Tardigrades in the lakes in Skarvsnes, Dronning Maud Land, Antarctica

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While the tardigrade community has been well documented in the sub-Antarctic and the maritime Antarctic regions, most of such studies focused on the terrestrial environment in those areas. Although some studies have been conducted on the tardigrades that live in the continental Antarctgic region, fewer documents are yet availble on the limnetic tardigradades in the area. Tardigrades are known to be abundant in the aquatic environment and a total of 16 species have been reported from the lakes in Signy Island and King George Island in the maritime Antarctic regon (Janiec, 1996; McInnes and Ellis-Evans, 1987). In the vicinity of Syowa Station, *Acutuncus antarcticus* (Richters, 1904) and *Diphascon* (*Diphascon*) *ongulense* (Morikawa, 1962) have been reported from a pond of East Ongul Island (69°01'S, 39°35'E) (Morikawa, 1962), and a recent study on the eukaryotic phylotypes in aquatic moss pillars suggested the presence of *Acutuncus antarcticus* (Richters, 1904) and *Diphascon* (*Diphascon*) *pingue* (Marcus, 1936) in Hotoke Ike Lake in Skarvsnes (69°20'S, 39°36'E) (Nakai *et al*., 2012). However, the tardgrade diversity in the lakes around this area is still unknown. This study was conducted in Skarvsnes on the east coast of Lützow-Holm Bay during the 49th Japanese Antarctic Research Expedition summer operation in January in 2008. Phytobenthos samples were collected in five lakes in Skarvsnes using a gravity core sampler. Sampled cores were sliced into thin layers and placed into 2.5ml tubes. Then, the tubes were stored at -70 °C and brought back frozen to Japan. The extracts of each sample were examined under the dissection microscope and the tardigrades were collected. The tardigrades were then mounted on slides in Faure's solution and identified under the phase-contrast microscope using the systematics and keys in Ramazzotti and Maucci (1983) and Dastych (1984). The species composition of tardigrades in the lakes in Scarvsnes will be reported in accordance with the limnological charateristics of each lake.

References

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