

Nondestructive observation on white chimney from Shinkai Seep Field and Conical Seamount, and Calyptogena from off Hatsushima

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The following three kinds of deep sea seepage field with life community have been reported:

A: Hydrothermal vent communities where life is supported by the interior thermal energy of the Earth, e.g. Mid-oceanic ridges, Okinawa Trough.

B: Cold seepage communities where life is supported by the fossil organic material (= photosynthesis products) induced by the energy of the sunlight, e.g. Japan Trench, off Oregon.

C: Cold seepage communities where life is supported by the inorganic energy (= hydrogen?) induced by serpentinization of ultrabasic rocks, e.g. Lost City, Shinkai Seep Field.

Two white chimneys are observed by CT-scan and XRF-mapping. Those samples are from the Shinkai Seep Field in the Southern Mariana and from the Conical Seamount in the Northern Mariana, collected by Shinkai 6500 and Alvin, respectively.

Calyptogena is also collected by Shinkai 2000 from deep sea seepage communities at the off Hatsushima Island in the Western Sagami Bay, Japan. A small part of its gill is also analyzed by EPMA.

The above mentioned nondestructive observation on non-organic as well as organic samples will be shown in the poster.

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