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Ethnobotanical Utilization of *Poecilineron pauciflorum* Bedd. by the Kani Tribes of Agasthiamalai, Western Ghats, Tamil Nadu, India

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ABSTRACT

This paper presents the kani tribal uses of an endemic plant species, *Poecilineuron pauciflorum*.Bedd. (Family Cluciaceae). The kani tribals use it for the treatment of Mendel disorder and infectious diseases, and for exorcism activities. The information presented here was collected from the Kani community at Karaiyar, Kalakad Mundanthurai Tiger Reserve (KMTR) forest, south India, Tamil Nadu.

Key Words: Kanis, Agathiyamalai, *Poecilineron pauciflorum*, South India.

INTRODUCTION

Biodiversity is not uniformly distributed on the surface of the Planet Earth. Nearly two thirds of the world biological resources are locked up; may be in virgin state, in the developing countries of the tropics which are gene rich but economically poor and technologically weak. The people of these countries are burdened with problems of illiteracy, debt; food shortages, malnutrition, housing, rural sanitation; population explosion & pollution. The ever increasing population, material needs and rising standard of hiring in these countries have serious negative impact on local biodiversity and consequently the continued availability of biological resources for further generation is doubtful.

The world of herbal medicine encompasses aspect of modern western medicinal and pharmaceutical practice, ancient and modern belief systems, biology, chemistry and Agriculture. Pharmaceutical industries are interested in finding and exploitation the benefits of natural product. Many people are interested in using a normal approach to treating their ailments. *Poecilineron pauciflorum* is an endemic tree species; belonging to the family Clusiaceae. It is an economically important timber yielding tree endemic to Travancore, Tirunelveli and South Kanara hills of Southern Western Ghats of India respectively (Gopalan & Henry, 2000). They yield valuable hard, reddish timbers that are used for building purposes and for making walking sticks.

The plant parts were employed as a kani tribal medicine and were used for the treatment of active infectious diseases. Phytochemical studies of P. pauciflorum barks were several xanthones. such as (1,6-dihydroxy-7-methoxyxanthone and 1,6-dihydroxy-7-methoxyxanthone 6-*O*-ß-d-glucoside) in addition to 12 known compounds (1,5-dihydroxy-, 1,5-dihydroxy-3-methoxy-,1,7-dihydroxy-, 1-hydroxy-7-methoxy-, 2-methoxy-, 4-methoxy-,

1,4,5-trihydroxy-, 1,3,5-trihydroxy-, 1,3,6-trihydroxy-7-methoxy-, 1,3,7-trihydroxy-, 3-hydroxy-2-methoxyxanthone and (-)-epicatechin) were isolated from the barks of *Poeciloneuron pauciflorum* (Tosa *et al.* 1997). The kani tribal *Poeciloneuron pauciflorum* plant was collected from Inchikuzhi and kannikatty area of Agathiyamalai.

Agathiyamalai is of a total area of about 2000 sq.km. This region represents the best example of tropical forest in South India. Agathiyamalai Biosphere reserve is located between 77°5 and 77 ^{o}40' East and 8 ^{o}20 and 8 ^{o}50 North and approximately covers an area of 1500 sq km. Pothigai peak (1968 m) is the highest peak in Agathiyamalai Biosphere reserve and contains about 2000 flowering. Plants species include ± 120 endemic species. *P. pauciflorum* is one of the important endemic plants in Agathiyamali (Nayar, 1996).

DESCRIPTION

Trees up to 15 m high, clear bole bark grayish. Leaves with petiole, petiole up to 1.5 cm long, rough, channeled; lamina coriaceous, oblong, up to 12 x 4 cm, rounded or acute at base, entire along the margin, bluntly acuminate at apex. Flowers solitary or paired in the axils of the fallen leaves, pedicel late, pedicels up to 2.5 cm long, glabrous, green in colour; sepals 4, ovate, the outer two ca 2.5 x 3 mm, the inner two up to 8 x 3 mm, apically obtuse, green, puberulous; petals ovate, ca 0.3 x 0.2 cm, apically obtuse, white, pubescent within; stamens 16-22, ca. 0.6 cm long. Ovary ca. 0.2 cm. Fruit globose, up to 2 x 1.7 cm. Local name- *Poothang khali*.

DISTRIBUTION

Southern parts of Western Ghats in Tamil Nadu and Kerala States of India.

MATERIALS AND METHODS

The kanies, the plant materials collected from the region of Inchikuzhi and kannikatty, agasthiyamalai, Southern Western Ghats of India. A voucher specimen (XCH 21532 and XCH 21535) for each species has been deposited at the herbarium of the Centre for Biodiversity and Biotechnology, St. Xavier's College (Autonomous), Palayamkottai, Tamil Nadu, India (plate 1).

