

## ETHNOMEDICAL AND PHARMACOGNOSTIC INVESTIGATIONS ON RHAPHIDOPHORA PERTUSA SCHOTT.

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**Received: 17 November, 1997**

**Accepted: 22 November, 1997**

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**ABSTRACT:** *Ethnomedical information and Pharmacognostical investigations of Rhabdophora pertusa Schott. (Araceae), a lesser known, but promising wild medicinal plant are discussed in the paper.*

### INTRODUCTION

Strategic importance of reviving indigenous medicinal practices to provide safe and affordable primary health care to the rural people of the world is now well recognized. During the last 11/2 decades or so WHO's Health Assembly had passed a number of resolutions in response to this resurgence of interest in the study and use of traditional medicine in health care and in recognition of the importance of medicinal plants to health care of many developing countries. But the modernization that brought changes in the life style of the people are posing serious threats to medicinal plants and associated traditional knowledge system. The situation had undermined the people's health security particularly in the context of primary health care of the people of the third world. It was against this background that ministry of Environment and forests launched an all India coordinated research project on Ethnobiology to document the traditional medicinal knowledge system of traditional societies of India and to initiate research to revive and revitalize this traditional medical wisdom of the people. During the course of this investigation carried out at the AICRPE unit located at Tropical Botanic Garden and Research Institute (TBGRI), Trivandrum, the authors recorded much valuable

information on many lesser known or hitherto unknown medicinal use of wild medicinal plants. The present communication reports the medicinal value of one such plant along with its pharmacognostic details.

### Materials and Methods

Ethnomedical information on *Rhabdophora pertusa* (Araceae) were collected during the ethnobotanical field survey in villages and tribal areas of Kerala. A questionnaire based interview of village physicians, tribal healers and other knowledgeable persons was conducted. Fresh samples of stem collected from the forest were subjected to pharmacognostical investigation.

### Results and discussion

#### Ethnomedical Informations

*R. pertusa* is a stout climbing shrub found in the evergreen and moist deciduous forests of Western Ghats upto an elevation of 4000f. It is mostly found growing on hill slopes and also as epiphyte on large trees. Ethnomedical informations collected are briefed as below.

Traditional physicians *Vaidyas* of Kerala call this plant as *Anamakudom* and use it as a single plant reed for treating liver disorders. The stem pounded well and cooked with rice to make a gruel and given orally twice for seven days to treat enlarged liver and spleen.

Many tribals of Kerala namely Kurichians and Adiyans of Wayanad district of Kerala call it *Anachakkara*. They prepare a medicated oil using coconut oil as base and dry powder of *R. pertusa* and apply it externally for treating various skin diseases. Expressed fresh juice of the stem of *R. pertusa* is administered orally twice daily for 15 days for treating ascites, and enlarged spleen and liver by Adiyans.

The traditional healers of Jammu prepare of pulp from tender stem to correct the dislocated joints and mend broken ones of animals and man. Bamboo splinters are used for bandaging the plastered joints/broken bones. (AICRPE, 1990).

The tribe Konda Reddis of Andhra Pradesh call *R. Pertusa Balarakkasa* and use it for bone setting. Aerial roots and leaves are ground into a paste and used for plating fractured bones and also applied on cuts and wounds. The fresh fruits are eaten as a tonic (AICRPE, 1990).

Caius (1986) reported that village physicians give the juice of tender stem along with black pepper powder to persons bitten by Russell's viper. The juice mixed with the juice of the roots of *Croton oblongifolium* and the fruits of *Momordica charantia* is applied on the bitten part.

### **Pharmacognosy**

Slant shrub, climbing on trees and rocks by means of adventitious aerial roots. Leaves

ovate to suborbicular in outline inequilateral, sometimes entire and if so perforate with elliptic holes, sometimes pinnatifid on one side to bear the base and perforate on the other side or more rarely pinnatifid to bear the midrib. 20 to 30 cm long 15, to 30 cm wide, apex shortly cuspidate lobes few, unequal, deleted towards the oblique falcate-acuminate margin, spathe deciduous, petioles deeply channelled above, 15 to 30 cm long flowers hermaphrodite, ovaries truncate stigma subsessile, pulvinate stamens 4-6 anthers erect, perianth 0.

