

A NEW SPECIES OF *ANDREAEA* FROM WESTERN TIBET

J. N. VOHRA AND B. M. WADHWA*

Botanical Survey of India, Calcutta

In continuation of the work on *Andreaea* (1963)**, the authors of this paper were advised by Sri R. S. Chopra, Reader in Botany, Panjab University, Chandigarh, to properly check the identity of *Andreaea kashyapi* Dix. *inedit.* collected by the late Prof. S. R. Kashyap from Manasarowar, Western Tibet in 1926. This material was tentatively identified as a probable new species by Mr. H. N. Dixon in the herbarium of British Museum (Nat. Hist.), London. Subsequently the authorities of the said museum were very kind to lend us this material for re-investigation with permission to publish the account in case it is a new taxon.

Andreaea kashyapi Dix. ex Vohra et Wadhwa spec. nov.

Affinis *A. yunnanensi* Broth. huius generis speciei unice sinensi foliis nervatis ornatae, ab ea tamen differt praesertim magnitudine minore totius plantae, foliis ovato-oblongis breviter acuminatis, papillis nullis in foliorum cellulis, cellulis laminaribus quadratis, cellulis basalibus rectangularibus hexagonis.

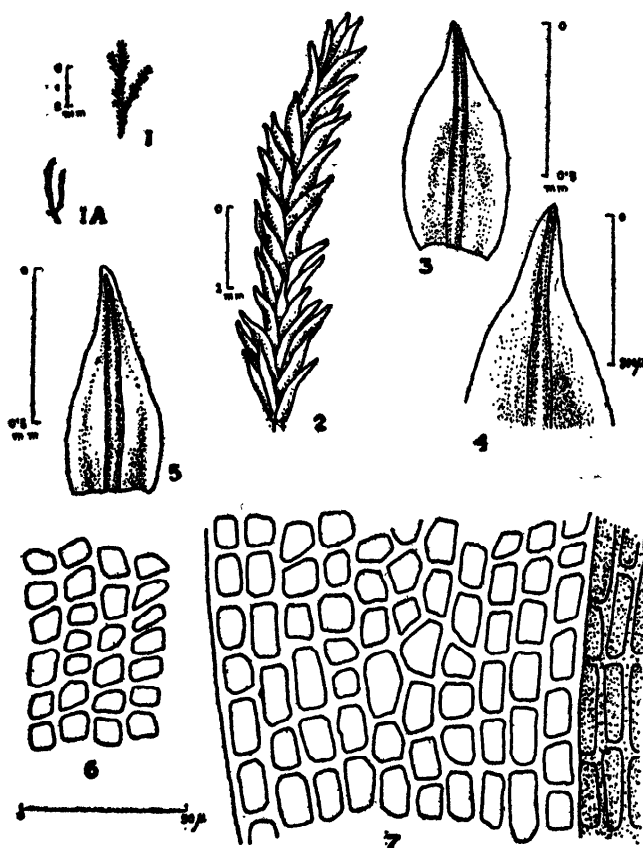
Dense caespitosa brunneola; stipes gracilis, ca. 0.5-0.75 cm altus, erectus vel decumbens, simplex vel semel furcatus. Folia sicca erecta stipiti adnata, madida vero aggregata, imbricata, erecto-patentia, ovato-oblonga, abrupte prope apicem angustata in acumen breve, acutum, marginibus planis, integris; nervi fortes, ad apicem desinentes, nonnumquam infra apicem in foliis tenuioribus; cellulae laminae $\pm$ quadratae, parietibus incrassatis levibus, ca. 10 μ latae, ad basim paulo ampliores, e rectangularibus hexagonae, ca. 13 μ latae, pellucidae. Bracteae perichaetiales foliis similes. Sporogonium haud visum.

Typus lectus ad lacum Manasarowar ad 4570 m altit. in Tibet Occidentali die 18 julii anni 1926 a beato Prof. S. R. Kashyap; holotypus, *Kashyap s. n.*, servatus in Museo Britannico (Hist. Nat.) ad Londinium; isotypus, *Kashyap A. s. n.* positus in herbario cryptogamico Officinae Centralis Bot. Surv. Indiae ad Calcuttam.

Andreaea kashyapi Dix. ex Vohra et Wadhwa spec. nov.

This species is allied to *Andreaea yunnanensis* Broth., the only known Chinese species of this

genus with nerved leaves, but differs from it chiefly in (i) small size of the plant; (ii) ovate-oblong,



Figs. 1-7 : *Andreaea kashyapi* Dix. ex Vohra et Wadhwa
1. Plant. 1A. Plant when dry. 2. A shoot showing arrangement of leaves. 3. Leaf. 4. Leaf apex. 5. Young leaf. 6. Laminar cells. 7. Basal cells from nerve to margin.

shortly acuminate leaves; (iii) absence of papillae on leaf-cells; (iv) quadrate laminar cells and (v) rectangular to hexagonal basal cells.

In close tufts of brownish colour. Stem slender, about 0.5-0.75 cm tall, erect or decumbent, simple or once or twice forked. Leaves when dry erect and clasped to stem, when moist crowded, imbricate, erecto-patent, ovate-oblong, abruptly narrowing near apex into a short acumen, acute, margin flat, entire; nerve strong, ceasing with apex, sometimes below apex in young leaves; laminar cells quadrate with very incrassate walls, smooth, about 10 μ wide, at base somewhat larger, rectangular to hexagonal, about 13 μ wide, pellucid. Perichaetial bracts resembling the leaves. Sporogonium not seen.

* Present address : Botanical Survey of India, Central Circle, Allahabad.

** Vohra, J. N. & B. M. Wadhwa. *Bull. bot. Surv. India* 5(2) : 45-46, 1963.

The type was collected from Manasarowar, (about 4570 m) in Western Tibet, on July 18, 1926, by the late Prof. S. R. Kashyap and Holotype (*Kashyap s. n.*) is located in the herbarium of British Museum (Nat. Hist.), London; and the Isotype (*Kashyap A. s. n.*) is deposited in the Cryptogamic Herbarium, Head Quarters Organisation, Botanical Survey of India, Calcutta.

Andreaea kashyapii Dix. ex
Vohra et Wadhwa

Andreaea yunnanensis Broth.

- | | |
|--|---|
| 1. Plant small, upto 0.75 cm tall. | 1. Plant large, upto 2 cm tall. |
| 2. Leaves ovate-oblong, abruptly
narrowing near apex into a
short acutemen, acute. | 2. Leaves from oval base,
long lanceolate, obtuse. |

- | | |
|---|--|
| 3. Papillae on leaf-cells absent. | 3. Coarse papillae on leaf-cells
present. |
| 4. Laminar cells quadratish. | 4. Laminar cells roundish. |
| 5. Basal cells rectangular to
hexagonal. | 5. Basal cells rectangular. |

ACKNOWLEDGEMENTS

The authors wish to express their sincerest thanks to Dr. H. Santapau, Director, Botanical Survey of India, for kindly giving the latin diagnosis and providing necessary facilities. They are also thankful to the authorities of British Museum (Nat. Hist.), London, for putting at their disposal this valuable material and to Sri R. S. Chopra, Punjab University, Chandigarh, for valuable suggestions and help with literature.