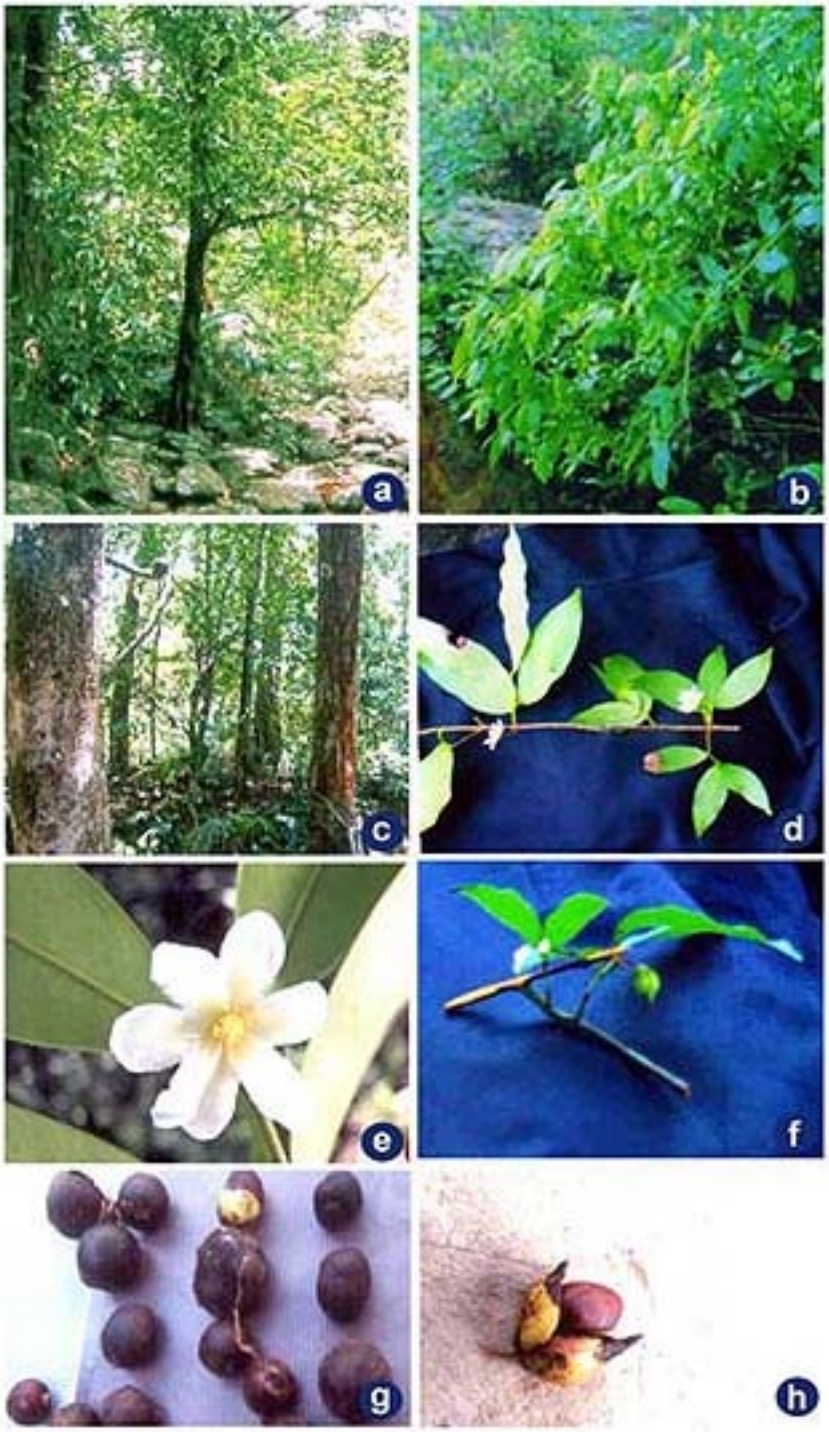

Plate 1. Illustrations of *P. pauciflorum*: A and **B**. Inchikuzhi population with mature tree and saplings; **C**. Kannikatty population with mature tree; **D** and **E**. Twig and flower; **F**. Immature fruiting twigg; **G**. Seed; and **H**. Mature fruit.

RESULTS AND DISCUSSION

The tribals and rural peoples use a variety of species from the forested as well as non forested pockets of the

study area. The comparative study of relevant and recent literature revealed medicinal uses. In the present paper *Poecilineuron pauciflorum*.Bedd. (Family Cluciaceae) the kani tribals use it for the purpose of infectious diseases, Mendel disorder and exorcism activities.

As we have seen, ethnobotany as a field is on the rise. However, it is still the laboratory-based molecular biologists whose work centers in the laboratory that garnishes more status and funding. Field ethno botanists have not yet received the same level of support and respect, primarily because interest in this field has only just reemerged. Yet, the field is growing. New scientific journals and societies have begun to disseminate the studies of the ethno botanists to peers, other scientists, and policy makers worldwide. The 1990's are an exciting time to be an ethno botanist. Ethno botany issues are the focus of much public attention. Due to increased public interest and policy making in conservation, companies are looking to plants for new approaches to food, medicines, and energy sources. University departments are opening positions for interdisciplinary-trained ethno botanists. The future looks promising for these dedicated scientists in a fascinating and vital field of research.

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