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

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.