

ANDREAEA RUPESTRIS HEDW. A NEW RECORD FROM WESTERN HIMALAYAS

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ABSTRACT

Andreaea rupestris Hedw. has been recorded for the first time from Western Himalayas. The only previous record of this species is from Sikkim Himalayas. In this note a detailed description of this taxon with illustrations and a key for the Indian taxa of *Andreaea* are given.

Andreaea, a member of the family Andreaeaceae, was first established by Ehrhart in 1778. Since after the Brussels Botanical Congress held in 1910 Hedwig's *Species Muscorum*, published in 1801, has been adopted as the starting point for the nomenclature of Musci, the genus is now known as *Andreaea* Hedw. (Wijk *et al.* 1959). Brotherus (1924) reported 122 species of this genus, of which 4 species from India endemic to Sikkim Himalayas are *A. indica* Mitt., *A. densifolia* Mitt., *A. commutata* C. Muell., and *A. rigida* Wils.

The present specimen was collected from above Mana village towards Badrinath at an altitude of 4000 m. by the senior author, under No. 33, during I. A. F. Expedition—1959 to Nilkanth and has been identified as *A. rupestris* Hedw. (= *A. petrophila* Ehrh.). This is the first record of this taxon from Western Himalayas. The only previous reference to this species is from Mitten (1859) from Sikkim Himalayas, which is based on the collections of Dr. J. D. Hooker and determined by Mr. W. Wilson.

The species of this genus have a characteristic appearance by which they can be distinguished. They form widely scattered blackish or dark red-brown patches on rocks in mountainous country; and this together with small size of the plant and valvate dehiscence of capsule point to *Andreaea*.

In the present paper a detailed description of this species with illustrations and a key for the Indian taxa of *Andreaea* are given.

KEY TO THE SPECIES

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|---|----------------------------------|-----|-----|-----|----------------------|
| 1 | Leaves nerved | ... | ... | ... | <i>A. rigida</i> |
| | Leaves nerveless | ... | ... | ... | 2 |
| 2 | Leaves lingulate | ... | ... | ... | <i>A. commutata</i> |
| | Leaves not lingulate | ... | ... | ... | 3 |
| 3 | Leaves acuminate | ... | ... | ... | <i>A. indica</i> |
| | Leaves obtuse or acute | ... | ... | ... | 4 |
| 4 | Laminar cells quadrate-hexagonal | ... | ... | ... | <i>A. rupestris</i> |
| | Laminar cells \pm elongate | ... | ... | ... | <i>A. densifolia</i> |

Andreaea rupestris Hedw. Spec. Musc. 47. fig. 7, 2g-p. 1801. *A. petrophila* (Ehrh.) Fuernr. in *Flora* 10 Beibl. 2: 30. 1827.

Plants in small scattered tufts, dark brown or reddish brown, slender, 0.5 to 1 cm. high, erect, often slightly curved towards one side, simple or several times forked. Leaves when dry, closely appressed with incurved tips; when moist spread from an erect base, ovate or oblong-lanceolate, nearly 1 mm. long, concave, obtuse, margin incurved, entire, basal ones denuded or smaller; nerve absent; areolations at the base narrow rectangular, sinuose, with very incrassate walls, 5-7 μ wide, 3-7 times as long as broad, becoming gradually shorter and wider upwards; laminar cells hexagonal to quadrate, walls thickened at angles, arranged in longitudinal rows, 5-8 μ wide, papillose on the back. Perichaetial bracts large, outer imbricate, inner convolute, broadly oblong.

Habitat: On boulders in exposed areas.

