

BARK OF TREE SPECIES ARE MEDICINALLY IMPORTANT, ECONOMICALLY VALUABLE AND SUPPORTS IN TREE IDENTIFICATION

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ABSTRACT

Key Words: Tree bark, Digital bark, Medicinal bark, Variation in bark

INTRODUCTION

Tree Bark similar to skin, bark is the outer covering of a tree. It adapts to protect the living tree from the environment, and protects delicate tissue from diseases and insect attack. It is composed of non living tissue on the outside and living tissue on the inside. From cork to canoes, bark can be used to create a variety of practical objects. Currently, the uses of bark are both endless and pragmatic. There is an enormous amount of research being conducted in the medical field to determine the benefits of bark.

REVIEW OF LITERATURE

Hedge *et al.*, (1998) studied variation in bark thickness in a tropical forest community of Western Ghats in India. They examined the relation between bark thickness and girth in a large sample of trees from evergreen and semi-evergreen rain forest. Pant (2003) worked on the structure, composition, regeneration status and plant and animal diversity of the North and South Betul forest divisions in Madhya Pradesh. Diversity of plant species tended to decrease in old growth stands, steep slopes, very disturbed area i. e. areas around villages or recently felled coupes, very dry areas, areas that had experienced fires in the recent past etc. Udayanet *al.*, (2003) surveyed medicinal plants conservation areas located in Karnataka for the study of plant diversity. Intensive field work undertaken during all seasons resulted in authentic collection of 933 medicinal plant species represented by 147 Families, including 556 genera. A major portion of Western Ghats lied in Karnataka State, recognized as the biodiversity hotspot of the world, the current study was significant and had its relevance in contributing to develop an efficient and cost-effective conservation action program. Prakasha *et al.*, (2007) studied tree species composition, diversity and dominance along disturbance gradient in tropical dry deciduous forest of Bhadra Sanctuary. Three dry deciduous forests of Bhadra wildlife sanctuary, Karnataka were categorized as Naturally Disturbed Forest (NDF), Disturbed forest (DF) and Partially Disturbed Forest (PDF) across a disturbance gradient. Semwalet *al.*, (2007) carried out assessment of population structure on the basis of density, distribution and diversity – dominance pattern in Kedarnath wildlife Sanctuary, Uttarkhand, India. Besides, distribution pattern, population structure and conservation status of ten rare and endangered medicinal plants were also evaluated. Different habitat types for these species were identified.

MATERIALS & METHODS

Digital Bark Library: The Digital bark library was prepared with the help of Microsoft's PowerPoint software and CDROM was developed. Now the bark specimens were available electronically in the form of Compact Disc which gave user friendly access. Photo images of bark specimens had taken by using camera and the images were processed using Photoshop version 7.0. All images were saved as JPEG files. The diverse nature of the bark was supporting character for tree identification in morphodiversity studies.

The information on medicinal use of the bark was collected from local tribal inhabitants. The bark specimens are collected by cutting small portion of the bark of the trees and tagged. External features like colour and texture of the bark was studied. On the basis of these characters the bark was classified in different types such as smooth, furrowed, scaly, warty and shaggy.

OBSERVATIONS & RESULTS

Tree bark: An important source of the medicine: Tree bark was an important ethnobotanical source of tribal life to control health related problems such as skin diseases, cuts, dysentery, digestion, acidity, body power, bone fracture and cough. The tree bark was traditionally used for medicinal purposes by the local residents and ethnobotanical knowledge was descended from older to young generation. It was known that wild animals of the forest used to swallow tree bark. In present study the ethnobotanical information was gathered by communicating the local residents. Bark morphology was studied. The tree bark was broadly classified on the basis of morphological characters, colour and texture whether it was smooth, scaly, furrowed, warty or shaggy.

Tree bark is protective and valuable: It was found that bark has its uses to human as well as to trees. The bark served to protect a tree, without bark there would not be the survival of trees. During observations some tree barks found to bear thorns, gums and resins. It was told by the inhabitants that there were some tree barks storing water, during dry hot summer when food and water was not sufficient, many animals found to use tree bark as their requirement of food and water.

Tree bark was source of organic matter: In the present study it was noted that the tribal of Melghat villages often used the powder of the dried bark as the organic material by mixing it with the soil. The plants growing on such a soil showed improvement in the growth rate, flowering and fruiting. This indicated that bark powder was useful for nursery soils for rapid growth of plant species. It was because of bark having many more chemical features, resulting positively on the tree growth. So, this nutritive quality of the bark was the notable feature that could be properly utilized in the nursery practices.

DISCUSSION

In present study trees were studied. During this study some visible differences of bark type, leaf type, flower, fruit and other morphological and medicinally important characters were studied. The barks were classified on the basis of their colors and textures. Pant (2003) carried out ecological analysis of the Satpura conservation area landscape through stratified field sampling and Remotely Sensed data. Pandit (2003) studied biodiversity of tropical dry deciduous forest of Gir forest of Gujrat, India Where the climate was very hot and dry. The plant species occurring there, presented with reference to their, families, genera and species; and also their vernacular names, flowering and fruiting periods. The study enumerated 431 species, belonging to 294 families of flowering plants, out of which dicotyledons contributed 371 plant species belonging to 246 genera and 80 families. Compartment 1016, research plot represented as many as 40 trees species belonging to 34 genera and 24 families of dicotyledons; the plant species were described with their local names, along with flowering and fruiting periods. Flowering period of most of the tree species varied from February to July and fruiting period was from June to November. Udayanet *al.*, (2003) provided an insight into the floristic diversity, occurrence and distribution pattern across the the forest of Karnataka . Common ethnobotanically important tree species occurring both in deciduous forest of Karnataka and Compartment 1016, research plot of MTR were *Bosweliaserrata*, *Buchananialanzan*, *Semecarpusanacardium*, *Phyllanthusemblica*, and *Terminaliabellerica*. Bark morphology of 40 trees belonging to compartment number 1016 research plot was studied. The tree bark was broadly classified on the basis of surface morphological characters, colour and texture whether it was smooth, scaly, furrowed, warty or shaggy. It was found that out of 40 bark

samples 16 were smooth, 5 scaly, 8 furrowed, 9 warty and 2 Shaggy types. From this study it was evident that the diverse nature of the bark helped in identification of the forest trees species.

CONCLUSION

Digital bark library of the 40 trees species exhibited diverse surface patterns e.g. smooth, scaly, furrowed, warty and shaggy types, in addition spiny nature of *Aeglemarmelos* (L.) Corr. and *Ziziphusmauritiana* Lamk. and papery bark of *Boswelliaserrata* Roxb. ex. Coleb. helped in tree identification. It was further to conclude that bark could become one of the important taxonomic characters for plant description.

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