles chez la femelle), flag. acces. avec 2 articles atteignant le second article du principale. Ant. II courtes, flag. avec 5 articles, lanceiforme chez le mâle, à structure normale chez la femelle. Palpes des maxillipèdes robustes, article 5 en forme de griffe et plus long que l'art. 4. Palpes

mandibulaires avec 3 articles, art. 3 plus court que l'art 2. Art. 6 du gnath. I plus court que l'art. 5, avec une protuberance pointue à l'extrémité distale (chez la femelle, cette protuberance est arrondie). Art. 6 du gnath. II a son côte palmaire dentelé. Ur. I-II à branches égales, Art. 1 de la branche externe (of ur. 3) à 2 fois plus que le pedoncule, art. 2 tres developpé, egal à la motié du premier en longueur. Branche interne en forme d'ecaille. Telson bilobé, les lobes divergents avec chacun 2 epines distales.

Dimensions: Taille du mâle: 3.1 mm, de la femelle: 2.7 mm.

Habitat: Dans les eaux saumâtres du Nord Vietnam .

Affinities: Melita vietnamica se distingue bien de toutes les autres espèces connues de ce genre par le dimorphisme des antennes II entre le mâle et la femelle, la structure des gnathopodes I, des palpes mandibulaires et des maxillipedes, et par l'article distal très developpé de l'uropode III. (I have not seen Dang's 1967-paper).

Of the books discussed in A.N. 5, Dr. John Luther Mohr, who according to Anatol Jankowski had "inverted the chonos tree" understandably wants to show he did do nothing of the kind, but his contribution has not yet reached me and will appear in A.N. 7. Diana Laubitz has kindly consented to reviewing Vassilenko's Caprellid-monograph for the Amphipod Newsletter, probably also in A.N. 7. Reygrobellet's thesis was received only a week ago, and I have chosen to use the author's summary in this case.

- ALIKHAN, M.A., K. JAŹDŹEWSKI & R. GONDKO, 1974. Ecological implications of haemolymph protein patterns in some amphipod and isopod species. \_\_\_\_\_ Curr. Sci, India 43: 136-139. (Not seen, i.a. on Gammarus fossarum, G. lacustris and G. roeseli).
- ALLAIN, J.Y., Th. DO-CHI, LAM HOAI THONG, M.- Th. OLLIVIER & C. RETIÈRE, 1971 Etude bionomique du Golfe Normanno-Breton: Secteur oriental de la Baie de Saint-Brieuc. \_\_\_\_\_ Trav. Lab. Biol. Halieutique, Univ. Rennes 5: 71-120 (not seen).
- BALCESCU- CODREANU, D., 1974. Sur une gregarine nouvelle à syzygies multiples, Uradiophora ramosa n.sp., parasite d'un amphipode Pontocaspien de Roumanie. \_\_\_\_\_ Rev. Roum. Biol., Ser. Zool. 19: 79-82 (The host is Pontogammarus robustoides).

