
Oral | Symbol H (Human Geosciences) | H-CG Complex & General

[H-CG38_29AM2]Systems of life in closed-ecology on planets

Convener:*Kaori Tomita-Yokotani(Graduate School of Life and Environmental Sciences, University of Tsukuba), Hiroshi Kojima(none), Chair:Kaori Tomita-Yokotani(Graduate School of Life and Environmental Sciences, University of Tsukuba)

Tue. Apr 29, 2014 11:00 AM - 12:45 PM 424 (4F)

Living creatures on the earth have been evolved since its origin a long time ago. They equip several important functions affecting each other. Knowledge on those functions and interaction of the ecology is essential for secure design of a closed-ecosystem with limited number of living species under the harsh environments, such as space and deep sea or desert.

12:30 PM - 12:45 PM

[HCG38-P01_PG]Growth of Hydrobryum

puncticulatum(Yakushimakawagoromo) may be
blocked by the increase of Melosira varians in Isso
River

3-min talk in an oral session

*Hiroyuki KITABUCHI¹, Osamu NAGAFUCHI¹, Koyomi NAKAZAWA¹, Kuriko YOKOTA², Kenshi TETUKA³, Kazuyasu AYUKAWA⁴, Masahiro TANABE⁵ (1.The University of Shiga Prefecture, 2.Toyohashi University of Technology, 3.Yakutane-goyou Research Group, 4.Environmental System Co., Ltd, 5.Nikkaki Bios Co., Ltd)

Keywords:Hydrobryum puncticulatum, periphyton, Yakushima, nutrient

Hydrobryum puncticulatum (Yakushimakawagoromo), the national monument and endangered species are making their habitat only in Isso river of Yakushima. For the first time in our observation, the bloom of *Melosira varians* which is periphyton of diatom was observed to be covered over the *H.puncticulatum* from 2011. This impact for the *H.puncticulatum* is a serious concern. The purpose of this study is to clarify the cause of bloom of *M.varians*. We examined the annual variability of dissolved nutrient concentration which was most accessible to *M.varians*. As a result, there was no increase in concentration of NO₃-N, SiO₂-Si from 2009 to 2013. In addition, PO₄-P was much lower concentration(0.003±0.001 mg/ l). Therefore, we assumed that there was no relationship between the bloom of *M.varians* and dissolved nutrient concentration in Isso river. Meanwhile, the floating mud which was deposited in the bottom of the river has been continued during dry-spell. Tachibana et al (1986) reported that an algae can intake the suspended nutrient same as dissolved nutrient. It suggests that the *M.varians* and *H.puncticulatum* can take suspended nutrient.