

REPRODUCTIVE BIOLOGY OF SOME SHOREA SPP. SECTION DOONA
(DIPTEROCARPACEAE) IN SINHARAJA
1. FLORAL BIOLOGY, FLOWER VISITORS AND POLLINATION

S. Dayanandan, A.W.W.L. Abeygunasekara, I.A.U.N. Gunatilleke
and C.V.S. Gunatilleke
Department of Botany, University of Peradeniya.

At Sinharaja all the Shorea spp. of section Doona are large trees over 25m in height occupying the canopy/subcanopy stratum. Not only are they among the dominant species in the vegetation, but they are also an important source of plywood and several 'minor' forest products. Despite this, little has been hitherto known about their reproductive biology.

By close range observations from canopy platforms, the floral biology, flower visitors and pollination of 8 Shorea species were studied at Sinharaja. Although morphologically, the inflorescences and flowers of these species resemble each other, a size variation does exist between them. Their flowers bloom between 5.30 - 6.00h emanating a pleasant fragrance. Another dehiscence accompanies anthesis; by 10.00h most of the pollen is dispersed and by 13.00 - 18.00h the stamens and corolla of each flower are shed.

At these flowering crowns, over 20 species of insects were observed and identified, based on their foraging pattern, as i). pollen feeders (bees, beetles-Elateridae, flies-Calliphoridae), ii). Stamen and corolla predators (Beetles-Chrysomelidae and Scarabacidae) and iii). carnivores, of small insects, that included spiders and wasps. In addition, the giant squirrel, the western purple faced leaf monkey foraged on the floral parts of S. megistophylla, Ashton, which had the largest inflorescences and flowers among the species studied.

Of these animals, the small bodied social bees, due to their size and behavioural pattern were not effective pollinators unlike the larger sized Apis dorsata, Apis indica and Nomia sp. Activity of these visitors at the flower and their peak foraging times were temporarily separated and possibly related to the availability of the floral rewards.

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