- BETHEL, W.N. & J.C. HOLMES, 1974. Correlation of development of altered evasive behavior in Gammarus lacustris (Amphipoda) harboring cystacanths of Polymorphus paradoxus (Acanthocephala) with the infectivity to the definitive host. \_\_\_\_\_ J. Parasitol. 60: 272-274 (not seen).
- BOU, C., 1974. Recherches sur les eaux souterraines 25. Les methodes de recolte dans les eaux souterraines interstitielles. \_\_\_\_\_ Ann. Speleol. 29:611-619.
- BROYER, C. de, 1975. Revision du genre Adeliella (Amphipoda, Gammaridae, Lysianassidae) et description d'une nouvelle espèce antarctique. \_\_\_\_\_ Crustaceana 28: 73-85 (Description and figures of A. laticornis, A. takoradia (described originally by J.L. Barnard sub Orchomene) and A. olivieri n.sp.)
- DADSWELL, J.M., 1974. Distribution, ecology and postglacial dispersal of certain crustaceans and fishes in eastern North America. \_\_\_\_\_ Natn Mus. Can. Publs Zool. 11: 1-XVIII, 1-110. (Not seen. Deals with i.a. Gammaracanthus loricatus and Pontoporeia affinis).
- DUPUIS, C., 1975. Objections aux propositions de Bousfield & Holthuis (1969) concernant une douzaine de genres d'Amphipodes. \_\_\_\_\_ Bull. zool. Nomencl. 32: 3-5 (On amphipod names proposed by Rafinesque; see also Holthuis 1975).
- FIELD, L.H., 1974. A description and experimental analysis of Batesian mimicry between a marine Gastropod and a Amphipod. \_\_\_\_\_ Pacif. Sci. 28: 439-448 (On the relation between Lacuna species and unidentified Stenopleustes species in California Zostera beds).
- FISH, J.D., 1975. Development, hatching and brood size in Bathyporeia pilosa and B. pelagica (Crustacea Amphipoda). \_\_\_\_\_ J. mar. biol. Ass. U.K. 55: 357-368.
- FLORES, M. & G.J. BRUSCA, 1975. Observations on two species of hyperiid amphipods associated with the ctenophore Pleurobrachia bachei. \_\_\_\_\_ Bull. south. Calif. Acad. Sci. 74: 10-15 (Hyperoche mediterranea and H. medusarum).
- GAMULIN- BRIDA, H., 1974. Biocenoses benthiques de la Mer Adriatique. \_\_\_\_\_ Acta Adriatica 15(9): 1-103.
- GASUNAS, I.I., 1975. (Peracarida from Lake Dusya (The Lithuanian SSR)). \_\_\_\_\_ Hidrobiol. Zhurn. 11 (1): 46-50 (Russian with English summary. Amph.: Chaetogammarus warpachowski, Corophium curvispinum, Gammarus lacustris, Pontogammarus crassus, P. robustoides).
- GILBERT, J. & C. van HERREWEGE, 1974. Alimentation artificielle et utilisation digestive des aliments chez Niphargus virei (Crustacé Amphipode hypogé): methodologie et resultats preliminaires)

- Ann. Nutr. 28: 159-172 (not seen).
- HINZ, W., 1975. Vorkommen von Gammarus (Amphipoda) im Raum Düsseldorf-Ratingen. \_\_\_\_\_ Decheniana (Bonn) 128: 107-112.
- HOLSINGER, J.W., 1974. A new cavernicolous amphipod crustacean of the genus Hadzia (Gammaridae) from Jamaica, with notes on the distribution and taxonomic status of the species. \_\_\_\_\_ Ann. Speleol. 29: 647-655 (Genus is redescribed and its distribution discussed)
- HOLTHUIS, L.B., 1975. Rafinesque's amphipod names: reply to Dr. Dupuis. \_\_\_\_\_ Bull. zool. Nomencl. 32: 5-8.
- HUGHES, R.G., 1975. The distribution of epizoites on the hydroid Nemertesia antennina (L.). \_\_\_\_\_ J. mar. biol. Ass. U.K. 55: 275-294. (Amphipods are among the most numerous associates of Nemertesia. The most common species are the caprellids Caprella linearis and Pseudoprotella phasma, the corophiids Corophium sextoni and Ericthonius brasiliensis, and the stenothoids Parametopa kervillei and Stenothoe marina).
- IVESTER, M.S. & B.C. COULL, 1975. Comparative study of ultrastructural morphology of some mouthparts of four haustoriid amphipods. \_\_\_\_\_ Can. J. Zool. 53: 408-417 (Acanthohaustorius millsii, Neohaustorius schmitzi, Protohaustorius aff. deichmannae and Pseudohaustorius carolinensis)
- JEFFORDS, R.M., 1975. Availability of genus and species-group names proposed after 1930 in "n.g., n.sp." and related formats: comments on discussion by C.W. Sabrosky. \_\_\_\_\_ Bull. zool. Nomencl. 32: 23-30.
- LAKE, P.S. & B. KNOTT, 1973. On the freshwater crustaceans of the Central Plateau. \_\_\_\_\_ Pp 95-99 in M.R. BANKS (ed.): The Lake Country of Tasmania. A symposium conducted by the Royal Society of Tasmania, at Poatina, Tasmania, on 11-13 Nov. 1972. (Not seen).
- LAPPALAINEN, A., 1973. Biotic fluctuations in a Zostera marina community. \_\_\_\_\_ Oikos, Suppl. 15: 74-80.
- MACDONALD, A.G. & J.M. TEAL, 1975. Tolerance of oceanic and shallow water Crustacea to high hydrostatic pressure. \_\_\_\_\_ Deep-Sea Res. 22: 131-144. (3 decapods and Lanceola sayana. L. sayana showed no significant changes in its locomotor activity after rapid compression to pressures below 200 atm, in contrast to the other species. Several Lanceola were capable of normal locomotor activity at 300 atm. for 1½ hours. L. sayana also tolerated temporary anoxia).

