

THE DETRITUS STORY

Pitiwong Tantichodok

Institute of Science, Walailak University, Nakhon Si Thammarat 80160, Thailand

The term detritus generally refers to dead or non-living organic matter. However, certain organisms (microflora and microfauna) which are intimately associated with the non-living particulate organic matter are usually considered to be part of detritus as well. Detritus is defined as all types of biogenic material in various stages of microbial decomposition which provide some potential energy to consumer species. Another working definition of detritus has been proposed to distinguish that the potential energy of detritus to consumers is not derived from carnivory or herbivory. The definition is as follows: non-predatory losses of organic carbon from any trophic level (including egestion, excretion, secretion, etc.) or inputs from sources external to the ecosystem that enter and recycle in the system (allochthonous organic carbon). By these definitions, detritus also includes dissolved forms of organic matter as well as mucus and faeces from living organisms. Dissolved organic matter can be either utilized by bacteria, adsorbed onto particles to form bigger aggregates or directly actively taken up by soft-bodied animals through the body wall.

Most of the organic detritus appears to be derived from plants. In estuaries, detrital organic matter can come from the terrestrial sources (allochthonous origin) or from estuaries themselves (autochthonous). In temperate shallow waters and salt marsh areas, the major source is probably from the marsh grass, *Spartina alterniflora*. In deeper waters, phytoplankton contributes mostly to the detrital pool, especially after sporadic phytoplankton blooms. In the tropics, mangroves play a more important role in contributing to the detrital pool in the estuaries.