

BPT023-P01

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Egg capsule of vent and seep gastropod of genus *Oenopota* ? life-history traits in chemosynthetic environments

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Chemosynthetic biological community associated with deep-sea hydrothermal vent and methane seep is one of the important components of the marine ecosystem because of both high productivity and high biomass. However, due to logistic difficulties in the deep-sea, we only have limited information about the life-history traits of the chemosynthetic animals. To figure out the specific life-history traits of those animals, we need to compare the life-history traits of the chemosynthetic animals with their close relatives in the non-chemosynthetic marine environments. In the present study, we focused on the gastropods of the genus *Oenopota*, as *Oenopota* species are distributed wide range of oceanic environment, from intertidal to 4000 m deep-sea floor, including deep-sea hydrothermal vent and methane seep areas. We compared the number of the eggs in an egg capsule. A seep endemic species *Oenopota sagamiana* lays an egg capsule containing the largest number of eggs among the known *Oenopota*, whereas vent endemic species *Oenopota ogasawarana* lays an egg capsule with the second largest number of eggs, and the number of the eggs in an egg capsule of deep-sea non-vent/seep species is the third. The size of the egg capsule among *Oenopota* species, ranged from 2.0 to 5.5 mm. These comparisons suggested that the deep-water species, especially in chemosynthetic species, tends to lay the larger number of smaller eggs into an egg capsule.

Keywords: chemosynthetic ecosystem, life-history traits