



NOTES AND NEWS

IN MEMORIAM PROF. V. I. MONCHENKO (1932-2016)

BY

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Vladyslav Ivanovych Monchenko, a distinguished Ukrainian copepodologist and a talented musician, was born on 2 April 1932 in Moscow, USSR. During WW II his family lived in Sverdlovsk, Ural Region. In 1945 the family moved to Kyiv, Ukraine, where Vladyslav's father led a team of mechanical engineers at the Arsenal military plant. Vladyslav's mother was a musician and taught her son to love and appreciate music.

After finishing high school, Vladyslav Monchenko was accepted into the Department of Biological Sciences at Taras Shevchenko National University of Kyiv (KNU) and the Kyiv Conservatory, where he took violoncello classes. A year later Vladyslav left the Conservatory and focused on his scientific career.

In 1955 Vladyslav graduated from KNU and joined a Ph.D. program in the Department of Parasitology, Schmalhausen Institute of Zoology NASU (IZAN). There he worked under the supervision of the founder of the Ukrainian parasitological school, Academician Olexander Prokofjevych Markevych. Monchenko's graduate research focused on copepods as intermediate hosts of helminths. He discovered the ways of natural invasion of the cysticeroids *Drepanidotaenia lanceollata* (Bloch, 1782) into *Paracyclops fimbriatus* (Fischer, 1853) and *Acanthocyclops vernalis* (Fischer, 1853), and experimentally validated invasions of different cyclopoid and calanoid copepod species in the laboratory. In 1958 Vladyslav accepted a Research Scientist position at the Department of Parasitology (IZAN).

In 1962 Monchenko defended his thesis on "Copepoda of the Middle Dnieper basin" and received his Ph.D. in Zoology from KNU. His work was the first comprehensive overview of free-living copepods in Ukraine. He recorded a total of 98 species of copepods, 10 of which had not been observed in Ukraine before. Of these species, *Diacyclops languidus* var. *belgicus* (Kiefer, 1936) and *Elaphoidella elaphoides* (Chappuis, 1923) were new to the entire former Soviet Union territory.

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As a student Monchenko participated in a one-year cruise on a whaleboat to the Antarctic region and collected zooplankton samples from the Indian Ocean, Antarctic waters and the island of Madagascar. For young Vladyslav this trip was an unforgettable experience, which left undelible memories.

In 1967 Vladyslav travelled to Poland, where he worked as a visiting scientist at the Department of Parasitology, Polish Academy of Sciences. His supervisor was the famous Polish parasitologist Dr. Włodzimierz Michajłow. In Poland, Vladyslav investigated the polyphyletic nature of macroevolution in different euglenoid protozoans adapted to parasitize copepods. This study inspired Monchenko to investigate cyclopoid systematics and taxonomy, and their transition from a free life to parasitism.

In 1975, Vladyslav Ivanovych Monchenko was promoted to a Senior Research Scientist position and became the head of the newly founded Department of Fauna and Systematics of Invertebrates at IZAN (fig. 1). At that time he published his first monographic book on Gnathostome cyclopoids (Cyclopidae) in the periodical "Fauna of Ukraine". His review on cyclopoids was to become a key milestone in cyclopoid copepods research in Ukraine. His systematic studies predicted several cyclopoid species yet to be discovered in Ukraine. As such, *Graeteriella unisetigera* (Graeter, 1908), described in Monchenko's monograph, was discovered only 40 years later in the Carpathian Mountains, Western Ukraine, by Taras Mykitchak (2013).



Fig. 1. Vladyslav Monchenko in his office at IZAN (left) and with Prof. V. R. Alekseev at St.-Petersburg (right). This figure is published in colour in the online edition of this journal, which can be accessed via <http://booksandjournals.brillonline.com/content/journals/15685403>.

