

Diversity of bdelloid rotifer in wetland and lakes of Sôya Coast, East Antarctica

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Bdelloid rotifers are a key, widespread and abundant microscopic invertebrates on the terrestrial and lake sedimental habitats in Antarctica. So far, 18 species of bdelloid rotifer have been reported in Antarctica, and 12 of them are known as endemic species from several regions. They had been reported only their existence from ice-free sites in Sôya Coast, but have not been studied their distribution, abundance nor species identification in details. We collected microbial mats from ephemeral wetland and five lake's (Bosatsu Ike, Nyorai Ike, Hotoke Ike, Naga Ike, Skallen O Ike) bottoms during the JARE-60 summer season, and tried to extract them to identify and enumerate the microscopic invertebrates such as bdelloid rotifers, nematodes, tardigrades from the frozen samples. The bdelloid rotifers were the most abundant and dominant in numbers the wetland and the four lakes while tardigrades were relatively dominant in Skallen O Ike. The abundance of microscopic animals, especially a bdelloid rotifer morphologically identified as *Philodina gregaria* in the wetland was 25 to 100 times higher than 5 lake mat's sample. Some bdelloid rotifers are new record from Sôya Coast.

Table1. Average population numbers of three microscopic invertebrates found in microbial samples (per 1g of wet weight)

	Bdelloid rotifer	Tardigrade	Nematode
Bosatsu Ike (n=15)	24.2 ± 11.0	10.0 ± 8.6	3.4 ± 3.4
Nyorai Ike (n=15)	20.6 ± 10.0	7.4 ± 3.6	1.6 ± 1.6
Hotoke Ike (n=15)	22.6 ± 14.4	6.5 ± 5.2	1.7 ± 1.3
Naga Ike (n=15)	7.8 ± 4.0	1.5 ± 1.4	0.2 ± 0.2
Skallen O Ike(n=15)	4.3 ± 2.1	6.5 ± 5.0	0.1 ± 0.1
Wetland (n=13)	541.0 ± 442.9	46.5 ± 37.3	16.7 ± 8.8

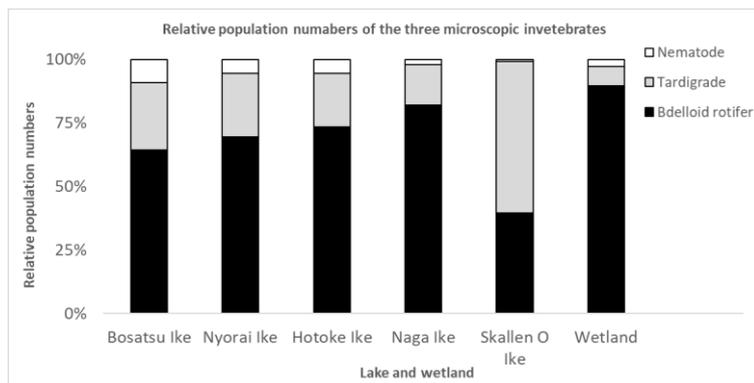


Fig1. Relative population numbers of the three microscopic invertebrates