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EUROPEAN
MARINE BIOLOGY
SYMPOSIUM
54 DUBLIN
25-29 August 2019

54th EUROPEAN MARINE BIOLOGY SYMPOSIUM

DUBLIN, IRELAND | 25-29 AUGUST 2019

BOOK OF ABSTRACTS

Talk

General Session

Museum collections as a chronicle for long-term monitoring: a case of benthic gastropods from the Kola Meridian transect (Barents Sea)

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Consequences of global change cannot be reliably estimated without long term monitoring programs. Kola Meridian, a transect along the 33°30'E in the Barents Sea is the oldest monitoring area in the Arctic. Regular (usually annual) oceanological and hydrobiological investigations along the transect has been carried out since 1899 up to present. However, materials stored in the museum collections remains the main source of the faunistic information obtained during the period observation, while only minor part of data was published. We re-examined (using optical microscopy and SEM) all samples of shell-bearing gastropods from the Kola Meridian stored in Zoological Institute of RAS and Saint Petersburg State University (SPBU). We found only 151 museum lots from 65 samples, which constitute a very small portion of total material collected along the transect. About one-third of them (54 lots) were misidentified or consist of individuals which cannot be identified to species level. Majority of studied samples (40) was collected during the period 1899-1920. Species composition revealed by museum materials substantially differs from published check-lists and recent results. Hence, extant collections do not provide a reliable baseline for the Kola Meridian. We propose that the storage of zoological material in public collections should be an essential part of the long-term monitoring programs.
The study was supported by the Russian Scientific Foundation (grant No 18-74-00010). Work with the SEM was performed at the Interdisciplinary Center for Nanotechnology of SPBU in the course of the project by the Grant Council of the President of Russia No MK-4797.2018.4.

Key words: Arctic, climate change, monitoring, Gastropoda