In the 1980s Monchenko shifted his interests towards the relict Ponto-Caspian fauna. His studies included all water basins of the Black Sea, Sea of Azov, Caspian Sea and Aral Sea, as well as a drainage basin. He completed the cyclopoid list of marine and freshwater fauna of the Ponto-Caspian basin. Out of the 125 species revealed more than half were new to the region, 55 species (44%) were new to the former Soviet Union and 29 species (23%) were new scientific discoveries altogether. He specialized in regressive oligomerization of cyclopoid limbs as the main direction of their morphological evolution. He built a hypothesis of Cyclopoida evolution, which includes existence of two successive stages of speciation. The first stage represents a formation of cryptic species along with the non-crossbreeding barrier, caused by allelic changes. The second stage reveals a formation of morphologically different species governed by complex genetic mechanisms. Monchenko summarized these research investigations in his Doctor of Science dissertation, "Free living crustaceans (Copepoda Cyclopoida) of the Ponto-Caspian basin (fauna, ecology, zoogeographical, morphological and evolutionary analysis, phylogeny, systematics)", which he successfully defended in 1989.

From 1980-1987 and 1993-1999 Monchenko worked as a deputy director of IZAN. In 1995 he accepted a Professor of Biology position at IZAN. In 2000 Vladyslav Ivanovych Monchenko was elected a corresponding member of the National Academy of Sciences in Ukraine, and in 2003 was promoted to the title of Academician. In 2007 Monchenko became a merit researcher at IZAN, and at the same time he was leading the Laboratory of Animal Protection and Renewal at the newly formed Megapolis Ecomonitoring and Biodiversity Research Centre NASU (now Institute for Evolutionary Ecology NASU). Monchenko also taught Biology students at KNU. In 2001-2004 Vladyslav Monchenko acted as chairman in Ecology and during 2005-2012 in Zoology at the Faculty of Biology of the Zhytomyr Ivan Franko State University, where he created new Master's degree programs and taught Methodology of Research Studies, Ecological Palaeontology, Water Toxicology, General Ecology, and Systematics of Vertebrates, as well as serving as an academic advisor to many Bachelor's and Master's students.

He received several awards for his scientific activities, including the Danyl Zabolotny Prize from the Ukrainian Academy of Sciences in 1975, the 2007 Ukrainian Government Prize, and the title of Honor Statesman of Ukraine in Science and Technology in 2008.

Throughout his scientific career, Vladyslav Monchenko closely communicated with other leading scientists in the field of systematics and taxonomy of copepods, such as Friedrich Kiefer, Frank Ferrari, Philippe Bodin, Bruce Coull, Frank Fiers, Bernard Dussart, Danielle Defaye, Hans-Uwe Dahms, Kurt Schminke, Jan Reid, Eduardo Suárez-Morales, Grace Wyngaard, Carel von Vaupel Klein, Maria

Hołynska and Viktor Alekseev. His library contains more than 50 monographs and technical reports on Copepoda signed with warm wishes by those authors. In the 1990s, after the break-down of the Soviet Union, when borders opened for scientific exchange and collaboration, Vladyslav Monchenko travelled abroad and attended a wide variety of international conferences and symposiums. As such he actively participated in the 1st European Conference on Crustaceans in 1992 (Paris, France), and in 1996 he attended the 2nd European Conference On Crustaceans in Liège, Belgium and the 4th International Conference on Copepoda in Oldenburg, Germany. In 1994 and 1998 he travelled to St. Petersburg, Russia for the 1st and 2nd International Symposiums devoted to “Diapause in Crustaceans”. At the age of 79 years Monchenko was again invited to St. Petersburg, Russia to participate as a principal investigator of the joined project and leading lecturer in a “Study of biodiversity and cryptic speciation in organisms from aquatic ecosystems in Russia and Ukraine” (2010-2011).