### **Macroscopical Characters**

Form – stem, conduction – scraped or sliced

Direction of growth – horizontal

Colour – green, taste irritating

Aroma – lacking

### **Microscopical Characters**

Transverse section (Fig 1) of the fresh stem soaked in 70% alcohol was taken stained with safranin, mounted in glycerin and observed under microscope.

Stem somewhat circular in outline. The epidermis which is five outermost layer is made of parenchyma cells, ground tissue is undifferentiated which is a character of monocot. Hypodermis is two layered. Upper region consists of two rows of collenchyma cells with abundant starch grains. The region follows is the ground tissue made up of parenchyma cells. Vascular bundles are numerous, scattered, endarch, collateral conjoint and closed phloem is composed of sieve tubes and companion cells only. Phloem parenchyma absent. Medullary rays not marked out maceration of the cortical cells showed some starch grains.

Histochemical analysis showed some calcium oxalate crystals or daphides.

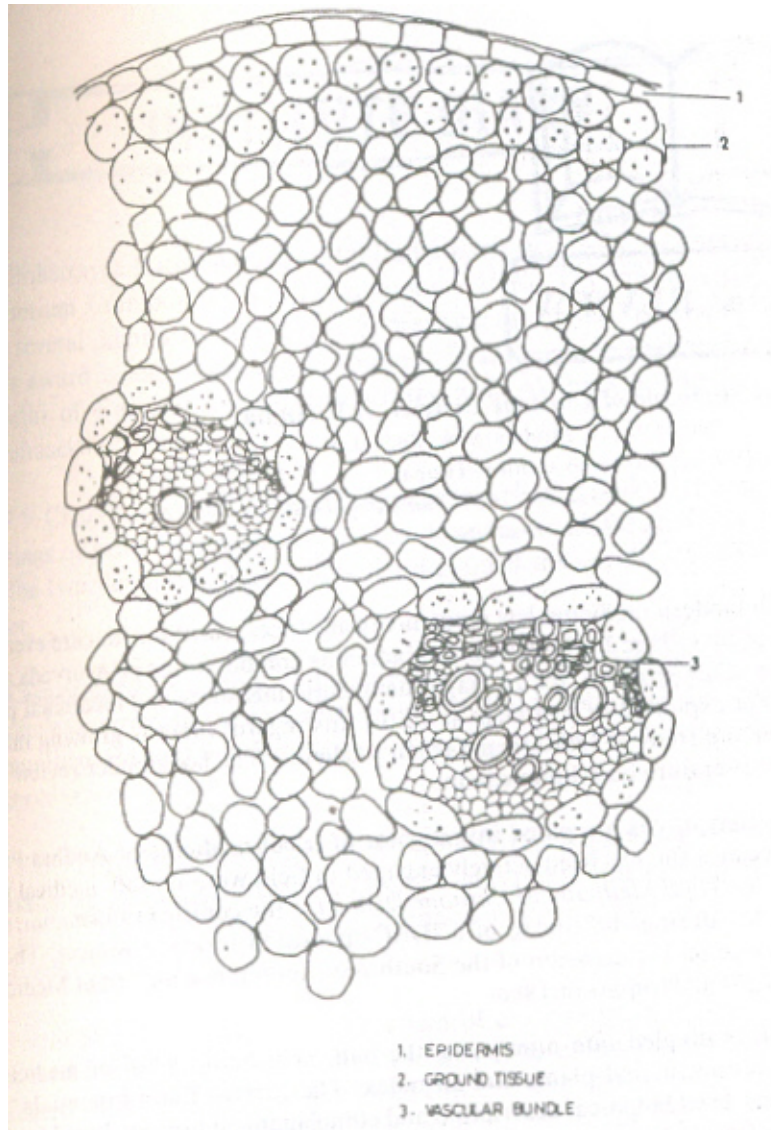
Preliminary ethnopharmacological investigations has revealed hepatoprotective property of this species, activity guided phytochemical screening has been initiated to identify and isolate the active principles from this plant, Efforts are also being made to develop some simple hepatoprotective herbal formulations using

this plant and some other medicinal plants it is hoped that very effective hepatoprotective herbal drug could be developed very soon from this plant.

### Acknowledgement

The authors are thankful to the ministry of environment & forests for providing financial assistance.

### T.S. OF RHAPHIDOPHORA PERTUSA (Stem)



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