- MARKOSYAN, A.G , 1974. (Le population de Gammarus lacustris Sars (Crustacea, Amphipoda) dans le lac Sevan au cours de la baisse des eaux). \_\_\_\_\_ Biol. Zhurm. Armenii 27 (1): 28-35 (In Russian, not seen).
- MAUCLINE, J. & A.R.S. BALLANTYNE, 1975. The integumental organs of amphipods. \_\_\_\_\_ J. mar. biol. Ass. U.K. 55: 345-355 (A descriptive paper, illustrating these organs and their distribution over the pereon for 7 hyperiid and 5 gammaroid species)
- MORAND, C., 1974. Croissance relative de l'Amphipode troglobie Niphargus, étude de quelques problèmes particuliers. \_\_\_\_\_ Ann. Speleol. 29: 637-645 (not seen).
- NEBEKER, A.V. & F.A. PUGLISI, 1974. Effect of polychlorinated biphenyls (PCB's) on survival and reproduction of Daphnia, Gammarus and Tanytarsus. \_\_\_\_\_ Trans. Am. Fish. Soc. 103: 722-728 (not seen).
- NILSSON, L.M., 1974. Energy budget of a laboratory population of Gammarus pulex (Amphipoda). \_\_\_\_\_ Oikos 25: 35-42.
- ORTIZ TOUZET, M., 1974. (Contribution to the study of the littoral amphipods (Gammaridae of Cuba). \_\_\_\_\_ Rev. Roum. Biol. Ser. Zool. 19: 83-87 (not seen).
- OSEID, D.M. & J.J. SMITH, 1974. Chronic toxicity of hydrogen sulfide to Gammarus pseudolimnaeus. \_\_\_\_\_ Trans. Am. Fish. Soc. 103: 819-822 (not seen).
- PRYGUNKOVA, R.V., 1974. (Certain peculiarities in the seasonal development of zooplankton in the Chupa inlet of the White Sea). \_\_\_\_\_ Pp. 4-55 in "Seasonal phenomena in the life of the White and Barents Seas". Akad. Nauk SSSR, Zool. Inst. Explor. Fauna Seas USSR 13: (21): 1-328 (In Russian, not seen. Some data on Hyperia galba, Parathemisto abyssorum and Themisto libellula).
- RABINDRANATH, P., 1975. Marine Gammaridea (Crustacea: Amphipoda) from the Indian Region. Family Ampeliscidae. \_\_\_\_\_ Hydrobiologia 46: 241-262. (Deals with A. brevicornis, A. cyclops, A. scabripes and A. zamboangae (of which A. chevreuxi is a junior synonym). Incomplete coalescence of urosomites 2 and 3 is noticed in A. cyclops and A. scabripes. This feature might be used for a division of this large genus).
- REYGROBELLET, J.-L., 1974. Garniture chromosomiques de quelques espèces du genre Niphargus (Amphipode Gammaride troglobie). \_\_\_\_\_ Ann. Speleol. 29: 97-104. (Table 1 gives a survey of literature data on the Gammaridae).

