

# Morphological Variability and Teratology of Lower Crustaceans (Copepoda and Branchiopoda) from Circumpolar Regions

Ivan S. Pandourski\*, Vesela V. Evtimova

<sup>1</sup>Institute of Zoology, Bulgarian Academy of Sciences, 1, Tsar Osvoboditel Blvd., 1000 Sofia, Bulgaria;  
E-mails: pandourski@gmail.com, evtimovv@tcd.ie

**Abstract:** The intra-population morphological variability in two calanoid species and cases of teratology in lower crustacean from the orders Calanoida and Cyclopoida (Copepoda), and from Diplostraca (Branchiopoda) from sub-polar and polar regions are presented. For the morphological analyses of the calanoids we focus on the most variable body part: the fifth pair of legs. The teratological morphology affects the number and the shape of setae on exopod 3 of P5 in females of *Boeckella poppei*, and the number of segments of the endopod of the right P5 in males. In *Eurytemora velox* we observe additional teratological spine on exopod 2 in females, and from one to three transversal folds on the distal end of exopod 3 in males. In half of the male specimens of *E. velox* we also find one or two additional teratological articles. In the cyclopoids from Iceland, there are morphological aberrations affecting the posterior part of the body. In one specimen of *Bosmina longispina* from Swedish Lapland we observe teratologically reduced upper ramus of the right antennule. We assume as a probable reason for the above described teratologies the expression of genetically unstable morphological characteristics under the combined effect of circumpolar abiotic factors. As opposed to the opinion of other researchers, who consider morphological stasis a common phenomenon in copepods, we observe exceptional variability at morphological level in the populations from the studied polar and sub-polar regions.

**Key words:** Variability, teratology, crustaceans, Antarctic and sub-Arctic populations