Theme 3: Biodiversity – Terrestrial, Aquatic

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DIVERSITY OF ORCHIDS IN SRINGERI TALUK, WESTERN GHATS OF KARNATAKA

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Sringeri is the smallest Taluk of Chickamagaluru District situated between 13°15'-13°-61' N and 75°04'-75°-21' E with a geographical area of 442.32 km square. The Taluk has a rich diversity of orchids distributed in different types of vegetation. The documentation of orchids and their host specification in different types of selected vegetations like Evergreen, Dry deciduous, Moist deciduous, Scrubby, Acacia plantations and Grasslands by using 2x100 m belt transect reveals that the taluk has rich diversity of orchids.

A total of 50 species of orchids belonging to 29 genera were recorded within the transects and out of the transects in Sringeri Taluk. Among these, 29 orchid species belonging to 21 genera were documented within the transect area of all types of selected vegetation including grass lands. Moist deciduous forest contributes the highest orchid diversity (249 individuals) followed by the scrubby forest (42) and also harbor high plant density (566 individuals) compare to other type of vegetation whereas, evergreen forest contributes only 5 individual of *Aerides crispa* and also lowest number of trees in the selected area *A.crispa* is the dominant orchid found in the evergreen vegetation and *Sarcanthus pauciflora* is dominant in remaining types of vegetation except evergreen forest. The grass lands contribute 106 individuals of terrestrial orchids *viz. Habenaria heyneana* (87), *Satyrium nepalensis* (11) and *Platanthera susanae* (8) with in the transect the other orchids found in grassland outside the transect are *H.perotettiana, H.grandifloriformis* and *H.logicorniculata, Peristylus aristatus* and *P.spiralis.*

The transect study in selected different forests reveals that *S.pauciflora* is the most abundant species (22.40), having highest SIV (60.53) and has highest density (14.00). *A.crispa* has highest frequency (0.75) and is followed by *S. pauciflora* (0.50). The recorded orchid species in different forest in Sringeri Taluk showed Shannon diversity value, $H^1 = 2.19$) and Simpson's species richness, C = 0.18.

The recorded 347 individuals of epiphytic orchids belonging to 26 species within the transect of different type of forests preferred 434 individuals of supporting trees as host plant belonging to 34 species of 22 families.

S.pauciflora preferred 112 number of host plants followed by *T.stocksii* (44). In the study area, the orchid *L.zeylanica* (20) observed only on *Hopea ponga*

Keywords: Transects, Sringeri, Western Ghats, *Sarcanthus pauciflora Platanthera susanae, Hopea ponga.*