

## *IN MEMORIAM*

### **NINA L. TZVETKOVA (1932-2010)**

Nina L. Tzvetkova died in June 13, 2010. She was a specialist in taxonomy, evolution, zoogeography and ecology of marine Gammaridean Amphipoda.

Nina Liverjevna was born in November 8, 1932 in the city of Bologoe (Tverskaya Oblast). Her parents Liveriy Alexandrovich and Elizabeth Ivanovna were teachers at the secondary school. The family moved to the city of Gatchina (near St. Petersburg) in 1934. During World War II Nina L. and her mother were in evacuation in the Vologodskaya Oblast. She returned to the city of Gatchina in 1945. In 1950 Nina L. entered State Leningrad University, the Faculty of Biology and Soil Sciences. She began to study at the Chair of Ichthyology and Hydrobiology under instruction of

Zinaida I. Kobyakova (a famous Russian specialist on Decapoda). Nina L. practised at the Murmansk Marine Biological Station (the Barents Sea). She wrote and defended her first course paper on the theme “The influence of salinity on amphipod survival”. In 1954 Nina L. participated in expedition to the southern part of the Norwegian Sea. The expedition resulted in diploma “Composition and distribution of the benthos from the north-eastern coast of the Iceland”. In 1955 she began to study marine amphipods under instruction of the most famous Russian carcinologist and hydrobiologist Evpraksia F. Gurjanova at the Department of Hydrobiology in the Zoological Institute of Russian Academy of Sciences.



Nina L. Tzvetkova successfully defended her PhD thesis on the theme “Amphipods of genera *Gammarus*, *Marinogammarus*, *Anisogammarus* and *Mesogammarus* of the Northern and Far Eastern Seas of the USSR and adjacent waters” in 1970. The monography was published in 1975. From 1978 to 1991 Nina L. headed the Department of Malacostraca and Pantopoda at the Laboratory of the Marine Research.

Nina L. participated in many scientific expeditions: the Soviet-Vietnam expedition to the Gulf of Tonkin (1961); the expedition to the Possjet Bay of the Sea of Japan (1962); the Soviet-Cuban expeditions (1965, 1968); the expedition to the White Sea (1967-1968); the expedition to the Kuril Islands (1969).

The scientific work of Nina L. Tzvetkova mainly deals with the study of the taxonomy, phylogeny, chorology, zoogeography, reproductive biology and salinity resistance of the gammarid amphipods. She revealed the parallelism of the morphological characters of the amphipods, which occurred in the northern parts of the Pacific Ocean and the Atlantic Ocean. Together with a famous hydrobiologist Alexander N. Golikov she developed the paleoecological method of the evolutionary reconstructions.

Nina L. took part in different national and international conferences. Since 1984, she has been a member of the International Society of the carcinologists.

Six amphipod species and one isopod species were named in honour to Nina L. Tzvetkova: *Ischyrocerus tzvetkovae* Kudrjaschov, 1975; *Spasskogammarus tzvetkovae* Bousfield, 1979; *Pareurystheus tzvetkovae* Conlan, 1983; *Paracalliopiella tzvetkovae* Bousfield et Hendrycks, 1997; *Anisogammarus tzvetkovae* Bousfield, 2001; *Psammonyx tzvetkovae* Budnikova, 2005; *Neastacilla tzvetkova* Kussakin, 1974 (Isopoda).

Nina L. Tzvetkova described 1 subfamily, 5 genera, 1 subgenus, 29 species and 2 subspecies from the shallow regions of the Far Eastern and Northern Seas. She is an author of more than 17 publications on systematics.

Nina L. got married to Alexander N. Golikov (1931-2010) when they were students. It was later when Alexander N. Golikov became a famous Russian hydrobiologist and zoologist and headed the Laboratory of the Marine Research at the Zoological Institute of Russian Academy of Sciences. In 1959 their son Alexey was born. At present Alexey A. is working at the Zoological Institute of Russian Academy of Sciences. Nina L. and Alexander N. Golikov lived together a long family life. Nina L. was very a faithful standby to her husband. She outlived her husband by only five months.

With the deepest sorrow we have to realize that there is no famous Russian amphipodologist and outstanding personality, Nina L. Tzvetkova, any more.

