



TAMIL NADU BIODIVERSITY & GREENING PROJECT

“Status and distribution surveys of threatened plant taxa in Tamil Nadu”

(Sathyamangalam Wildlife Sanctuary, Mukurthi National Park
Gudalur Forest Division, Point Calimere Wildlife Sanctuary)

FINAL REPORT

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Salim Ali Centre for Ornithology and Natural History
Coimbatore – 641 108

2015



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**“Status and distribution surveys of threatened plant taxa in Tamil Nadu”
(Activity under component 1.1.3.1)**

SATHYAMANGALAM WILDLIFE SANCTUARY

By

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GUDALUR FOREST DIVISION

(Activity under component 1.1.3.1)

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Mukurthi National Park

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Status and distribution surveys of threatened plant taxa in Tamil Nadu

Executive summary of the project

Background: Tamil Nadu Forest Department has formulated Tamil Nadu Biodiversity Conservation and Greening Project (TBGP) primarily aimed at assessment of wild plant taxa for conservation of vital biodiversity of the state both inside the Protected Areas and Reserve Forests. The initial step is outlined for the assessment of wild threatened taxa in the forest areas based on IUCN criteria. A state wide assessment plan was planned and it was decided to carry out the survey in 17 Divisional Management Units (DMU) across Tamil Nadu. Of the 17 DMUs, four namely, Sathyamangalam Wildlife Sanctuary, Point Calimere Wildlife Sanctuary, Mukurthi National Park and Gudalur Forest Division were assigned to SACON. The specific objectives of the project are to prepare the checklist of plant species in the above four DMUs, list out the endemic and threatened taxa in the DMUs, and assess the status of the threatened plant taxa (IUCN) in the DMU.

Methodology: Vegetation assessment was done by using nested-quadrat method. Trees, shrubs, bamboos and lianas found in the 0.1 ha plots were recorded. Trees measuring >10 cm diameter DBH (diameter at breast height) were measured and recorded. Shrubs and saplings were measured in the two 5 x 5 m quadrat laid within the 0.1 ha plot. Four 1 x 1 m plots were laid within the 0.1 ha plot to record herbs and seedlings. Number of quadrats to be laid in each DMU was allotted by the Tamil Nadu Forest Department. It included 56 quadrats for Sathyamangalam Tiger Reserve, eight quadrats for Mukurthi National Park, eight quadrats for Point Calimere Wildlife Sanctuary and eight for Gudalur Forest Division.

Results:

Sathyamangalam Tiger Reserve: In total, 538 plant species belonging to 131 families were recorded during the vegetation sampling of 76 quadrats. Poaceae (71) was found to be the most dominant family. Highest number of species (288) was recorded in the Southern Dry mixed Deciduous Forest. A total of 40 endemic plants of 21 families were recorded. Twenty two threatened species (IUCN) belonging to 18 families were recorded.

Mukurthi National Park: In total, 327 plant species belonging to 98 families were recorded in the quadrats. It included 57 endemic species belonging to 30 families and 23 IUCN

threatened species belonging to 9 families. Most dominant family representing endemic species included Lauraceae.

Gudalur Forest Division: In total, 473 plant species belonging to 100 families were recorded in the quadrats. This included 62 endemic species belonging to 38 families and 30 IUCN threatened species belonging to 16 families. Lauraceae formed the most dominant family representing both endemic and threatened species.

Point Calimere Wildlife Sanctuary: A total of 127 species were found in the quadrats. Three endemic species and one IUCN threatened plant were recorded.

Among the four DMUs, Sathyamangalam Wildlife Sanctuary and Gudalur Forest Division are rich in plant diversity and also harbouring large number of endemic (*Michelia nilagirica*, *Rhododendron arboretum*, *Syzygium densiflorum*, *Bridelia crenulata*, *Barleria longiflora* etc.) and threatened plants. Species such as *Actinodaphne salicina*, *Cycas circinalis*, *Isonandra villosa*, *Pterocarpus santalinus* (Endangered), *Jasminum azoricum*, *Syzygium travancoricum* (Critically Endangered) and *Vanda spathulata* (Vulnerable).