

Biogeochemical study of deep-sea mussels from Kairei hydrothermal field at Rodriguez Triple Junction in Indian Ocean

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First active hydrothermal venting and community has been found from seafloor in central Indian Ocean during dive operation of Kaiko, JAMSTEC. Several animals were collected from the vents, deep-sea mussels were measured sulfur isotope composition of its soft tissues for clarify its energy source. Energy substances for the deep-sea mussels identified from Pacific and Atlantic are different, i.e., Pacific species use only sulfide or methane and sulfide but Atlantic species use only methane or methane and sulfide. Sulfur isotope compositions of the mussel samples were comparable with that of hydrothermal-fluid sulfide and chimney sulfides. It indicates that the mussels depend on only sulfide as energy source. This nature is similar with the species identified from Pacific Ocean.