Monchenko was one of the top Ukrainian Biological Scientists and an internationally recognised Copepoda specialist, a dedicated field researcher fascinated with all manifestations of living nature. He devoted 60 years of his life to studying fundamental aspects of taxonomy, zoogeography, ecology, and evolution of free-living freshwater and marine Copepoda, and published close to 200 scientific papers. He was a member of several professional groups, including the Ukrainian Scientific Society of Parasitologists and the World Association of Copepodologists (WAC). Monchenko travelled all over the world to explore and investigate a curious world of invertebrate organisms. He introduced 42 new taxa, described and defined one new cyclopoid subfamily and five new genera with one subgenus, one harpacticoid species and one syncarid subspecies. He proposed the genera names *Sergiosmirnovia* for preoccupied *Smirnoviella* and *Cyclopinotus* for preoccupied *Cycloporella*. By himself and with others, Vladyslav also established two new genera and two species of Euglenoidida. Monchenko has formulated fundamental hypotheses related to oligomerization of copepod appendages, induction and termination of diapause in invertebrates, and the existence of cryptic species in Cyclopoida. His laboratory studies based on interbreeding experiments demonstrated the importance of cryptic speciation in evolution of copepods. Monchenko’s contribution to our understanding of biology, ecology, and taxonomy of common and endemic invertebrate species from the Ponto-Caspian basin, along with their relationship to the Mediterranean fauna, is a major landmark in his scientific career, which defined his profound international reputation.

On 8 February 2016, following a long illness, Vladyslav Ivanovych Monchenko passed away at his home in Kyiv, Ukraine. There is a legend about a young Monchenko travelling 4000 km to the Caspian Sea and back to collect copepod samples with a canoe attached to his bike. He will always be remembered

by his peers as a dedicated and incredibly intelligent scientist, a great friend, kind supervisor and a humorous person, who enjoyed life. Right until the end, despite serious health problems, being bedridden, he kept his optimism, high spirits, benevolence and open-mindedness. We will miss his kindness and powerful intellect, sharp jokes and energy.

ACKNOWLEDGEMENTS

The author is grateful to Ina Ivanivna Monchenko for sharing memories of her belated husband, Dr. V. V. Anistratenko (IZAN) for providing access to Monchenko's scientific material and collections, and Dr. Vladyslava Ratushna for her help with editing this manuscript.

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NEW TAXA INTRODUCED BY VLADYSLAV MONCHENKO

EUGLENOIDIDA (parasites of Copepoda)

1. *Paradinemula* Monchenko, 1967
2. *Paradinemula polonica* Monchenko, 1967
3. *Mesastasia* Palienko & Monchenko, 1979
4. *Mesastasia mirabilis* Palienko & Monchenko, 1979

CRUSTACEA: COPEPODA: CYCLOPOIDA

5. *Acanthocyclops americanus spinosa* Monchenko, 1961
6. *Acanthocyclops biarticulatus* Monchenko, 1972
7. *Bryocyclops (Palaeocyclops)* Monchenko, 1972
8. *Bryocyclops (Palaeocyclops) jankowskajae* Monchenko, 1972
9. *Halicyclops longispinosus* Monchenko, 1974 (now *Colpocyclops longispinosus* (Monchenko, 1974))
10. *Halicyclops validus* Monchenko, 1974
11. Euryteinae Monchenko, 1975
12. *Smirnoviella* Monchenko, 1977 (now *Sergiosmirnovia* Monchenko, 2007)
13. *Smirnoviella reducta* Monchenko, 1977 (now *Sergiosmirnovia reducta* (Monchenko, 1977))
14. *Colpocyclops* Monchenko, 1977

