

# Tardigrade diversity of Inhovde, Dronning Maud Land in East Antarctica

Megumu Tsujimoto<sup>1</sup>, Atsushi C. Suzuki<sup>2</sup>, Sandra J. McInnes<sup>3</sup>, Peter Convey<sup>3</sup>, Ryosuke Nakai<sup>4</sup> and Satoshi Imura<sup>1</sup>

<sup>1</sup>*National Institute of Polar Research*

<sup>2</sup>*Keio University*

<sup>3</sup>*British Antarctic Survey*

<sup>4</sup>*National Institute of Genetics*

The tardigrades (phylum Tardigrada) are microscopic animals that are important members of the biomass in the simple faunal assemblages found in extreme Antarctic environments. While the tardigrade communities of the sub-Antarctic and the maritime Antarctic regions has been reasonably well documented, the tardigrade literature for Syowa Station, continental Antarctica, is still limited. A recent preliminary study provided a baseline description of tardigrade species diversity and distribution pattern within the terrestrial and lake environments of the coastal regions around Syowa Station and the neighbouring inland Sør Rondane Mountains, Dronning Maud Land, giving the total recorded tardigrade diversity for this region of continental Antarctica to ten species (Tsujimoto et al., 2014).

In this study, terrestrial moss samples and a freshwater lake sample were collected from Inhovde (69°51'S, 37°06'W), which locates in between Syowa station and Sør Rondane Mountains, Dronning Maud Land during the 56th Japanese Antarctic Research Expedition (JARE) summer operation in January 2008. The collected samples were stored in sealed plastic bags at -20°C and brought back frozen to Japan.

The extracts of each sample were examined under the dissection microscope, the tardigrades isolated, mounted on slides in Faure's solution and identified under the phase-contrast microscope. The results of our study revealed four species: *Acutuncus antarcticus* (Richters 1904), *Hebesuncus ryani* Dastych and Harris 1994, and *Mesobiotus* cfr. *blocki* (Dastych 1984), *Pseudechiniscus* sp. While *A. antarcticus*, *Mesobiotus* cfr. *blocki* and *Pseudechiniscus* sp. often appear around Syowa Station, the easternmost distribution of *H. ryani* was Sør Rondane Mountains, providing the tardigrade species diversity in Inhovde area lies between Syowa Station and Sør Rondane Mountains.

## References

1. Tsujimoto M et al. Preliminary description of tardigrade species diversity and distribution pattern around coastal Syowa Station and inland Sør Rondane Mountains, Dronning Maud Land, East Antarctica. *Polar Biology*, 37, 1361-1367, 2014.