

Bacteria associated holothurians : the key of habitat preference diet and functions

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Abstrak

An investigation of bacteria as holothurians's feed carried out from May until June 2006 in Medane Bay and Kombok Bay, Lombok, Indonesia. The aims of this study are to know whether holothurians eat bacteria, to observe that bacteria are the key for holothurians' habitat preference, and to understand the functions of bacteria in holothurians intestine. The results showed there are many kind of bacteria in the substrates and inside intestine of sea cucumber. There are no specificity in performance, species and number of bacteria which found in anterior or posterior of intestine, as well in their substrates. Therefore, the holothurians do not choose specific bacteria for their feed. Bacteria are the consequence of substrates ingested. Some of them can be microflora in holothurians intestine. Bacteria inside holothurians produce some enzymes such as protease, amylase and agarase. This function was proven by the increasing of Total Organic Matters (TOM) in their feces. This evidence supporting Wiedmeyer (1992) statement that sea cucumber adds organic matters in the sediment. So this also firm holothurians' function in their habitat, as supplier for organic matters. The conclusion is that bacteria are eaten by holothurians by absorption, bacteria is not the key for microhabitat preference for holothurians, and inside the intestine of holothurians, digestion and degradation are the function of bacteria by producing their enzymes.