International Journal of Home Science 2020; 6(3): 506-510

International Journal of Home Science

ISSN: 2395-7476
IJHS 2020; 6(3): 506-510

www.homesciencejournal.com
Received: 27-08-2020
Accepted: 09-10-2020

Dr. Prashant Kumar
Assistant Professor, Department of Botany, Laxmi Venkatesh Desai College Raichur, Karnataka, India

Corresponding Author:
Dr. Prashant Kumar
Assistant Professor, Department of Botany, Laxmi Venkatesh Desai College Raichur, Karnataka, India

Plant species diversity in Kolanki hills of Raichur, Karnataka, India

Dr. Prashant Kumar

Abstract
The environmental gradients such as sunlight, temperature, wind, moisture and rainfall determine the structure and composition of the vegetation of a particular habitat. The plant species diversity mainly relevant to the change of climate of the area. The present paper deals with the plant species diversity in Kolanki hills of Raichur. A total 39 species and 38 genera belonging to different 26 families have been recorded. It is observed that the number of plants was highest in the rainy season and lower in the summer season. Hill flora shows very poor representation of monocotyledons. It is interesting to note that the Fabaceae members are dominant followed by Acanthaceae, Convolvulaceae and Euphorbiaceous.

Keywords: Flora, Kolanki Hill, Diversity, Raichur, Karnataka

1. Introduction
The study of plant species diversity and their status in the existing different forests of the world is a significant need of the present time. Due to remarkable climate change and anthropogenic effect the considerable variation taking place in the vegetation of a particular habitat. In India there are many plant researchers have reported the distribution of plant species in different regions based on the natural habitats in the form of flora, among which some of them are namely Ramanjam and Kadamban (2001) [5], Bairagee and Kalita (2003) [3], Shrikanth *et al*., (2006) [10] Anuradha Chauhan *et al*., (2007) [2], Vinay Ranjan (2010) [12], Shiragave, P. D. (2015) [9], Patharaj. J. (2016) [5], Soosairaj. S. *et al*. (2016) [11] and Acharya Balkrishna *et al*., 2018) [1] The Raichur Kolanki forest is located in Northern part of Karnataka and lies between $17^0$35' and $18^0$25' north latitude and $76^0$42' and $77^0$39' east longitude and altitude of 514 meters from the Sea level and the average temperature from 30 to 42 ^{0}C (Fig.1).

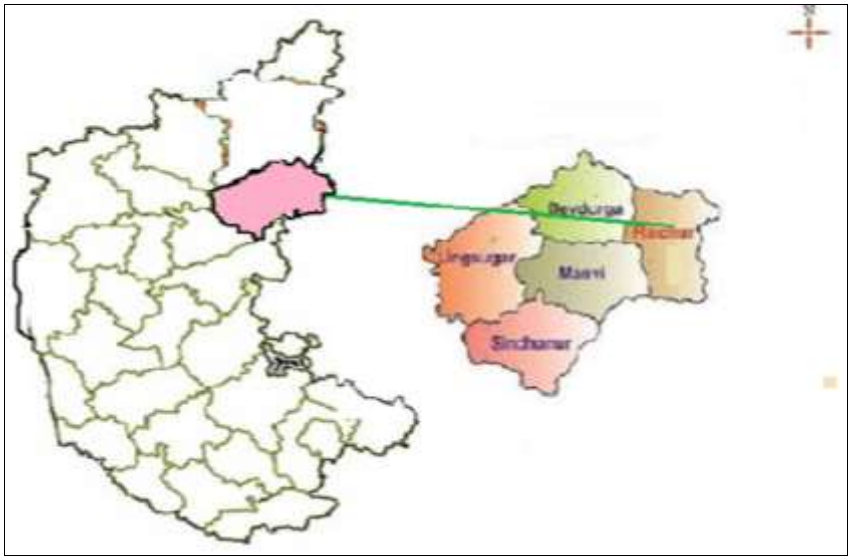

Fig 1: Map of Raichur district showing Kolanki hills in Karnataka

Fig 2: Panoramic view of Kolanki forest Raichur

2. Materials and Methods

Regularly visited the Kolanki hills of Raichur in different seasons and collected plants growing in the study area. The collected angiosperm plants transfer to the blotting paper and carried to the laboratory. All the plants are identified by using the flora such as "Flora of Gulbarga District" (Seetharam *et al*, 2000) [13] "Flora of presidency of Madras" (Gamble's 1915-1935) [4] "Flora of Karnataka" (Saldhana *et al*., 1988) [7] and prepared the herbaria. These plants deposited in the department of Botany, Laxmi Venkatesh Desai College Raichur for further reference.