REYGROBELLET, J.-L., 1975. Le fonctionnement des gonades chez Niphargus virei (Crustace Amphipode troglobie). Processus généraux, détermination de la durée de la spermatogenèse par histo-autoradiographie. \_\_\_\_\_ Diss. Univ. Lyon, 121 pp, 10 Pls. (La morphologie générale et l'organisation des appareils génitaux de N.virei sont peu différentes de celles déjà connues chez les Amphipodes. Le cycle d'intermue de ce troglobie présente des particularités qui se résument en deux mots: longueur et variabilité. La biologie de la reproduction supporte les mêmes qualificatifs; elle présente de plus une nette convergence avec celle des Talitrides terrestres.

Après la mise en point des méthodes d'étude, le cycle fonctionnel des gonades de N. virei a été établi. Il est, intrinsèquement, très semblable à celui des autres Amphipodes. Des points particuliers du fonctionnement du testicule ont été signalés dont le plus important est l'augmentation de l'activité génitale pendant le mois de Printemps, tout comme chez un organisme épigé. Quelques anomalies ont été décelées dans ce fonctionnement, qui dénotent chez N. virei la possibilité de périodes de blocage dans l'élaboration des cellules sexuelles.

Après étude autoradiographique on a pu déterminer que le testicule de N virei élaborait à partir d'une spermatogonie primaire un spermatozoïde mûr en 50 jours, durée considérablement supérieure à ce qu'on connaît des organismes vivant en surface.

Cette étude nous a donc permis de confirmer le ralentissement général des processus vitaux déjà connus chez Niphargus, cet animal étant cependant capable, ponctuellement, de productions aussi rapides que celles des épigés \_\_\_\_\_ (author's résumé.)

RANNON, M. & J. NOUGUIER, 1974. Pêches abyssales aux casiers. \_\_\_\_\_ Ann. Inst. Oceanogr. Paris 50: 139-143 (not seen).

ROE, H.S.J., 1974. Observations on the diurnal vertical migrations of an oceanic animal community \_\_\_\_\_ Mar. Biol. 28:99-113 (Reference incomplete in A.N.5).

SABROSKY, C.W., 1974. "Gen.n., sp.n." after 1930; is the generic name available? \_\_\_\_\_ Bull. zool. Nomencl. 30:210-216.

WING, B.L., 1975. New records of Ellobiopsidae (Protista incertae sedis) from the North Pacific with a description of Thalassomyces albatrossi n.sp., a parasite of the mysid Stilomysis major. \_\_\_\_\_ Fish. Bull. 73: 169-185. (Thalassomyces marsupii on pp. 178-180, hosts Parathemisto libellula, P. pacifica and Cyphocaris challengerii, the first known lysianassid host).

