

Plant Diversity at Castle rock, Goa

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ABSTRACT

The paper aimed to document the diversity of different plant species along with their vernacular name and family. Castle rock is included in the Western ghat. This attempt is for their checking the status. The documentation of plant diversity has their role in conservation and sustainable development.

INTRODUCTION

Study of plant diversity refers to the type, number and their distribution pattern, Barnes RSK(1988). Swindle BF, Conde LF (1984) and Schuler A (1998) were of opinion that Biodiversity is very significant in the study of population dynamics and sustainable development. India is one of the rich country in the biodiversity as the division is in the number of states Concerned with diverse type of plants (Mahalingam R and et. al. in 2011). India stood at 12th position among 12 mega biodiversity countries in the world (Hajra P K, (1997), Reddy CS (2008).

We have observed plant diversity existing at Castle rock. It is located at the border of Karnataka and Goa. It is situated at an average elevation of 621m above sea level. It lies 100km to north of Karwar.

Practically Castle rock is explored from Taxonomic point of view includes changes that take in the environmental factors. An attempt has been made to check the flora from that point of view. We have observed the flora to give their current status of availability.

Guerra and et. al. (2008) given the definition of Taxonomy as, the description, classification and identification of organisms.

Study of Biodiversity play an important role in understanding the proper functioning of an ecosystem to maintain proper ecological balance. (Sumeet G and et. al.,2010)

In old field ecosystems in forest, plants species diversity generally increases with succession and reaches a maximum during the forest stage when structural diversity is highest and at the time when both shade tolerant and shade intolerant species are present together. Species distribution curves are geometric during the first few years of succession and gradually change as more species are added to community, the process resulting in a high degree of evenness.

The main purpose of this study is to get acquainted with plant diversity of Castle rock, which will be useful in the field of Biology.

MATERIAL AND METHODS

To carry out work on plant diversity of Castle rock, we have visited Castle rock area in rainy, winter and summer seasons for two consecutive years. A general survey of vegetation was made and observed herbs, shrubs and trees. During our visit, we clicked some photographs of trees, natural habitats, road side, etc. The plants were identified with the help of flora. (T. Cook, (1908), Bhagat, R. B. & et.al. (2008).

Castle rock had been marked as frontier between the Portuguese-held Goa and British-held India for many years. Along with plant diversity main attraction of this place are Dandeli Tiger Reserve and Dudhsagar Falls. Another popular place near Castle rock is Ponda, which is home to the Bondle Wildlife Sanctuary and the Mahavir Wildlife Sanctuary.

