Snow crabs found clustered around methane vents at bottom of Sea of Japan

August 24 2010, The Yomiuri Shimbun

Large clusters of a type of snow crab called benizuwaigani have been discovered around methane vents at the bottom of the Sea of Japan, but scientists are not quite sure why.

Methane may play an important role in the feeding habits of the crab, as microorganisms are known to gather around methane vents to receive nutrients, providing the crabs with a source of food, researchers from the University of Tokyo and other institutes speculated when the finding was announced Wednesday.

Experts believe the Sea of Japan may be home to deposits of methane hydrate, a methane compound with a sherbet-like texture known as "burning ice" for its potential uses as a next-generation fuel source.

"We might be able get some insights on methane hydrate exploration by looking into these crab clusters," said Prof. Ryo Matsumoto of the University of Tokyo.

The research team noted that the sea off Niigata Prefecture is home to both methane deposits and the benizuwaigani crab. Using an underwater robot called Tsuna Sando, the group photographed 12 locations of 800 square meters (2,624.7 square feet) each at the bottom of the sea 30 (18.6 miles) to 40 kilometers (24.85 miles) off Naoetsu Port, a site known as a major benizuwaigani habitat.

Crab clusters were found in nine locations where massive amounts of

methane are released. The crabs were concentrated at densities of several to 80 times their ordinary levels, with 3,341 crabs observed at one particular location. However, three spots where only a small amount of methane is released only had an average number of crabs, or none at all.

A particularly large number of benizuwaigani were found around carbonate rocks and so-called bacteria mats, places where microorganisms gather to receive nutrients from methane. The researchers believe the crabs gather in such places because of the abundance of available food.

The term methane hydrates came into everyday use at the height of media reporting on the BP Deepwater Horizon oil well blowout in the Gulf of Mexico, which occurred April 20. Formation of methane hydrate crystals also contributed to the failure of the first cofferdam BP attempted to lower onto the well opening to contain the flow of oil from the blown-out well.

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