## THE TAXA DESCRIBED BY NINA L. TZVETKOVA

### SUBFAMILY

*Corogammaropsinae* Tzvetkova, 1990

### GENERA

*Mesogammarus* Tzvetkova, 1965

*Paracalliopiella* Tzvetkova et Kudrjaschov, 1975

*Pareurystheus* Tzvetkova, 1977

*Eohaustorioides* Bousfield et Tzvetkova, 1982

*Corogammaropsis* Tzvetkova, 1990

### SUBGENUS

*Spinulogammarus* Tzvetkova, 1972

### SPECIES

*Anisogammarus (Eogammarus) barbatus* Tzvetkova, 1965 (= *Eogammarus barbatus*)

*Mesogammarus melitoides* Tzvetkova, 1965

*Anisogammarus (Eogammarus) possjeticus* Tzvetkova, 1967 (= *Eogammarus possjeticus*)

*Lilljeborgia serratoides* Tzvetkova, 1967

*Palinnotus japonicus* Tzvetkova, 1967

*Anisogammarus (Eogammarus) aestuariorum* Tzvetkova, 1972 (= *Locus-togammarus aestuariorum*)

*Gammarus (Lagunogammarus) kamtschaticus* Tzvetkova 1972 (= *Gammarus kamtschaticus*)

*Gammaropsis (Podoceropsis) barnardi* Kudrjashov et Tzvetkova, 1975

*Paracalliopiella pacifica* Tzvetkova et Kudrjaschov, 1975

*Parapleustes echinoicus* Tzvetkova, 1975 (= *Dactylopleustes echinoicus*)

*Synchelidium bulytschevae* Kudrjaschov et Tzvetkova, 1975 (= *Eochelidium bulytschevae*)

*Synchelidium gurjanovae* Kudrjaschov et Tzvetkova, 1975 (= *Americhe-lidium gurjanovae*)

- Biancolina obtusata* Tzvetkova, 1976  
*Iphiplateia orientalis* Tzvetkova, 1976  
*Paradexamine fraudatrix* Tzvetkova, 1976  
*Pareurystheus gurjanovae* Tzvetkova, 1977  
*Pareurystheus latipes* Tzvetkova, 1977  
*Photis beringiensis* Tzvetkova, 1980  
*Melita mikulitschae* Tzvetkova et Kudrjaschov, 1985 (= *Melita mikulitschae* Gurjanova, nom. nud.)\*  
*Ocosingo kussakini* Tzvetkova, 1987  
*Cerapus lukini* Tzvetkova, 1990 (= *Notopoma lukini*)  
*Corogammaropsis kudrjaschovi* Tzvetkova, 1990  
*Harpinia panini* (?) Tzvetkova et Golikov, 1990 (= *Harpinia panini* Gurjanova, nom. nud.)\*\*  
*Metopa gurjanovae* Tzvetkova et Golikov, 1990  
*Metopa shoemakeri* Tzvetkova et Golikov, 1990  
*Metopella bousfieldi* Tzvetkova et Golikov, 1990  
*Parallorchestes asiatica* Tzvetkova, 1990  
*Pleusymtes margulisiae* Tzvetkova et Golikov, 1990  
*Stenula alexanderi* Tzvetkova et Golikov, 1990

## SUBSPECIES

- Pleusirus seccorus* (sic) *asiaticus* Kudrjashov et Tzvetkova, 1975\*\*\*  
*Biancolina obtusata sachalinensis* Tzvetkova et Kudrjaschov, 1985

## LIST OF THE MAIN PUBLICATIONS ON SYSTEMATICS OF NINA L. TZVETKOVA

- BOUSFIELD, E. & TZVETKOVA, N., 1982. Studies on Dogielinotidae (Amphipoda, Talitroidea) from the shallow waters of the North Pacific region. *Explorations of the Fauna of the Seas*, 29(37): 76-94.

\* The species was assigned and named by Evpraksia F. Gurjanova, but was not described. The descriptions were made by Nina L. Tzvetkova and Valeryi A. Kudrjaschov in 1985.

\*\* The species was assigned and named by Evpraksia F. Gurjanova, but was not described. The descriptions were made by Nina L. Tzvetkova and Alexey A. Golikov in 1990.

\*\*\* Shin-ichi Ishimaru (1985) doubted in existence of the subspecies and supposed that it was the synonym of *Pleusirus seccorus* Barnard, 1969, described from the Californian Coast.

