

## Importance and uses of *Angiopteris helferiana* C. Presl at Pachmarhi biosphere reserve, central India

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### Abstract

The present study mainly focuses on the importance and uses of *Angiopteris helferiana* C. Presl by the tribes of Pachmarhi Biosphere Reserve, Hoshangabad district, Madhya Pradesh state, India. The tribal's residing in this area include Gond, Korku, Bhariya and Mavasi they are frequently utilize wild plants *Angiopteris helferiana* C. Presl status in this paper. Their family names, local names, habit, and veterinary uses are provided.

**Keywords:** *Angiopteris helferiana*, Pachmarhi biosphere reserve, India

### Introduction

Pachmarhi Conservation Area represents the central Indian Highlands and is a heterogeneous mosaic of a large contiguous forest area that includes protected areas where resource use has been stopped or controlled for a long time and the managed forests where it is still on. Human use of resource is need-based and hence a strategy to keep people away from the resource is neither feasible nor viable (Anonymous, 1996) [1]. The area represents the central Indian Highlands and the forests are economically amongst the most valuable of the dry deciduous types.

Pachmarhi belong to the Gondwana sandstone series. Perennial streams flow through the gorges down below towards the base of these hills. It has one of the highest peaks at Dhoopgarh, which is one of the highest points between the Himalayas in the North and Palni & Nilgiri hills in the south of the Indian subcontinent (Bir & Vasudev, 1973) [5]. Though a lot of information on pteridophytic flora is available, about the Himalayan and South Indian members, there is very little information on *Angiopteris helferiana* of Pachmarhi.

### Methodology

The present study is the outcome of the one years of critical field survey in the different parts of Madhya Pradesh various seasons. Medicinal information was gathered from the local and tribal people. All the specimens were collected in duplicate forms and they were deposited in the Herbarium of Botany department of government Narmada post graduate college, Hoshangabad, (M.P.) Descriptions of species and identification were done with the help of literature Beddome, R.H.(1973 and 1983) [2-3] Khullar, S. P. (1994 and 2000), Khullar *et al.* (1991) and Pande and Pande (2002) [13].

### Observation

*Angiopteris helferiana* C.Presl, Fraser-Jenkins, C.R. in Taxon. Rev. Indian subcontinental pteridophytes with a revised census-list: pp. 685 [22-26] 2008. Syn. *Angiopteris evecta*, In Comm. Soc. Reg. Gott. 12:29.t.5. 1796; Tiwari in

J. Indian Bot. Soc. 43(3): 433. 1964; Dixit & Paniger. In Bull. Bot. Surv. India 11 (3 & 4): 368. 1969.

Local name- Ghodatap, Family: Angiopteridaceae

Description-Large fern, 2-3 m high, Rhizome fleshy, ca 60cm thick, after becoming erect in age; stipes green with scattered whitish streaks and covered with small brown hairs when young but not at age. Fronds usually bipinnate rarely tripinnate, pinnae about 1m long, with pinnules 2-3 cm apart; 5-30x2-4cm, dark green, glabrous, shining sessile, unequal at base, ovate-oblong in shape, subcoriaceous, margins entire when young, serrulate at age, apex acuminate, strongly toothed; vein free, simple or forked. Fertile pinnules not contracted; Sori about 1mm away from the margin, consisting of 7-12 sporangia in each group (Fig-1).



Fig 1: *Angiopteris helferiana* C.Presl

### Veterinary uses

The Stem and Rhizome are used along with *Cyathea* spp. In the treatment of indigestion and other bowels related problems of cattle and goats. The portion of the bark is given orally to cattle in dysentery occurring during rainy

seasons. This potion is also used in treatment hair loss of the cattle caused either due to infection or injury.

### Result and Discussion

*Angiopteris helferiana* C. Presl, Fraser-Jenkins, (Godatop) before my study it's also called by many botanists as *Angiopteris evecta* and after that observe by me and identified by Fraser-Jenkins (Singh and Upadhyay, 2010). The Godatop is very interesting fodder for Barking deers, Cheetals, Sambhars and Chinkara when it grows from Rhizome and top of them so Sori condition plant observation are very difficult. The Godatop is rare tree fern in the central India found only Pachmarhi Biospher reserve. These taxa need to be deleted from present or future publications concerning India. *Angiopteris evecta* (G. Forst.) Hoffm. From Tahiti - error for *A. indica* Desv. And *A. helferiana* C. Presl (Fraser-Jenkins, 2008a, in prep.)<sup>[17]</sup>, neither of which is threatened or rare.

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