



First report of the moss *Rhynchostegiella divaricatifolia* (Renauld & Cardot) Broth. from Western Himalayan region of India

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Abstract

Study of the bryoflora of the Western Himalayas revealed for the first time the presence of the moss taxon *Rhynchostegiella divaricatifolia* from the Kumaon region. Earlier this moss was known from the eastern part of the country, i.e. Darjeeling (Sikkim), and was considered unique to that region. The present study describes the extended range of distribution from the Eastern Himalayan to the Kumaon hills of India in an area of 21,035 km². *Rhynchostegiella divaricatifolia* is characterised by a twisted half turn leaf apex, leaf cells showing irregular primordial utricle, linear, irregularly rhomboid. The moss plants are soft, large, glossy, and yellow–green in lax tufts.

Key words: Bryophyta, Distribution, Taxonomy

Introduction

India is one of the 12 mega-biodiversity countries in the world. The large area and the variety of phytoclimatic conditions met within its different bio–geographical zones contribute to the great diversity of the Indian flora. Bryophytes are an important part of any forest ecosystem (Carleton & Maycock 1981, Rose 1992, Selva 1994). The northern Himalayan region is known for a luxuriant bryophyte cover, both in frequency and diversity (Pande 1958, Gangulee 1969, 1970). Kumaon is situated in the state of Uttarakhand and lies between the latitude 28°44' and 30°49' N, and longitude 78°45' and 81°1' E. It is separated from Nepal, to the east by the Kali River and to the north by the Kailas Mansarovar region of western Tibet (Map 1). To the west of Kumaon lies the Chamoli and Pauri district of Kumaon and to the south it touches the districts of Bareilly, Pilibhit, Rampur, and Moradabad. The topography of the area is irregular due to valleys and plateaus of various dimensions (Singh *et al.* 2004).

The bryophyte genus *Rhynchostegiella* Limpr in Rabenh. (1896: 207; division Bryophyta, class Bryopsida, order Hypnales), is placed in the family Brachytheciaceae. There are approximately 61 species in the genus.

The distribution of *Rhynchostegiella divaricatifolia* (Renauld & Cardot) Brotherus (1909: 1169) was known to occur only in the Eastern Himalayan part of India, and until now, it has not been recorded outside this area. The present study presents the first record from the Western Himalayas, and describes the distribution of this species from the Kumaon hills. Several extensive surveys were made in last two years during the course of this study in each season, along with the use of a GPS to map the actual localities of the moss in this region (Table 1).