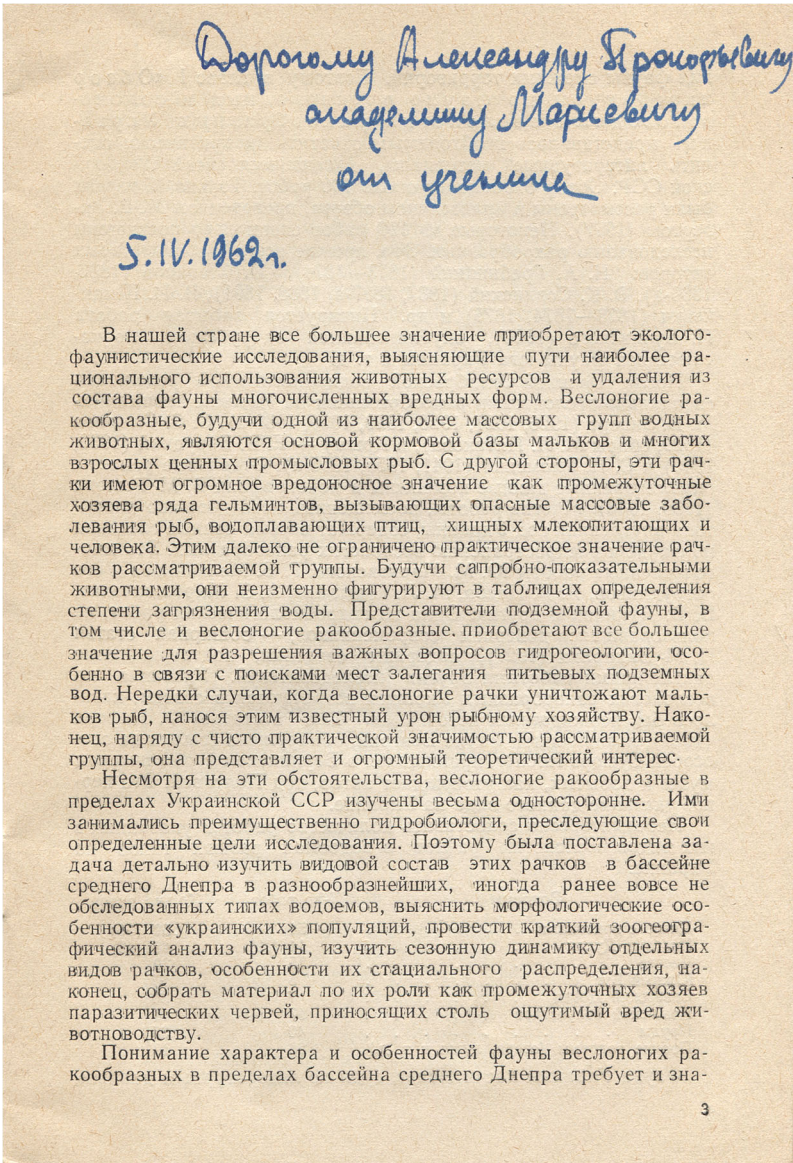


Fig. 2. Example of the handwriting of Vladyslav Monchenko on a copy of his Ph.D. Thesis meant for his supervisor, Prof. Dr. Olexander P. Markevych. This figure is published in colour in the online edition of this journal, which can be accessed via <http://booksandjournals.brillonline.com/content/journals/15685403>.

15. *Colpocyclops dulcis* Monchenko, 1977
16. *Paracyclops dilatatus ivanegai* Monchenko, 1977
17. *Cyclops ricae* Monchenko, 1977

