

***Arthromeris repandula* Ching var. *nainitalensis* (Pteridophyta): A New Variety from Western Himalaya**

P. C. Pande⁽¹⁾, H. C. Pande^(2,3) and Pragya Joshi⁽¹⁾

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ABSTRACT: *Arthromeris repandula* Ching var. *nainitalensis* a new variety from Western Himalaya has been described and illustrated in detail.

KEY WORDS: *Arthromeris repandula* var. *nainitalensis*, Pteridophyta, Western Himalaya, New variety.

INTRODUCTION

During the course of floristic studies on Pteridophytes collected from Kumaon region of Western Himalaya (Fig. 1A-Map study area), the authors came across some specimens of the genus *Arthromeris* (Moore) J. Sm., deposited in the herbarium of Kumaon University Campus, Almora which could not be identified earlier. These plants apparently seemed to be related to *A. repandula* Ching (previously reported from Nainital, collected by E. W. Trotter in 1891 vide Bir, 1985: 99). After critical examination and perusal of literature (Ching, 1983; Iwatsuki, 1975) these specimens were determined as belonging to a distinct taxon. So far 5 species of this genus have been reported from the area (Pande and Pande, 2002; 2003). This new taxon is being described and illustrated in this paper (Figs. 1 & 2).

Arthromeris repandula* Ching var. *nainitalensis P. C. Pande, H. C. Pande *et* Pragya Joshi
var. nov.

Arthromeris repandula Ching var. *repandula* affinis, sed auriculis basioscopicis in pinnae basales bene evolutis; pinnis terminalibus base 2-lobatis; soris inter quoque par venarum lateralium 2- seriatis (in pinnae fere omnes) et inter marginem et costam in 2-3 columnae saepe confluentibus; paraphysebus 4-5-cellulari longis differt.

Arthromeris repandula Ching var. *nainitalensis* P. C. Pande, H. C. Pande *et* Pragya Joshi, *var. nov.* is close to *Arthromeris repandula* Ching var. *repandula* but differs in having well developed basioscopic auricles in the basal pinnae; terminal pinna with two basal lobes; sori in 2 rows between each pair of lateral veins (almost in all the pinnae) and often confluent in 2-3 columns between margin and costa, paraphyses 4-5 celled long.

Type: INDIA, Uttaranchal: Nainital District (Lat. 29.23°N, Long. 79.30°E), Kilbery, 2100 m, July 13, 1989, H. C. Pande, 4314 (BSD); Holotype; Pithoragarh District, Pamtori near Didihat, 1500 m, Sept. 27, 1989, P. C. Pande, 4913A, B (BSD), Paratype.