3. Results

About 39 plant species under 38 genera belonging to different 26 families of phenarogams have been recorded from Kolanki hills of Raichur and are arranged alphabetically along with their family (Table: 1, Plate 1,2,3,4,5)

Table 1: Enumeration of plant species diversity in Kolanki hills of Raichur

Name of the plant Species	Name of the plant Species Family
Justicia simplex D. Don	Acanthaceae
Asystasia gangetica (L.) T.Anderson.	Acanthaceae
Rungia repens (L.) Nees	Acanthaceae
Achyranthes aspera L	Amaranthaceae
Allmania nodifera (L.) R.Br. ex wight	Amaranthaceae
Annona reticulate L.	Annonaceae
Caralluma adscendens (Roxb.)Haw.	Apocynaceae
Caralluma fimbriata Wall.	Apocynaceae
Cryptostegia grandiflora R.Br.	Apocynaceae
Calotropis procera L.	Asclepidiaceae
Tridax procumbens L.	Asteraceae
Brassica nigra (L.) W.D.J.Koch	Brassicaceae
Cleome viscosa L.	Capparaceae
Terminalia chebula Retz.	Combretaceae
Commelina bengalensisi L.	Commelinaceae
Cuscuta reflexa Roxb.	Convolvulaceae
Evolvulus alsinoides L.	Convolvulaceae
Cucumis prophetarum L.	Cucurbitaceae
Drosera indica L.	Droseraceae
Euphorbia hirta L.	Euphorbiaceae
Jatropa gossipifolia L.	Euphorbiaceae
Dichrostachys cinerea (L.) Wt. & Arn.	Fabaceae
Gleciridia sepium (Jacq.) Walp.	Fabaceae
Prosopis juliflora (Sw.) DC.	Fabaceae
Tamarindus indica L	Fabaceae
Hyptis suaveolens (L.) Poit	Lamiaceae
Leucas aspera (Willd.) Link	Lamiaceae
Malva sylvestris L	Malvaceae
Abutilon indicum L.	Malvaceae
Azadirachta indica Juss.	Meliaceae
Boerhavia diffusa L.	Nyctaginaceae
Striga gesneriods (Willd.) Vatke	Orobanchaceae
Argemone maxicana L.	Papaveraceae
Passiflora foetida L.	Passifloraceae
Cynodon dactylon (L.) Pers.	Poaceae
Datura metal L.	Solanaceae
Solanum surattense Burm.f	Solanaceae
Lantana camara L	Verbenaceae
Tribulus terrestris L.	Zygophyllaceae



Dichrostachys cinerea (L.) Wt. & Arn *Dichrostachys cinerea* (L.) Wt. & Arn *Drosera indica* L.-*habit*



Cucumis prophetarum L.-young fruits *Tribulus terrestris* L. Habit *Tribulus terrestris* L.-Flower

Plate 1.



Achyranthes aspera L *Caralluma fimbriata* Wall *Cassia auriculata* L.



Acalypha indica L. *Euphorbia hirta* L. – *Habit* *Datura inoxia* L.– Habit

Plate 2.



Abutilon indicum L. *Cryptostegia grandiflora* R.Br *Solanum surattense* Burm. f. – Habit



Solanum surattense Burm. F *Argemone maxicana* L *Lantana camara* L

Plate 3.



Cuscuta reflexa Roxb. *Evolvulus alsinoides* L. *Justice simplex* D. Don



Datura metal L. *Tamarindus indica* L. *Jatropa gossipifolia* L.

Plate 4.


Azadirachta indica Juss. *Commelina bengalensisi* L.

Plate 5.

4. Discussion

It is apparent from the present study that 39 species of plants under 38 genera belong to 26 families occurs in the Kolanki hills of Raichur, Karnataka. The different forms of plant species namely herbs are represented by 26 species and shrubs by 06 species, climber by 01 species and trees by 06 species. Herbs and shrubs have been observed growing in normal shape and size throughout all seasons except during summer, but the tree species are in extremely stunted condition. Present exploration has recorded 38 species of diocots and 01 species of monocots respectively. Fabaceae members are dominant followed by Acanthaceae, Convolvulaceae and Euphorbiaceous. The diversity of plant species of Kolanki hills of Raichur was rich and the present report play significant role to enrich the existing flora of our nation.

5. Conclusion

Forest Resources in India provides protection to environment and wildlife. It also enhances water holding capacity of soil, maintains the soil fertility, checks soil erosion, reduces flood disaster etc. people have to understand the significance of forests resources and the fact that deforestation threatens the ecology. Thus, people have to create more interest and involve in conservation of forest resources in India.

6. Acknowledgement

Author is thankful to Principal, Laxmi Venkatesh Desai College Raichur for providing facilities to carry out the present investigation.

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