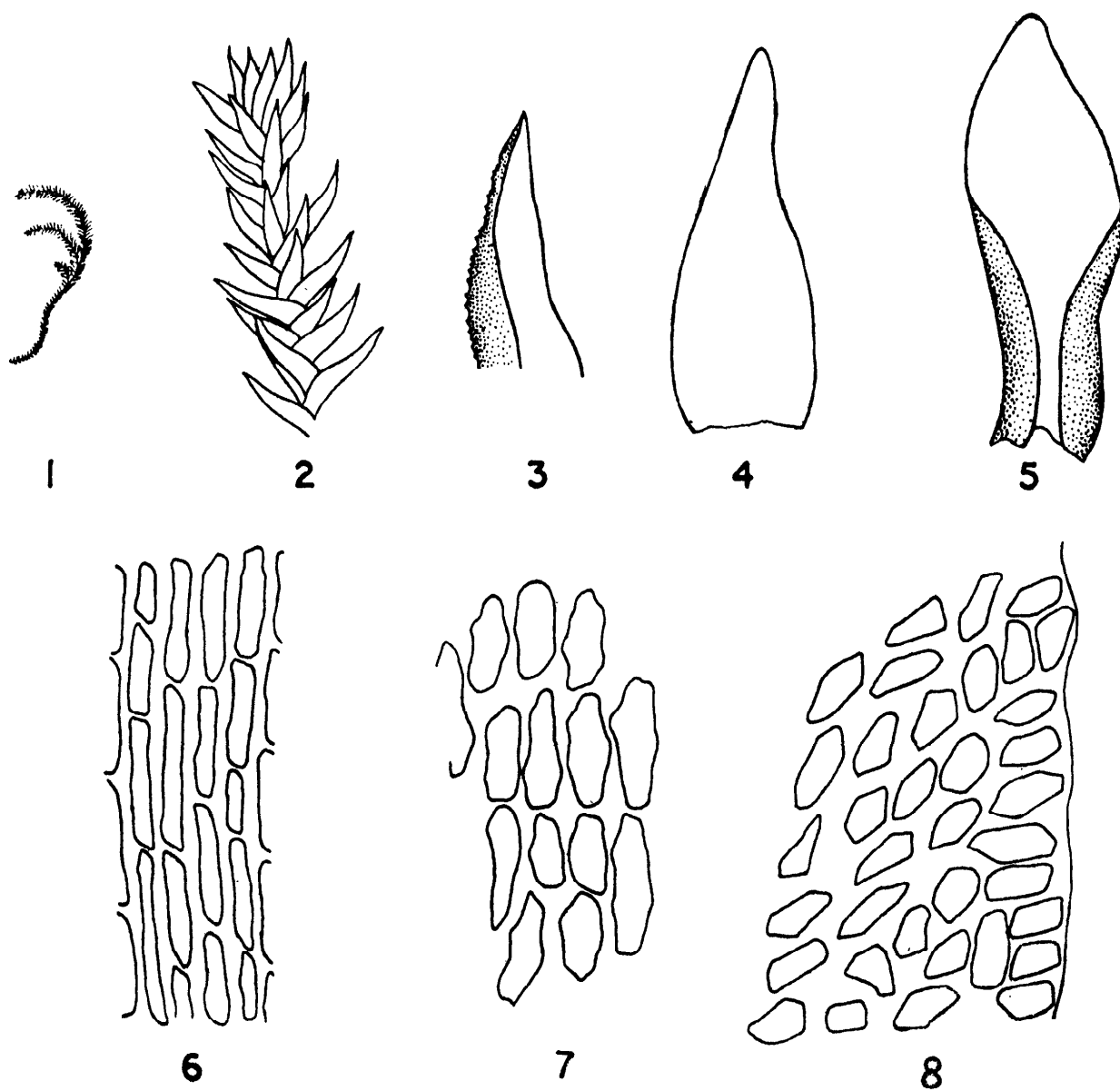
The material has been deposited in the Herbarium of the Headquarters Organisation of the Botanical Survey of India, Calcutta and a part in the Herbarium of Northern Circle, Botanical Survey of India, Dehra Dun, bearing field number 33.

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Explanation of figures 1-8

1. Habit $\times 2$; 2. Shoot showing arrangement of leaves $\times 20$; 3. Leaf apex with papillae on the back $\times 76$;
 4. Leaf $\times 76$; 5. Peri-chaetial bract $\times 76$; 6. Basal cells $\times 870$; 7. Middle cells $\times 870$; 8. Laminar cells $\times 870$.