

**ROLE OF THE GASTROPOD *Terebralia palustris* (LINNAEUS, 1767) IN
RHIZOPHORA APICULATA LEAF LITTER DECOMPOSITION.**

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Macro-invertebrates play an important role in the breakdown of leaf litter in the mangrove ecosystems. Among them, the gastropod *Terebralia palustris* L., is considered to be an important species that significantly contribute to this process.

The role of *T. palustris* on the leaf litter breakdown of *Rhizophora apiculata*, one of the commonest mangrove species in Sri Lanka, is assessed by a laboratory experiment where the loss of dry weights of *R. apiculata* leaf litter, increase of particulate organic matter and changes of the total reactive phosphate concentration in water at varying densities of *T. palustris* were measured at varying period of exposure. The distribution juvenile and adult *T. palustris* along the margin of the estuary from where the specimens were collected was also investigated *in-situ* using the belt transect method.

Results showed that the loss of dry weight of leaves decreased significantly as a result of shredding by *T. palustris*. The total suspended particles were increased significantly with the period of exposure and the density of *T. palustris*. The total reactive phosphate concentration in water increased with the period of exposure, but this was not related to the density of *T. palustris*. The adult *T. palustris* were more abundant near the mangrove root system, while the juveniles were abundant in the open areas of the estuary.

This study showed that *T. palustris* helps shredding large leaves into small litter particles and contributes immensely to the decomposition mangrove leaf litter. However, this process did not enhance the mineralization of phosphorus as the fragmented litter particles were not in critical size and the leaves were not exposed to an adequate period of time for leachate loss.