Floristic Diversity of Hebbe Range, Bhadra Tiger Reserve, Western Ghats, Karnataka

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Abstract

Primary data collection based on floristic survey, identification and documentation forms the basis for biodiversity conservation of any region. This provides accurate and reliable basic data of a particular region. Assessment of floristic diversity of any protected areais pre-requisite for management and conservation planning. The Western Ghats with a chain of mountains running parallel to thewest coast of Peninsular India is known for its pristine forests and globally recognized as a biodiversity hotpot. This paper deals with the floristic diversity of Hebbe range in Bhadra Tiger reserve which is in Western Ghats. Considering the importance of the location of Hebbe range which comprises of dense evergreen forests, this present study was conducted to bring out a comprehensive floristic documentation. Regular field survey was conducted at different intervals to document the flora of this range. This resulted in documentation of a total of 308 species under the 251 genera belonging to 76 families. The dominant family was found to be Fabaceae with 51 species followed by Orchidaceae (25 sp.), Lamiaceae (14 sp.), Poaceae (13 sp.), and Apocynaceae (13 sp.). About 25 endemic and threatened species are also documented from this range. About 33 medicinal and wild edible plants are also documented which are most significant to the existing record.

Keywords: Floristic diversity, protected area, Tiger reserve.

1. Introduction

Among the 53 tiger protected areas in India, the Bhadra Tiger Reserve harbors the most extensive and the finest preserved tropical forests in the state of Karnataka. The Bhadra Wildlife Sanctuary (13°22’N, 75°45’E & 13°30’N, 75°47’E) was notified during 1974 and declared as Tiger Reserve in 1988. It is spread between Chikmagalur and Shivmoga District of Karnataka State. The Tiger reserve encloses four ranges Lakkavalli, Muthodi, Hebbe, Tanigebyle of which the Hebbe range is rich in flora, many of which are rare, endemic, and threatened species of the Western Ghats. Hebbe range is in the southern part of Bhadra Tiger Reserve. Rainfall is quite heavy and is not evenly distributed in the reserve area. Hebbe ranges receive higher rainfall than other ranges. Botanically Bhadra Tiger Reserve remained

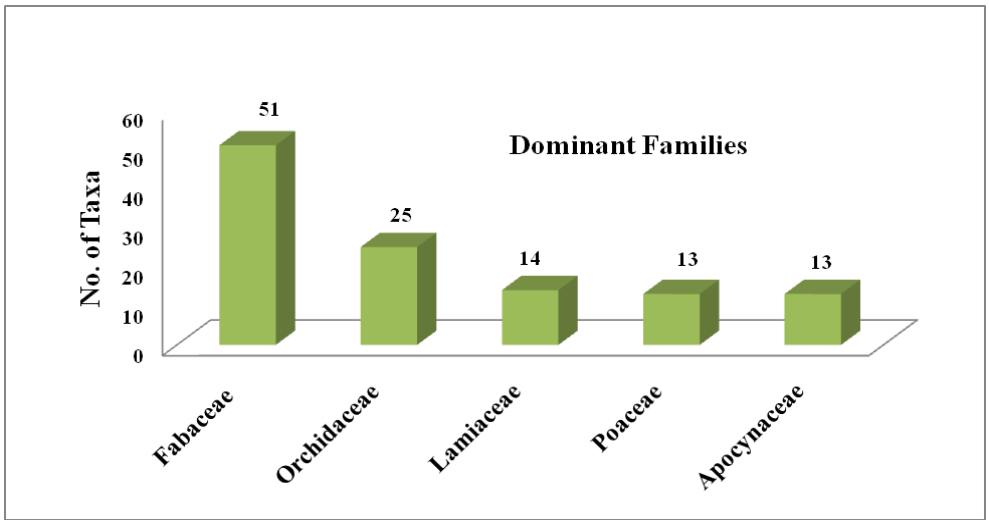
underexplored. So far, no attempt of floristic documentation is available for this Wildlife Sanctuary as a whole, except a few floristic accounts by Yoganarasimhan et al. (1981), Karanth (1981), Raju & Hegde (1995), Krishnamurthy et al. (2009). In this view the present survey and study on floristic diversity of the Hebbe Range has been undertaken to fill this gap and provide comprehensive floristic documentation of the plants present in this Range of Bhadra Tiger Reserve.

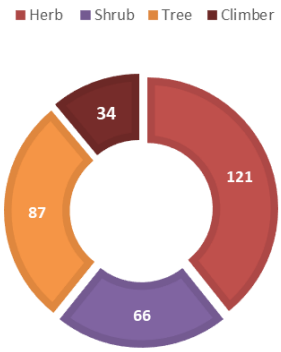
2. Materials and Methods

The field work was carried out from the period of September 2018 to November 2023 from Hebbe ranges. Collection of plant specimens was undertaken from the different parts of this range. Herbarium will be prepared for the plant's specimens collected from this range using standard herbarium techniques (Jain and Rao 1977). Identification of plants specimens was done taxonomically with the help of available literature & floras.

3. Results

During field studies documentation of a total of 308 species under the 251 genera belonging to 76 families. The dominant family was found to be Fabaceae with 51 species followed by Orchidaceae (25 sp.), Lamiaceae (14 sp.), Poaceae (13 sp.) and Apocynaceae (13 sp.)





In general, the flora of Hebbe range is dominated by herbs with 121 taxa, shrubs with 66 taxa, trees with 87 taxa and climbers with 34 taxa.

Out of 308, almost 25 endemic and 33 medicinal plants are reported from Hebbe Range.

3.1 Endemic plants

Gordonia obtuse, Hopea parviflora, Aspidopterys canarensis, Holigarna arnottiana, Humboldtia brunonis, Sophora wightii, Syzygium laetum, Lagerstroemia microcarpa, Begonia crenata, Hymenodictyon obovatum, Lasianthus acuminatus, Wendlandia thyrsoidea, Jasminum malabaricum, Canscora perfoliata, Aeschynanthus perrottetii, Asystasia dalzelliana, Gomphostemma heyneanum, Myristica malabarica, Cinnamomum malabatrum, Artocarpus hirsutus, Aerides maculosa, Oberonia brunoniana, Oberonia josephi, Murdannia lanuginose, Calamus nagbettai.

3.2 Medicinal plants

Tinospora cordifolia, Helicteres isora, Sterculia guttata, Murraya koenigii, Ampelocissus tomentosa, Allophylus cobbe, Abrus precatorius, Bauhinia racemosa, Caesalpinia bonduc, Chamaecrista mimosoides, Mucuna monosperma, Xylia xylocarpa, Drosera indica, Terminalia paniculata, Careya arborea, Meyna laxiflora, Mitragyna parvifolia, Ageratum conyzoides, Diospyros melanoxylon, Calotropis gigantean, Canscora diffusa, Argyreia cuneata, Solanum erianthum, Anisomeles indica, Leucas aspera, Aristolochia ringens, Myristica malabarica, Cinnamomum malabatrum, Santalum album, Phyllanthus emblica, Artocarpus hirsutus, Gloriosa superba, Salix tetrasperma.

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