

**CYSTOPTERIS BERNH. (WOODSIACEAE): A NEW GENERIC RECORD
FOR THE PTERIDOPHYTE FLORA OF NORTH EASTERN INDIA
FROM ARUNACHAL PRADESH**

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ABSTRACT

The genus *Cystopteris* Bernh. with a species *Cystopteris moupinensis* Franch. has been collected for the first time from the state Arunachal Pradesh (India), which forms a new generic record to the pteridophyte flora of northeastern India. It is a very rare species and known only from one locality in Tale Wildlife Sanctuary of Arunachal Pradesh (India). The detailed description, distribution, first evidence, habitat, comparison notes, conservation status and the coloured photo-plate are provided to facilitate for easy identification.

Key Words : Arunachal Pradesh, Conservation, *Cystopteris*, Genus, North-Eastern India, Woodsiaceae

INTRODUCTION

The genus *Cystopteris* Bernh. (Woodsiaceae) is comprises of *c.* 21 species (POWO, 2022), distributed as cosmopolitan globally. In India, the genus is represented by only six taxa namely *viz.* *C. fragilis* (L.) Bernh. subsp. *fragilis* from Himachal Pradesh, Jammu & Kashmir, Sikkim, Uttarakhand, West Bengal; *C. fragilis* (L.) Bernh. subsp. *diaphana* (Bory) Litard. from Himachal Pradesh, Jammu & Kashmir, Uttarakhand; *C. fragilis* (L.) Bernh. subsp. *dickieana* (R.Sim) Hook.f. from Himachal Pradesh, Jammu & Kashmir, Sikkim, Uttarakhand; *C. fragilis* (L.) Bernh. subsp. *kansuana* (C.Chr.) Fraser-Jenk. only from Sikkim; *C. montana* (Lam.) Bernh. ex Desv. from Jammu & Kashmir, Uttarakhand and *C. moupinensis* Franch. collected only from Sikkim (Kholia, 2014) to till date (Fraser-Jenkins, *et al.* 2018). Four species belonging to the genus *Cystopteris* occur in the west Himalaya (Khullar, 1994). *Cystopteris* is a taxonomically difficult genus at the species level. Especially troublesome is the worldwide and polymorphic species *C. fragilis* sensu lato. To maintain it as single species several varieties would be easiest (and least controversial). This approach however, may not accurately reflect true evolutionary history. Thus, Fraser-Jenkins *et al.* (2018) treated it as atypically athyroid genus, closely related to *Athyrium*, and should be placed in the same subfamily as *Athyrium* if there were any need to recognise subfamilies of Woodsiaceae. During the pteridophytic exploration of the Tale Wildlife Sanctuary in Arunachal Pradesh (India), first authors came across an interesting athyroid fern species, which was collected for further identification. After a critical examination of characters, consultation of literature its identity was confirmed as *Cystopteris moupinensis* Franch. The species was previously reported only