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Title: *Dynamics and spatial distribution of changes in the concentration levels of anthropogenic pollutants in the proglacial waters of the Scott River*

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The research area was located on NW part of the Wedel Jarlsberg Land (SW Svalbard) while the main object was proglacial Scott River outflowing to the Bellsund Fiord. The Scott River's catchment (of glacial hydrological regime) covers the surface of ca 10 km², 40% of which is occupied by the valley Scott's Glacier in the strong retreat. Water sampling points were located in 4 sites at the longitudinal profile of the river.

Pollutants being the result of anthropopression in the regions of lower geographical latitudes reach the Scott River catchment due to the global migration of pollutants. The Scott glacier - at the surface of which is being reached by wide range of numerous chemicals considered to be pollutants due to wet and dry deposition - is the alimentary area of the Scott River provisioned in 90% by the glacial waters. In its lower run the waters of Scott River are provisioned by the waters of the Reindeer Stream which carries the load of pollutants coming from the surface runoff from the seaside plane of Calypsostranda. The Scott River outflows to the Recherche Fiord and deposits the pollutants re-deposited both from glacier surface and the Calypsostranda area.

The aim of the studies was to determining the concentration levels of both organic and inorganic pollutants of anthropogenic origin in the Scott River's catchment and assessing its impact on the pollution degree of the Recherche fiord waters. The following parameters were determined: sum of phenol, formaldehyde, TOC, cations, anions, pH and conductivity. Spectrophotometer (Spectroquant PHARO 100, MERCK), TOC analyzer (TOC-VCSH/CSN, SHIMADZU), ion chromatograph (ICS 3000 DIONEX), pH-meter/oxygen meter microcomputer (CX-401 by ELMETRON) as well as OK.-102/1 conductometer (by RADELIKS) were used at final determination steps.

Based on the initial results of the studies it can be stated that the Reindeer Stream is a source of additional pollution load coming from the seaside terrain that reach the Scott River and subsequently the Recherche fiord. The share of the Reindeer Stream in the final pollution load reaching the Recherche fiord is significant.



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