

LITTER DECOMPOSITION IN A DRY MIXED  
EVERGREEN FOREST OF SRI LANKA

A. Nanayakkara, D. Parkinson\*,  
S. Widanapathirana and I. Balasooriya  
Dept. of Botany, University of Kelaniya.  
\*University of Calgary, Canada.

A study of litter standing crop and litter decomposition characteristics in a dry mixed evergreen forest at Sigiriya was carried out. Five plots of each 50x50m area were demarcated and the litter standing crop was measured, once in two months for a period of one year.

Seasonal changes of litter standing crop was observed. The lowest value of standing crop  $6.3t\ ha^{-1}$  was recorded in the month of January 1986, and the highest was  $8.9t\ ha^{-1}$  in the month of October 1986.

The standing crop was separated into three fractions. Average non-woody litter standing crop was  $2.1t\ ha^{-1}$ , woody litter standing crop  $3.9t\ ha^{-1}$  and F & H materials were  $1.6t\ ha^{-1}$ . Non-woody litter fraction was separated into species level as far as possible. Woody fraction was separated into size classes (0 - 0.5cm, 0.5-1.0cm, 1.0-2cm, 2.0cm, 2.0-10cm and Bark). Using the values of the litter standing crop and the total litterfall, annual decay constant (0.99) was calculated. The decomposition characteristics of leaf litter of five tree species (Drypetes gardeni (Thw.) Pax & Hoffm. (Euphorbiaceae), Tricalysia erythrospora (Thw.) Alston. (Rubiaceae), Schleichera oleosa (Lour.) Oken. (Sapindaceae), Euphoria longana (Lam. Sapindaceae), Syzygium cordifolium (weight.) Walp. (Myrtaceae) and woody litter of the first two species (0-2cm diameter) were studied. Decomposition of wood (2-10cm) of three species were also studied.

Only 41% of the original dry weight of leaf litter of Euphoria longana remained after 309 days. Leaves of other four species decompose slowly leaving behind 52%-76% of their original dry weight after the same period of decomposition. Of the 0-2cm wood, 78%-89% were remained. Only 58 of the dry weight of large wood (2-10cm) of Drypetes gardneri remained after 309 days.

10th Dec, 1987 (Th ursday) 02.45 p.m. - 03.00 p.m.