



## *Costus speciosus* (Koeing.) J. E. Sm., *Lobelia nicotianaefolia* Roth. And *Urginea indica* Kunth- the Important Ethnomedicinal Plants from the Western Ghats

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### ABSTRACT

*Ethnobotany may be the knowledge that prehistoric man had gained by observations and experimentations. It is the multi-disciplinary science that brings to light many less known or unknown uses of plants, of which some may have wide medicinal potential. Ethnomedicine, a part of ethnobotany deals with the study of ethnic beliefs, concepts, knowledge and practices in the midst of the tribal for checking or curing diseases. It has become an important area of research in medicine, conservation of biodiversity and socio economic development of the region. Ethnomedicine has acquired a new life due to the innovative discoveries of some amazing plant uses. Tribals of Western Ghats like Mahadevkoli and Thakars formulate various kinds of medicines from the plants like Costus speciosus (Koeing.) J. E. Sm., Lobelia nicotianaefolia Roth. and Urginea indica Kunth. These plant species are found in the Kalsubai-Harishchandragad wild life sanctuary of Ahmednagar district (Maharashtra) and due to over exploitation, they are on the way of extinction. Hence, there is an urgent need for the conservation of such important botanical and ethnomedicinal plants.*

**KEY WORDS:** Ethnomedicine, extinction, conservation

### INTRODUCTION

Ethnobotany may be the knowledge that prehistoric man had gained by observations and experimentations [1]. It is the multi-disciplinary science that brings to light many less known or unknown uses of plants, of which some may have wide medicinal potential. Ethnomedicine, a part of ethnobotany deals with the study of ethnic beliefs, concepts, knowledge and practices in the midst of the tribal for checking or curing diseases [2]. It has become an important area of research in medicine, conservation of biodiversity and socio economic development of the region. Ethnomedicine has acquired a new life due to the innovative discoveries of some amazing plant uses. Tribals of Western Ghats like Mahadevkoli and Thakars formulate various kinds of medicines from the plants like *Costus speciosus* (Koeing.) J. E. Sm., *Lobelia nicotianaefolia* Roth. and *Urginea indica* Kunth. Tuber and roots of *Costus* contain diosgenin, 5 $\alpha$ -stigmast-9(11)-en-3 $\beta$ -ol, sitosterol,  $\beta$ -sitosterol- $\beta$ -D-glucoside, dioscin, prosapogenins A & B of dioscin, gracillin and quinines [3]. *Lobelia* consists of Lobeline, *l*-lelobanidine and lobelanidine [3] whereas the bulbs of *Urginea* contain octacosanoic acid, hentri-acontanol, cardiac glycosides-scillarens A<sup>4</sup> and B<sup>5</sup>. The bulbs, leaves and roots contain stigma sterol, sitosterol and campesterol [3].

These plant species are found in the Kalsubai-Harishchandragad wild life sanctuary, the part of Ahmednagar district (Maharashtra). Government of Maharashtra declared Kalsubai-Harishchandragad as a wildlife sanctuary in the year 1986. Total area of forests is 36171.03 hectare (361.71 Sq. Kms.) out of which 17119.86 hectare is for reserved forest. The area possesses number of rare, endangered, poisonous and non-poisonous medicinal plants. But due to over exploitation, these medicinal plants are on the way of extinction. Hence, there is an urgent need for the conservation of such important botanical and ethnomedicinal plants.

## MATERIALS AND METHODS

Ethnomedicinal knowledge of tribals was documented by arranging frequent field visits to the study area. A questionnaire was prepared containing the information about the tribal vaidyas and medicinal uses of plant species. Medicinal plant parts for propagation were collected in presence of the Vaidyas or local herbalists.

Photographs of plants were also taken during the fieldwork. The collected plants were identified with the help of keys to families, genera and species provided in standard literature like Flora of Bombay Presidency [4], Flora of Ahmednagar District [5], Flora of Maharashtra State Vol.I [6], Flora Maharashtra State Vol. II [7] and Flora of Maharashtra State Vol-III [8]. The plant parts collected were propagated in the botanical garden of the department.

## RESULTS AND DISCUSSION

Rhizome of *Costus speciosus* is exploited as expectorant and is of use in asthma, fevers, bronchitis, leprosy and is applied on skin diseases. It is also given orally in urinary complaints, otorrhoea, deafness and other ear complaints.

Roots *Lobelia nicotianaefolia* are useful in the treatment of eye diseases. Decoction of flowers is given orally in asthma. Root paste is applied on dog bites.

Bulb paste of *Urginea indica* is useful to get relief from heating sensations, bronchitis and heart diseases but should be taken in small doses. Bulb powder is applied on skin diseases.

All the three plant species are facing threat and are on the way of extinction. Tribals are effectively using the plant parts against different diseases. All the three species have beautifully acclimatized in botanical garden. *Costus speciosus* is being supplied to nearby colleges.

## CONCLUSION

Due to the medicinal and botanical importance, these plant species are continuously exploited by the tribals, students, researchers and botanists, due to which they are facing a constant threat. There is an urgent need for generating awareness among the tribals, students and researchers for the conservation of these medicinal plants as it is an important genetic resource. The plants facing a constant threat and which are required continuously for the research and practical purposes, can be propagated in the botanical garden. The propagated and multiplied plant species can be supplied to the nearby institutes and colleges.

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