1. Department of Botany, Kumaon University, S. S. J. Campus, Almora, India.

2. Botanical Survey of India, 192, Kaulagarh Road, Dehra Dun, India.

3. Corresponding author. E-mail: pandehc13@rediffmail.com

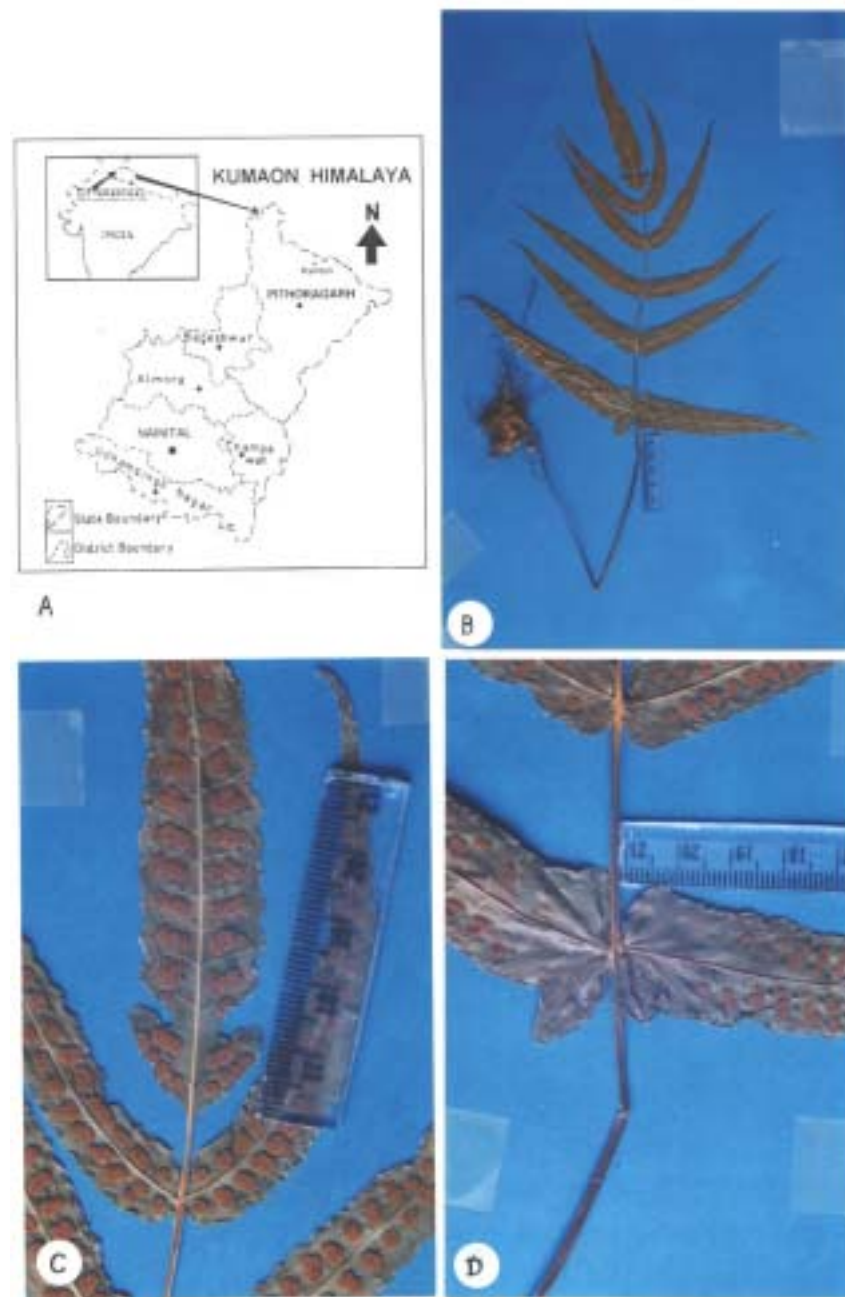


Fig. 1. *Arthromeris repandula* Ching var. *nainitalensis*. A. Map study area. B. Whole plant. C. Apical pinna with notched base. D. Basal pinna showing basiscopic auricles and confluent sori.

All the specimens have been deposited in the Herbarium, Botanical Survey of India (NC), Dehra Dun (BSD), Uttaranchal, INDIA.

Rhizome long creeping, diameter 0.5 cm, covered with scales; scales bicolorous, brown, lanceolate, 1-1.5 cm long, apex acuminate, margin eroded. Stipe 27 cm long, 0.5 cm in diameter, stramenous, scaly at the very base, scales similar to rhizome scales. Lamina simple pinnate, texture coriaceous, upper surface dark glossy, light brown beneath, size 30 x 28 cm at base, deltoid, consists of up to 5 pairs; pinnae sessile, alternate, ovate, gradually acuminate towards tip, lowermost pair largest, 14 x 3 cm, bearing basiscopic auricles, upper pinnae also



Fig. 2. *Arthromeris repandula* Ching var. *nainitalensis*. A. Plant habit. B. Rhizome scale. C. Terminal pinna showing cuneate lobes. D. Sporangium. E. Receptacle paraphyses. F. Spores.

bears partly developed basioscopic auricle, margin uniformly repando-undulate with thick cartilage line, terminal pinnae equal to basal pair; petiolated (1.5 cm), base cuneate and notched into 0.8 cm deep pair of lobe; venation reticulate, prominent, reaching the margin. Sori exindusiate, round, small, arranged in 2 rows between each pair of lateral veins and 2-3 columns between mid-vein and margin in all pinna, often confluent; receptacle with 5 celled long paraphyses bearing a long multicellular stalk, $187 \times 168 \mu\text{m}$ in size, annulus cells more than 13; spores bilateral, size $70 \times 38 \mu\text{m}$, exine highly spinous.

Habitat: Rare, growing lithophytically on rocks in moist and shady situations in the forest floor.

Etymology: The varietal epithet of taxon is named after the type locality – Nainital.

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西部喜馬拉雅山區之新變種：肢節蕨

P. C. Pande⁽¹⁾、H. C. Pande^(2, 3)、Pragya Joshi⁽¹⁾

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摘 要

本文描述西喜馬拉亞山區所產的新變種 - 肢節蕨 (*Arthromeris repandula* Ching var. *nainitalensis*)。

關鍵詞：肢節蕨、蕨類、西部喜馬拉雅山、新變種。

1. Department of Botany, Kumaon University, S. S. J. Campus, Almora, India.
2. Botanical Survey of India, 192, Kaulagarh Road, Dehra Dun, India.
3. 通信作者。E-mail: pandehc13@rediffmail.com