- KUDRIJASCHOV, V. & TZVETKOVA, N., 1975. New and rare species of Amphipoda (Gammaridea) from the coastal waters of the south Sakhalin. *Zoologicheskyy Zhurnal*, 54(9): 1306-1315.
- TZVETKOVA, N., 1965. A new genus of gammarids (Amphipoda, Gammaridea) from the intertidal zone of the Japan Sea. *Zoologicheskyy Zhurnal*, 44(11): 1631-1636.
- TZVETKOVA, N., 1965. Species composition, distribution and ecology of amphipods belonging to the genus *Anisogammarus* (Amphipoda, Gammaridea) in the intertidal zone of Kuril Islands. *Zoologicheskyy Zhurnal*, 44(3): 348-362.
- TZVETKOVA, N., 1967. On the fauna and ecology of amphipods (Amphipoda, Gammaridea) of the Possjet Bay (the Sea of Japan). *Explorations of the Fauna of the Seas*, 5(13): 160-195.
- TZVETKOVA, N., 1972. Taxonomy of the genus *Gammarus* Fabr., with the description of some new species of gammarids (Amphipoda, Gammaridae) from the north-western part of the Pacific Ocean. *Trudy Zoologicheskogo Instituta*, 52: 201-222.
- TZVETKOVA, N., 1975. A new species of Pleustidae (Amphipoda), a commensal of sea urchins, from the Commander Islands. *Zoologicheskyy Zhurnal*, 54(1): 121-124.
- TZVETKOVA, N., 1975. *Pribrejnnye gammaridy severnyh i dal'nevostochnnyh morei SSSR i sopredel'nyh vod*. Leningrad, 257 pp. (from the Russian original)
- TZVETKOVA, N., 1976. New species of Dexaminidae, Phliantidae and Biancolinidae, warm-water elements of the Possjet Bay fauna (Sea of Japan). *Zoologicheskyy Zhurnal*, 55(5): 684-695.
- TZVETKOVA, N., 1977. New genus and new species of amphipods (Amphipoda, Corophioidea) from the Japan Sea. *Explorations of the Fauna of the Seas*, 21(29): 88-101.
- TZVETKOVA, N., 1980. New species of *Photis* (Amphipoda, Corophioidea) from the Bering Sea. *Explorations of the Fauna of the Seas*, 25(33): 101-104.
- TZVETKOVA, N., 1987. A new species of lysianassids (Amphipoda, Gammaridea, Lysianassidae) from the upper sublittoral zone of Simushir Island (the Kuril Islands). *Zoologicheskyy Zhurnal*, 66(11): 1739-1744.
- TZVETKOVA, N., 1990. An addition to the fauna of amphipods (Amphipoda, Talitroidea, Hyalidae) from the shallow waters of the East Kamchatka. *Trudy Zoologicheskogo Instituta*, 218: 40-53.
- TZVETKOVA, N. L. (1990). Novoe podsemeistvo, rod i vidy amfipod (Amphipoda, Gammaridea, Corophioidea) iz pribrejnyh vod ostrova Simushir (Kuril'skie ostrova). *Sistematika i horologiya morskikh organizmov*: 26-42. Vladivostok. (from the Russian original)

- TZVETKOVA, N. & GOLIKOV, A., 1990. Fauna, ecology and role in ecosystems of amphipods (Amphipoda, Gammaridea) at the New Siberian shoals and adjacent waters of the Laptev Sea. *Explorations of the Fauna of the Seas*, 37(45): 258-343.
- Tzvetkova, N. & Kudrjaschov, V., 1975. The new genus of the family Calliopiidae (Crustacea; Amphipoda) from the North Pacific. *Biologiya morya*, 4: 13-23.
- Tzvetkova, N. & Kudrjaschov, V., 1985). On the fauna and ecology of gammarids (Amphipoda, Gammaridea) and biocoenoses of the upper parts of the shelf of the South Sakhalin. *Explorations of the Fauna of the Seas*, 30(38): 292-345.

ALEXEY V. SMIRNOV

Zoological Institute, Russian Academy of Sciences

NATALIA L. DEMCHENKO

A.V. Zhirmunsky Institute of Marine Biology,  
Far East Division of Russian Academy of Sciences