- ANADÓN, R., 1975. (A contribution to the knowledge of the bottom fauna of the Ria of Vigo (NW of Spain) 1. Pycnogonids and Crustacea of Panjon) \_\_\_\_\_ Investig. Pesqueras 39: 199-218 (Spanish with English summary. Amphipoda apparently identified with Chevreux & Fage 1925).
- BEK, T.A., 1974? (Material for the study of population structure in mass-occurrences of intertidal gammarid species (Amphipoda, Gammaridea)) \_\_\_\_\_ Biol. Belogo Morja?: 110-122 (In Russian, precise reference unknown, not noted on offprints. Studies on Gammarus duebeni, G. oceanicus and Marinogammarus obtusatus in the White Sea intertidal.)
- BRUN, B., 1973. Contribution à l'étude de la variabilité génétique d'un caractère chetotaxique chez Gammarus insensibilis Stock (Crustacé Amphipode). \_\_\_\_\_ Arch. Zool. exp. gén. 114: 213-231 (The character studied is the number of marginal setae on the coxal plates).
- CZECZUGA, B., 1975. Carotenoids in thirteen species of Gammaridae from Lake Baikal. \_\_\_\_\_ Comp. Biochem. Physiol. 50 B: 259-268. (not seen).
- DEGENS, E.T. & D.A. ROSS (ed.), 1974. The Black Sea. Geology, Chemistry and Biology. \_\_\_\_\_ Am. Ass. Petroleum Geologists, Tulsa, Oklahoma. IX+ 633 pp. (not seen).
- DEXTER, D.M., 1974. Sandy-beach fauna of the Pacific and Atlantic coasts of Costa Rica and Colombia. \_\_\_\_\_ Rev. Biol. trop. 22: 51-66. (Dominant amphipods were Phoxocephalidae and Acanthohaustorius n.sp.).
- DORGELLO, J., 1974. Comparative ecophysiology of gammarids (Crustacea, Amphipoda) from marine, brackish and fresh-water habitats, exposed to the influence of salinity-temperature combinations. 1. Effects on survival. \_\_\_\_\_ Hydrobiol. Bull. 8: 90-108.
- DUCRUET, J., 1975. Action de l'ecdystérone sur la mue de Crustacés amphipodes femelles: Gammarus pulex (L.) et G. fossarum Koch. Premiers résultats. \_\_\_\_\_ Crustaceana 28: 86-88. (The duration of intermoult is reduced after injection with ecdysterone).
- GALHANO, H., 1974. Sur les relations trophiques probables de quelques éléments benthiques de l'estuaire du Douro. \_\_\_\_\_ (i.a. Corophium multisetosum and Gammarus chevreuxi).
- GANNON, J.E. & S.A. GANNON, 1975. Observations on the narcotization of crustacean zooplankton. \_\_\_\_\_ Crustaceana 28: 220-224. (Carbonated water was the best narcotizing agent of those tested for crustacean zooplankton, followed by chloroform and methyl alcohol).

- GOEDMAKERS, A., 1974. Les Gammaridae (Crustacés, Amphipodes) du Massif Central. \_\_\_\_\_ Bull. zool. Mus. Univ. A'dam 3:211-219. (Gammarus pulex, G. fossarum and G. ibericus, the last-named a new species for France).
- GREZE, I.I., 1975. (A new species Nannonyx goesii reductus (Amphipoda, Gammaridea) from the Black Sea). \_\_\_\_\_ Zool. Zhurn. 54: 297-299.
- HAMMOUD, W., J. COMTE & J. DUCRUET, 1975. Recherche d'une substance sexuellement attractive chez les Gammares du groupe pulex (Amphipodes, Gammaridea). \_\_\_\_\_ Crustaceana 28: 152-157. (Both urine of attractive females and ecdysterone may act as a sexual pheromone in Gammarus).
- HORT-LEGRAND, C., J. BERREUR-BONNENFANT & T. GINSBURGER-VOGEL, 1974. Etude anatomique et histologique comparée de la différenciation des gonades chez les mâles et les femelles d'Orchestia gammarella Pallas (Crustacé Amphipode) pendant la période post-embryonnaire. \_\_\_\_\_ Bull. Soc. zool. Fr. 99: 521-524 (not seen).
- HURLEY, D.E., 1974. Titles of selected scientific periodicals and expedition reports dealing with marine sciences. New Zealand and the Antarctic. \_\_\_\_\_ Miscell. Publs N.Z. oceanogr. Inst. 58: 1-45.
- JOSSI, J.W., 1973. Distribution and abundance of pelagic Amphipoda in the Arabian Sea, Java Sea, and Indian Ocean with notes on their contribution to the total zooplankton. \_\_\_\_\_ J. mar. biol. Ass. India 14 (1972): 115-138. ("Distribution and abundance of 50 taxa of pelagic amphipods are presented. The percentage contribution, by numbers, of the amphipods to the total zooplankton averaged less than 10 %". Not seen).
- LADLE, M., 1975. The Haustoriidae (Amphipoda) of Budle Bay, Northumberland. \_\_\_\_\_ Crustaceana 28:37-47 (Studies of seasonal population changes in 6 species of Haust. The Bathyporeia species have an age-span of one year, while Urothoe species and Haustorius arenarius are much less sensitive towards low winter temperatures and live at least two years. The "Urothoe grimaldii" of this paper is more probably U. poseidonis (W.V.)).
- LAKING, P.N., 1974. The Black Sea. Its geology, chemistry and biology. A bibliography. \_\_\_\_\_ Woods Hole Oceanogr. Inst., Woods Hole, Mass., XIV + 368 pp. (not seen).
- LAVAL, Ph., 1975. Une analyse multivariable du développement au laboratoire de Phronima sedentaria (Forsk.), amphipode hypéride. Etude de l'influence de la température et de la quantité de nourriture. \_\_\_\_\_ Annls Inst. Oceanogr. 51: 5-41. (A most interesting study. Only the

