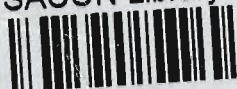


Role of Birds in Seed Dispersal and
Natural Regeneration of Forest Plants in
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ROLE OF BIRDS IN SEED DISPERSAL AND NATURAL REGENERATION OF FOREST PLANTS IN TAMIL NADU

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ABSTRACT

The forest department of Tamil Nadu has launched various ecorestoration programmes to restore some of the degraded areas. One of the major activities under the scheme was planting trees and it was desired that the species chosen should be of those which are dispersed by birds. Hence, SACON was entrusted with the project to identify bird-dispersed native plant species suitable for reforestation in select localities of Tamil Nadu Western Ghats.

Studies were conducted in the Coimbatore Forest Division, Nilgiri Biosphere Reserve (between 1993 and 1996), where the major forest is dry mixed deciduous type. Vegetation and bird sampling was done in three habitats, namely least disturbed, moderately degraded and highly degraded.

Of the 115 woody species recorded in the study area, 52% of the species were dispersed by birds. *Ficus* spp. attracted the maximum number of bird species followed by *Celtis philippensis* and *Syzygium cumini*. Other important bird-dispersed genera of this division were *Santalum*, *Premna*, *Grewia*, *Ixora*, and *Vitex*.

Of the 5047 birds (120 species) recorded during the census, 36.2% of the sightings were constituted by frugivores. In total, 35 species were seen to eat fruits, out of which 18 were major frugivores. Four species of mynas, four species of bulbuls, three species of barbets, two species of orioles, Fairy Bluebird (*Irena puella*), Pompadour Green pigeon (*Treron pompadora*), Malabar Pied Hornbill (*Anthracoceros coronatus*), Emerald Dove (*Chalcophaps indica*) and Koel (*Eudynamis scolopacea*) were the major frugivores in the study area. Bulbuls, barbets and Fairy Bluebird displayed behaviour most compatible for the dispersal of seeds for the plants they visited for fruit-feeding. These bird species visited the plants more frequently, swallowed the fruits wholly, and the mean duration of feeding visits was shorter. While three species of bulbuls (*Pycnonotus* spp.) and two species of barbets (*Megalaima* spp.) were the potential seed dispersers of dry deciduous forest species, Fairy Bluebird and two species of bulbuls were so for the riverine forest species.

Among the three types of fruits recognized in the study area, small fruited species (fruits measuring less than 15 mm) attracted maximum diversity of avian seed dispersers followed by soft fruits of any size with tiny seeds (figs) and large-fruited, large-seeded species. Large fruited, large seeded species attracted only a few bird species and for those species, mammals were the principal seed dispersers.

A total of 30 bird-dispersed plant species that have been lost or reduced to small numbers due to human disturbance have been suggested for planting in the degraded forests. A list of important genera in Western Ghats that are known to attract birds is appended.