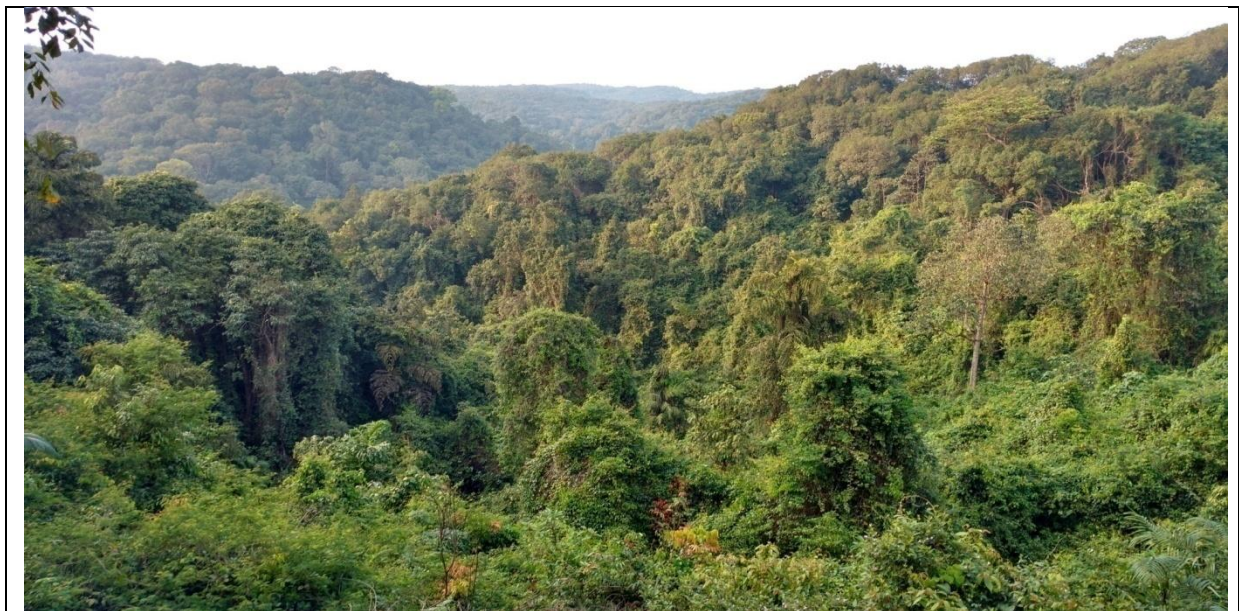
RESULT AND DISCUSSION

The present study leads to the conclusion that many of the plant species become loss. (Castle Pines Village Approved Plant List April 2016). The dominant flora is formed by the type of moist deciduous forests dominated by *Xylia xylocarpa*, *Terminalia paniculata*, *Dalbergia latifolia*, *pterocarpus marsupium* and *Albizia lebbek*, *Actinodaphnae hookerii*, *Calycoptera floribunda*

We have observed maximum number of angiospermic plants. The vegetation is of moist tropical deciduous forest. Plants have developed adaptations for different soil type, methods of pollination, daylight hours, temperature, altitude, competition with other plants. The list is endless even two plants of same species separated by geography will have a different genetic make-up. In that region, dudhsagar waterfall is source of conservation of water. List of plants in Castle rock with their families are as follows.

Sr. No.	Scientific Name	Family	Vernacular Name
1	<i>Terminalia paniculata</i>	Combretaceae	Kindal tree
2	<i>Xylia xylocarpa</i>	Fabceae	Jamba
3	<i>Terminalia crenulata</i>	Combretaceae	
4	<i>Ervatamia heyneana</i>	Apocyanaceae	Nag Kuda
5	<i>Lagerstroemia microcarpa</i>	Lythraceae	Ben Teak
6	<i>Calicopteris floribunda</i>	Combretaceae	Ukshi
7	<i>Dillinia pentagyna</i>	Dilliniaceae	Karmal
8	<i>Aporusa lindleyeana</i>	Euphorbiaceae	Sali
9	<i>Scheichera oleasa</i>	Sapindaceae	Kisum
10	<i>Glycosmis pentaphylla</i>	Rutaceae	Orangeberry
11	<i>Hopea wighana</i>	Dipterocarpaceae	Ponga
12	<i>Ixora nigricans</i>	Rubiaceae	Black Ixora
13	<i>Callophyllum apetalum</i>	Clusiaceae	Beautyleaf
14	<i>Memecylon umbellatum</i>	Melastomaceae	
15	<i>Diospyros candolleana</i>	Ebenaceae	
16	<i>Syzygium cumini</i>	Myrtaceae	Jamun
17	<i>Lophopetalum wighanum</i>	Celastraceae	Bapale
18	<i>Olea dioica</i>	Oleaceae	Rose sandalwood
19	<i>Hopea ponga</i>	Dipterocarpaceae	Kambakam
20	<i>Holigarna arnottiana</i>	Anacardiaceae	Black varnish tree
21	<i>Actinodaphne angusfolia</i>	Lauraceae	Gulchal
22	<i>Actinodaphne hookeri</i>	Lauraceae	Pisa
23	<i>Arenga wightii</i>	Palmae	Wight's sago palm

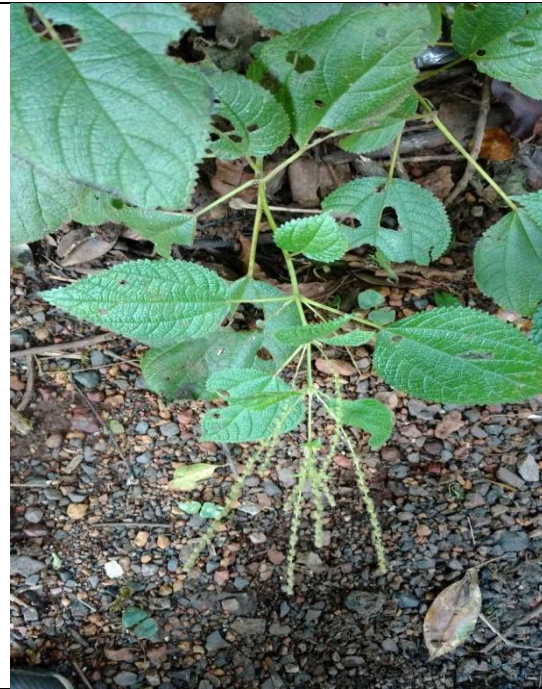
24	<i>Beilschmiedia wightii</i>	<i>Lauraceae</i>	
25	<i>Cinnamomum sulphuratum</i>	Lauraceae	Sulphur cinnamon
26	<i>Cryptocarya bourdilloni</i>	Lauraceae	
27	<i>Diospyros pruriens</i>	Ebenaceae	Panicked Ebony
28	<i>Diospyros saldanha</i>	Ebenaceae	Spindle
29	<i>Euonymus anugulatus</i>	Ebenaceae	Ghat Goniathalamus
30	<i>Goniathalamus cadiopetalus</i>	Celastraceae	Waras
31	<i>Heterophragma quadrangularae</i>	Annonaceae	Ran Jayphal
32	<i>Knema attenuate</i>	Bignoniaceae	Free-Flowering Litsea
33	<i>Litsea floribunda</i>	Anacardiaceae	Aromatic litsea
34	<i>Litsea mysorensis</i>	Knema aenuate	Mango
35	<i>Mangifera indica</i>	Lauraceae	Rampatri
36	<i>Myristica malabarica</i>	Lauraceae	
37	<i>Palaquim ellipcum</i>	Anacardiaceae	Gowrimara
38	<i>Polyalthia fragrans</i>	Myrisceae	Mysore Potato Plum
39	<i>Scolopia crenata</i>	Sapotaceae	