amount of food ingested, and not the temperature, has an influence on the size of individuals. The amount of food ingested has also a profound effect on morphological differentiation, and this is analysed for 15 morphometric characters).

MAUCLINE, J., 1973. Assessing similarity between samples of plankton. \_\_\_\_\_ J. mar. biol. Ass. India 14 (1972): 26-41.

MEYERING, M.P.D., A.G.L. HAGEMANN & H.E.F. SCHRÖER, 1974. Der Einfluss hauslicher Abwasser auf die Verteilung von Gammarus pulex L. und Gammarus fossarum Koch in einen hessischen Mittelgebirgsbach. \_\_\_\_\_ Limnologica (Berlin) 9: 247-259.

MORRIS, B.F. & D.D. MOGELBERG, 1973. Identification manual to the pelagic Sargassum fauna. \_\_\_\_\_ Bermuda biol. Stn Res., spec. Publ. 11: 1-64. (Amphipoda pp. 39-41, i.a. an "apparently undescribed" Biancolina sp, living among Sargassum)

NAGELL, B., M. NOTINI & O. GRAHN, 1974. Toxicity of four oil dispersants to some animals from the Baltic Sea. \_\_\_\_\_ Mar. Biol. 28: 237-244 (Includes some work on Gammarus spp.)

PINKSTER, S. & A. GOEDMAKERS, 1975. On two new freshwater species of the genus Gammarus from North Africa (Crustacea, Amphipoda). \_\_\_\_\_ Beaufortia 23: 93-103.

PLITT, F., 1974. Unterschiedlich verunreinigte Abschnitte des Emmerbaches (Kr. Lüdinghausen) und ihre Gammariden-Populationen. \_\_\_\_\_ Natur u. Heimat. 34: 76-91. (On Gammarus pulex and G. roeseli)

PULSIFER, J., 1975. Some techniques for mounting copepods for examination in a scanning microscope. \_\_\_\_\_ Crustaceana 28: 101-105.

REES, C.P., 1974. A device for determining substratum selection under flowing-water conditions. \_\_\_\_\_ Limnol. Oceanogr. 19: 1012-1014. (Not seen. Experiments with Leptocheirus plumulosus).

SCHRAM, F.R., 1974. Convergences between late Paleozoic and modern caridoid Malacostraca. \_\_\_\_\_ Syst. Zool. 23: 323-332.

SEменова, T.N., 1974. (On the diurnal vertical migrations of Parathemisto japonica Bov. (Hyperiidia) in the Sea of Japan). \_\_\_\_\_ Okeanologiya 14: 334-340 (In Russian, English summary. Not seen)

SHEADER, M. & F. EVANS, 1974. The taxonomic relationship of Parathemisto gaudichaudi (Guerin) and P. gracilipes (Norman), with a key to the genus Parathemisto. \_\_\_\_\_ J. mar. biol. Ass. U.K. 54: 915-924. (P. gracilipes is a growthform, without any taxonomic status.)