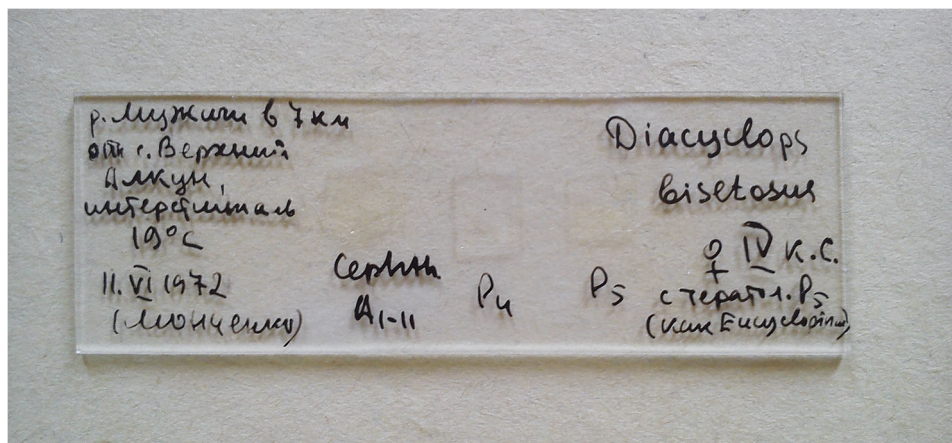


Fig. 3. Example of a slide prepared by V. I. Monchenko, including a sample of his handwriting. This figure is published in colour in the online edition of this journal, which can be accessed via <http://booksandjournals.brillonline.com/content/journals/15685403>.

problems, since she has outstanding research potential. Summing up, I would like strongly support Larysa's application.

Supervisor,
The Academician of NASU,  Vladislav Ivanovich Monchenko
Prof., Dr.

Fig. 4. Specimen of the signature of Vladyslav Ivanovych Monchenko. This figure is published in colour in the online edition of this journal, which can be accessed via <http://booksandjournals.brillonline.com/content/journals/15685403>.

18. *Eucyclops persistens* Monchenko, 1978
19. *Cryptocyclopina* Monchenko, 1979
20. *Cryptocyclopina inopinata* Monchenko, 1979
21. *Cyclopina pontica* Monchenko, 1979
22. *Halicyclops cryptus* Monchenko, 1979
23. *Cyclopina parapsammophila* Monchenko, 1980
24. *Diacyclops cohabitatus* Monchenko, 1980
25. *Acanthocyclops (Megacyclops) viridis oligotrichus* Monchenko, 1980 (now *Megacyclops viridis oligotrichus* (Monchenko, 1980))
26. *Cyclopina oblivia* Monchenko, 1981
27. *Cycloporella* Monchenko, 1982 (now *Cyclopinotus* Monchenko, 1989)
28. *Cycloporella eximia* Monchenko, 1982 (now *Cyclopinotus eximius* (Monchenko, 1982))
29. *Halicyclops cryptus secundus* Monchenko & Polischuk, 1982
30. *Smirnoviella unisetosa* Monchenko, 1982 (now *Sergiosmirnovia unisetosa* (Monchenko, 1982))
31. *Diacyclops insularis* Monchenko, 1982

32. *Speocyclops cinctus* Monchenko, 1983
33. *Eucyclops persistens tauricus* Monchenko & Sopova, 1984
34. *Diacyclops imparilis* Monchenko, 1985 (now *Reidcyclops imparilis* (Monchenko, 1985))
35. *Caspicyclops* Monchenko, 1986
36. *Caspicyclops mirabilis* Monchenko, 1986
37. *Speocyclops atropatenae* Monchenko, 2010
38. *Speocyclops atropatenae dispar* Monchenko, 2010
39. *Bryocyclops incognitus* Monchenko, 2010
40. *Bryocyclops incognitus secundus* Monchenko (in press)

CRUSTACEA: COPEPODA: HARPACTICOIDA

41. *Schizopera borutzkyi* Monchenko, 1967

CRUSTACEA: MALACOSTRACA: SYNCARIDA

42. *Bathynella natans ukrainica* Monchenko, 1968

LIST OF EPONYMS

The following eponyms have been traced in the literature and on the internet (the list is probably not complete because of some recent descriptions in press).

CRUSTACEA: COPEPODA (1 genus and 3 species)

Monchenkiella Martínez Arbizu, 2001

Cryptocyclopina monchenkoi Karanovic, 2008

Neocyclops monchenkoi Karanovic, 2008

Prehendocyclops monchenkoi Rocha C.E.F.: in Rocha C.E.F., Iliffe, Reid & Suárez-Morales, 2000

MOLLUSCA: CAENOGASTROPODA (1 species)

Boucardicus monchenkoi Balashov & Griffiths, 2015

A SELECTION OF BOOKS BY VLADYSLAV MONCHENKO

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