Litter production of a mangrove forest in East Sumatra, Indonesia


Abstract

Estimation of litter production in Bruguiera parviflora, B. sexangula, and B. sexangula-Nypa fruticans communities in the mangrove forest in Talidendang Besar, East Sumatra, Indonesia, was done from May 1990 to June 1991 using litter traps with a 2 to 3 weekly collection period. The total annual litter-falls are estimated to be 1267 g/m at the power of -2/year at the power of -1 in B. parviflora community, 1269 g/m at the power of -2 /year at the power of -1 in B. sexangula community and 1096 g/m at the power of -2 /year at the power of -1 in B. sexangula-N. fruticans community. In those communities, the litter-fall consisted of leaves (55.5 percent to 64.5 percent), reproductive parts (16.6 percent to 24.3 percent), twigs (4.1 percent to 5.3 percent) terminal buds (5.6 percent to 11.0 percent) and miscellaneous (3.9 percent to 5.3 percent), Distinct seasonal fluctuations were recognized in the amounts of reproductive parts and twig litter; i.e. bimodal (one peak in the dry season and one peak in the rainy season), and also in that of miscellaneous, i.e. unimodal in the rainy season. However, no marked seasonal rate pattern is recognized in the fall of leaves and terminal buds. While production of fruits of B. parviflora and Rhizophora apiculata are vigorous, that of fruits of B. sexangula are low. The annual litter-fall of those mangrove forests (1096 to 1269 g/m at the power of -2/year at the power of -1 are close to that of the mangrove forest in Muara Angke-Jakarta and Tiris Indramayu, West Java, Indonesia