- SHULENBERGER, E. & R.R. HESSLER, 1974. Scavenging abyssal benthic amphipods trapped under oligotrophic Central North Pacific Gyre water. \_\_\_\_\_ Mar. Biol. 28: 185-188. (Traps from 5720 m gave 1793 specimens of 5 species: Orchomene n.sp., Paralicella 2 n.spp., Eurythenes gryllus and Cyclocaris sp.)
- SMIT, H., 1974. Extension de l'aire de repartition de Gammarus tigrinus Sexton en 1973 aux Pays-Bas, et quelques remarques sur la concurrence avec les Gammares indigènes (Crustacea, Amphipoda). \_\_\_\_\_ Bull. zool. Mus. Univ. A'dam 4:35-44.
- STEIMLE, F.W. & R.B. STONE, 1973. Abundance and distribution of inshore benthic fauna off southwestern Long Island, N.Y.. \_\_\_\_\_ Techn. Rep. NMFS SSRF 673: 1-55 (Not seen).
- SUKOP, I., 1975. A population of Gammarus fossarum Koch (Amphipoda) in a Karstic stream. \_\_\_\_\_ Vestnik ceskosl. Spolecnosti. zool. 39: 73-79.
- TECKELMANN, U., 1974. Temperaturwirkungen auf Wachstum und Stoffwechsel kaltstenothermer Flieszwassertiere. \_\_\_\_\_ Arch. Hydrobiol. 74:479-527. (The growth of animals living in mountain streams (Amphipods and larvae of insects) was compared with that of Gammarus fossarum reared in the laboratory. The chemical composition of these laboratory-reared animals was investigated and was compared with that of animals taken in the wild.)
- THURSTAN, M.H., 1974. Crustacea Amphipoda from Graham Land and the Scotia Arc, collected by Operation Tabarin and the Falkland Islands Dependencies Survey, 1944-59. \_\_\_\_\_ Br. antarct. Surv. scient. Repts 85: 1-89 (A second important contribution by this author on antarctic amphipods. New taxa: Gnathiphimedia barnardi, Polycheria antarctica f. acanthopoda, Antarctogeneia (Eusiridae), A. macrodactyla, Atylopsis orthodactylus, Lopyastis and Tosylopis (Eusiridae "Calliopiidae", split off from Atylopsis), Paramoera husvikensis, Gammaropsis bennetti, Liljeborgia eurycradus, Cheirimedon similis, Tryphosella marri and Seba stoningtonensis. Keys to the species of the genera Gnathiphimedia, Atylopsis s.l. and Gammaropsis (adult males) and to the forms of Polycheria antarctica are provided, and notes and illustrations of a number of other species.)
- TZVETKOVA, N.L., 1975. (A new species of Pleustidae (Amphipoda), a commensal of sea urchins, from the Commander Islands). \_\_\_\_\_ Zool. Zhurn. 54:121-124 (in Russian, probably with English summary. Not seen).

- TZVETKOVA, N.L., 1974. Geographical distribution of species of the genus Anisogammarus Derzhavin (Amphipoda, Gammaridae). \_\_\_\_\_ Crustaceana 28: 191-199.
- UTINOMI, H., 1973. Additional record of the Caprellidae (Crustacea, Amphipoda) from Japan. \_\_\_\_\_ Bull. biogeograph. Soc. Japan 29: 29-38.
- WILKENS, H. & J. PARZEFALL, 1974. Die Oekologie der Jameos del Agua (Lanzarote). Zur Entwicklung limnischer Hoehlentiere aus marinen Vorfahren. \_\_\_\_\_ Ann. Speleol. 29: 419-434 (i.a. on the amphipods Nicippe buchi, n.sp., to be described elsewhere by Andres, and Parhyale hawaiiensis).
- ZHARKOVA, I.S., 1975. (Reduction of organs of sight in deep-water Isopoda, Amphipoda and Decapoda.) \_\_\_\_\_ Zool. Zhurn. 54:200-208. (In Russian. Data on 11 spp. of Amph., in the families Lysianassidae, Stegocephalidae, Vitjazianidae, and Lanceolidae).

