

## 阿寒湖のマリモ重なり群落（予備調査）

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### **A preliminarily ecological research of the community of Marimo at the bottom of lake Akan in Hokkaido - A size dependent hierarchy of the community of Marimo**

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The dominant aquatic microphyte, such as many kinds of algae, ciano algae and so on, aggregates to construct a three-dimensional structure, and increases their biomass at the bottom of the fresh water lake in polar region. The Marimo, the lake green ball constructed with a fibrous green algae *Aegagropila linnaei*, becomes globe of size more than 30cm in diameter. The various size of many Marimos pile up in the bottom of the lake and form the community of Marimo. It was informed that big Marimos were piling up on the small MARIMOs, but there was no information about structural details.

The number and sizes of MARIMO at the bottom of the lake were measured by the stratified clipping method to know what kinds and how many plants are there every place in a community of Marimo, at Churui Bay in lake Akan in August 2014. Two communities of Marimo was parted into 12section or 18section, and each section was collected from the upper layer of a community of Marimo for stratification towards the lower layer (bottom of the lake). The upper surface layer of Marimo communities were predominantly high in the ratio of big Marimo, and the bottom of the layer was low. It was shown that the big MARIMOs were tending to pile up on small MARIMOs.

The digital images are analysing now using ImageJ, a public domain, Java-based image processing program developed at the National Institutes of Health, NIH. The quantitative data will reveal the details of the accretion of Marimo in lake Akan.