

AN INVESTIGATION OF PHENOLOGICAL EVENTS IN SOME ENDEMIC TREE SPECIES OF SRI LANKA, WITH REFERENCE TO CLIMATE

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Thirteen endemic tree species were selected for the study from Kottawa Forest Reserve (6.06 N, 80.18E) and Ellakanda Forest Reserve (5.59 N, 80.36E), both of which are situated in the Southern Province of Sri Lanka. The Southern Province lies in the low country wet zone of Sri Lanka in between the isohyets of 2000 & 2500 mm and is within the agroecological region WL 4 where the 75% expectancy value of annual rainfall is >1525 mm. Tropical lowland rain forests dominate both reserves and humid warm climate prevails. Kottawa reserve receives an average annual rainfall of 3700 mm distributed throughout the year with 2 maxima in April-May and in October-November while Ellekanda receives an average annual rainfall of about 2000 mm with the main rainy seasons from April to June and October to November. The average temperature is around 26^o C. Phenological events such as leaf growth/greening, leaf fall, flowering, seed ripening/fruitletting, growth periods, increment growth per month etc. were monitored monthly for a period of one year.

It was observed that most phenological events do occur either during the rainy months or are triggered by the onset of rains. All investigated tree species within the reserves exhibited two prominent growth periods per year except for *Dipterocarpus zeylanicus*, *Doona congestiflora* and *Carallea calycina* which showed only one major growth period per year. All species except for *Doona congestiflora*, *Palaquium rubiginosum* and *Carallia calycina* showed at least some growth throughout the year. The leaf growth in most species was during the S. W. monsoon period or during the intermonsoon period from September to November. In the case of *Mastixia tetrandra* the leaf growth was during July/August. None of the investigated species showed seasonal leaf fall. Flowering was confined in most species to the driest months of the year, January/March or to August/September. Only some species showed two flowering periods per year such as *Dipterocarpus zeylanicus* and *Mangifera zeylanica*.