LAST MINUTE ADDITIONS

Bibliography

Sheila MANTON (British Museum, Natural History) writes, that she has just completed a book called "The Arthropoda: habits, functional morphology and evolution", copy of which is now in the hands of the Clarendon Press, Oxford. It contains 195 sheets of drawings and 8 plates of over 60 photos of living animals and represents a much more ample and satisfactory summary of the work recorded in the Linnean Series of papers (11 parts in the years 1950-1973) than the short reprint in J.Zool. It includes a good deal of other people's work as well, including the recent, not yet published, reconstructions of fossil animals.

ANDRES, H.G., 1975. Zur Verbreitung eulitoralener Gammaridea (Amphipoda, Crustacea) an den von Kaltwasserströmen beeinflussten Küsten Südamerikas und Südafrikas sowie Angaben über sublitorale Gammaridea vor der chilenischen Küste. \_\_\_\_\_ Diss., Univ. Hamburg, 139 pp. (Received too late for abstracting. Mostly ecological and zoogeographical, but with description of a new Paracorophium species).

DIVAKARAN, O. & N.K. PILLAI, 1975. The vascular system of Parhyale hawaiiensis (Amphipoda). \_\_\_\_\_ Acta zool. 56: 129-139.

FENCHEL, T., L.H. KOFOED & A. LAPPALAINEN, 1975. Particle size-selection of two deposit feeders: the amphipod Corophium volutator and the prosobranch Hydrobia ulvae. \_\_\_\_\_ Mar. Biol. 30: 119-128.

JONGE, V.N. de, 1974. Classification of brackish coastal inland waters. \_\_\_\_\_ Hydrobiol. Bull. 8: 29-39, (A new analysis and interpretation of Heerebout's (1970. Neth. J. Sea Res. 4) data from inland waters in the SW. part of the Netherlands).

KOOL, R., 1973. Predation and population dynamics of the ciliated Protozoa in Marion Lake, British Columbia. \_\_\_\_\_ Abstr. Papers subm. 36th Meeting Am. Soc. Limnol. Oceanogr., Univ. Utah, Salt Lake City. \_\_\_\_\_ (Abstract only. Hyalella azteca is one of the major predators)

KUDRJASHOV, V.A., 1973. (New amphipod species (Gammaridea) from the intertidal zone of the Kurile Islands). \_\_\_\_\_ Zool. Zh. 34: 364-371 (In Russian, not seen. New taxa: Cerapus comparativus, Ischyrocercus gurjanovae, I. tzvetkovae).

- MAREN, M.J. van, 1975. Some notes on the intertidal gammarids (Crustacea, Amphipoda) from the Atlantic coast of the Iberian peninsula. \_\_\_\_\_ Beaufortia 23: 153-168 (12 species of Gammaridae, i.a. Gammarus salinus new to Spain, and Chaetogammarus storerensis and Pectenogammarus planicrurus new to Portugal).
- MASON, W.R.M., 1974. Shipping alcohol collections in plastic bags. \_\_\_\_\_ Proc. entom. Soc. Wash. 76:229-230 (Very useful hints).
- MORIARTY, C., 1973. Distribution of freshwater macroinvertebrates in Ireland, 1967-1972. \_\_\_\_\_ Irish Nat. J. 17:409-412. (Not seen. According to abstract the author found i.a. 2 freshwater spp. of Gammarus)!
- OSEID, D.M. & L.L. SMITH, 1974. Factors influencing acute toxicity estimates of hydrogen sulfide to freshwater invertebrates. \_\_\_\_\_ Water Res. 8: 739-746. (Not seen, i.a. data on Crangonyx richmondensis laurentianus and Gammarus pseudolimnaeus)
- ROKOP, F.J., 1974. Reproductive patterns in the deep-sea benthos. \_\_\_\_\_ Science 186: 743-745 (not seen).
- WAKABARA, Y., 1973. (Levantamento dos Amphipoda). \_\_\_\_\_ Publçao esp. Inst. oceanogr. Sao Paulo 3: 175-182 (In Portuguese, not seen).