

CONSERVATION EFFORTS OF *PINUS ROXBURGHII* IN WEST KAMENG DISTRICT ARUNACHAL PRADESH (EASTERN HIMALAYA)

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INTRODUCTION

It is a branch of Geography which deals with the geographical distribution of varieties of plant species. The present study is to find out the extraction of resin from *Pinus Roxburghii* and how the local communities play a significant role. It is observed that there is tremendous change in the natural environment where the destruction and degradation of natural habitat are widespread. Phytogeography is the study of varieties of flora and their origin of an area. Through the phytogeography, an analysis of various endemism and distribution of species can be done. The conservation of plant diversity is considered as one of the important aspects for the development and evolutionary research.

Objective

1. To study the Phytogeographic survey of *PinusRoxburghii* in West Kameng district, Arunachal Pradesh.
2. To find out the amount of resin extraction per year.
3. To make an analysis of anthropogenic threats like Jhuming, fuelwood, house construction etc.
4. To study the regeneration status of this tree species in the proposed area.
5. To create awareness campaigns related with conservation and its utility among the ethnic group.

METHODOLOGY

Field survey had carryout in most of the villages nearby pine forests. Dirang and Nafra are the two sub-divisions which has taken for the sample. The satellite data and GIS software have used to have a synoptic view of study area. Survey had generate habitat data (soil type, texture, moisture, pH, climate, etc). Other data (slope, slope aspect, altitude, etc) had derived from Digital Elevation Model (DEM) digitized from the toposheet. Satellite data has also used for land use mapping and NDVI to understand anthropogenic threat and pine tree density.

REVIEW OF LITERATURE

The resin acts to remove the joint inflammation caused by rheumatism, which helps to restore movement and to alleviate pain. A traditional use of pine resin has been an external treatment for burns and sores (Mohd et al.2013).

Conserving the importance of medicinal plants for human health and well beings there is a need for their cultivation and conservation under the agroforestry or under the man made tree plantation of the local area of the habitat. Chir pine, which is an important timber species in the sub-tropical region of India, has a wide adaptability less demanding on soil and nutrients than other conifer. This is the cause of its being used in massive afforestation programme in the country (Chandra et al. 2011).

Pinus roxburghii presents an example of a plant that has a rich history of utilization in folk remedies by various ethnic groups to treat diverse ailments. While many potential biologically active compounds have been identified in all parts of the plant, and a growing body of work demonstrates the clinical potential for some of these compounds, there still exists a great need to fully explore the scientific basis for the medicinal uses of this plant (Pawan et al. 2013).

DISCUSSION

Pinus Roxburghii is a valuable tree species for multiple uses. It is very beneficial treatment for a variety of skin complaints, wounds, sores, burns, boils etc. It is also useful for treating burning of the body cough, ulcer etc. This tree species is religiously and economically important in the proposed area since time immemorial. A meagre work has been carryout on proposed proposal. This tree species is the naturally growing plant in various sites under Nafra circle but it has been greatly exploited for economic activities and presently it is under great threat. It is very much significant to record the present status of *Pinus Roxburghii* distribution and amount of resin extraction. One needs to stay in the forest to extract resin for more than a month leading to health hazard. Continuous extraction of resin leads to shorten the life span of this tree species.

The inhabitants living near the pine forest are very much accustomed with the uses of pine trees for burning, lighting, rituals, house construction etc. Especially in rural areas the communities are still using pine trees for house construction, setting fire, lightening etc. Besides, they extract the resin from such species for the growth of their economy. As study is highly dominance of Buddhist communities and traditionally the leaves of this tree species is very significant for any rituals in the locality.

Chir pine is scientifically known as *Pinus Roxburghii* (family *coniferaea*) and is one of the most widely occurring species. It is a large evergreen tree with a massive branch system. Chir forest is found to be the fastest growing among the conifers found in the Himalaya. This tree species grow faster in compare to natural forest and therefore it is more suitable species for afforestation especially in barren land. In West Kameng district, the *Pinus Roxburghi* is mainly found in various villages under Nafra circle. The extraction of resin from this tree species makes a significant contribution to the economic growth of concern communities. Chir pine has a multiple uses to the people. It is significantly a popular timber in North east India and is widely used in various purposes like house construction, doors, windows, packing box, railway sleepers, boat buildings, sports articles, match sticks etc. Chir pine generates 70% of turpentine oil. The charcoal from chir pine used by the blacksmiths is for heating iron and goldsmiths used it for heating various metals for making distinct ornaments.

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