Vegetation of Castle rock



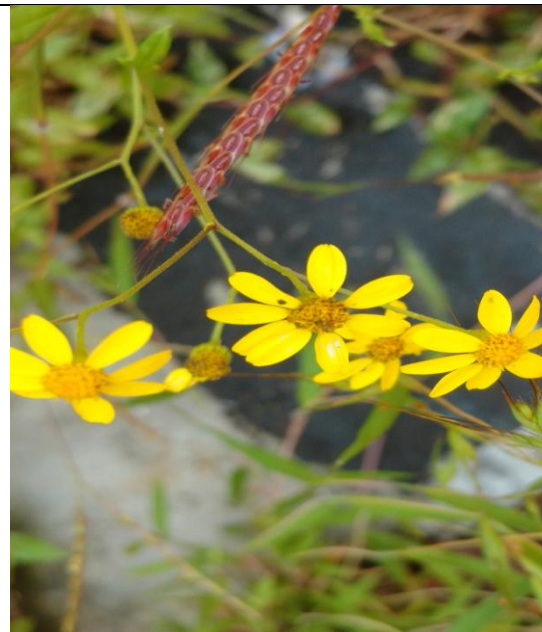
Phyllocephalum tenue



Bohemeria



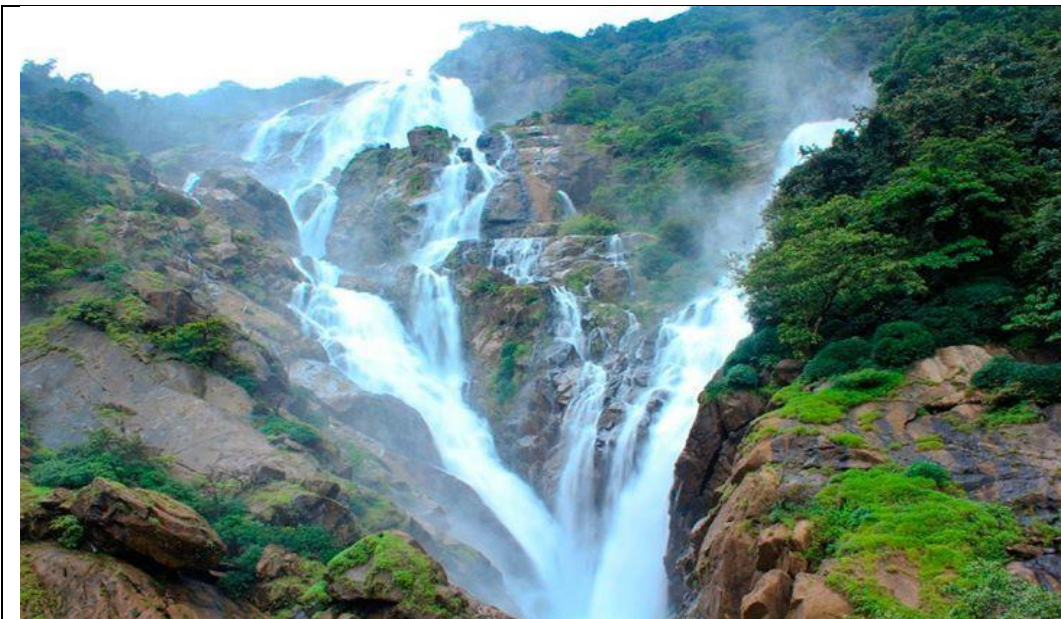
Pogostemon deccanensis



Senecio grahamii



Dudhsagar Waterfall



Dudhsagar waterfall

CONCLUSION

Taxonomy is a tool for identification of the different living organisms. It serves the purpose of conservation of Biodiversity (Bhaskaran & Rajan, (2010).Documentation of flora from time to time is necessary for conservation.



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