

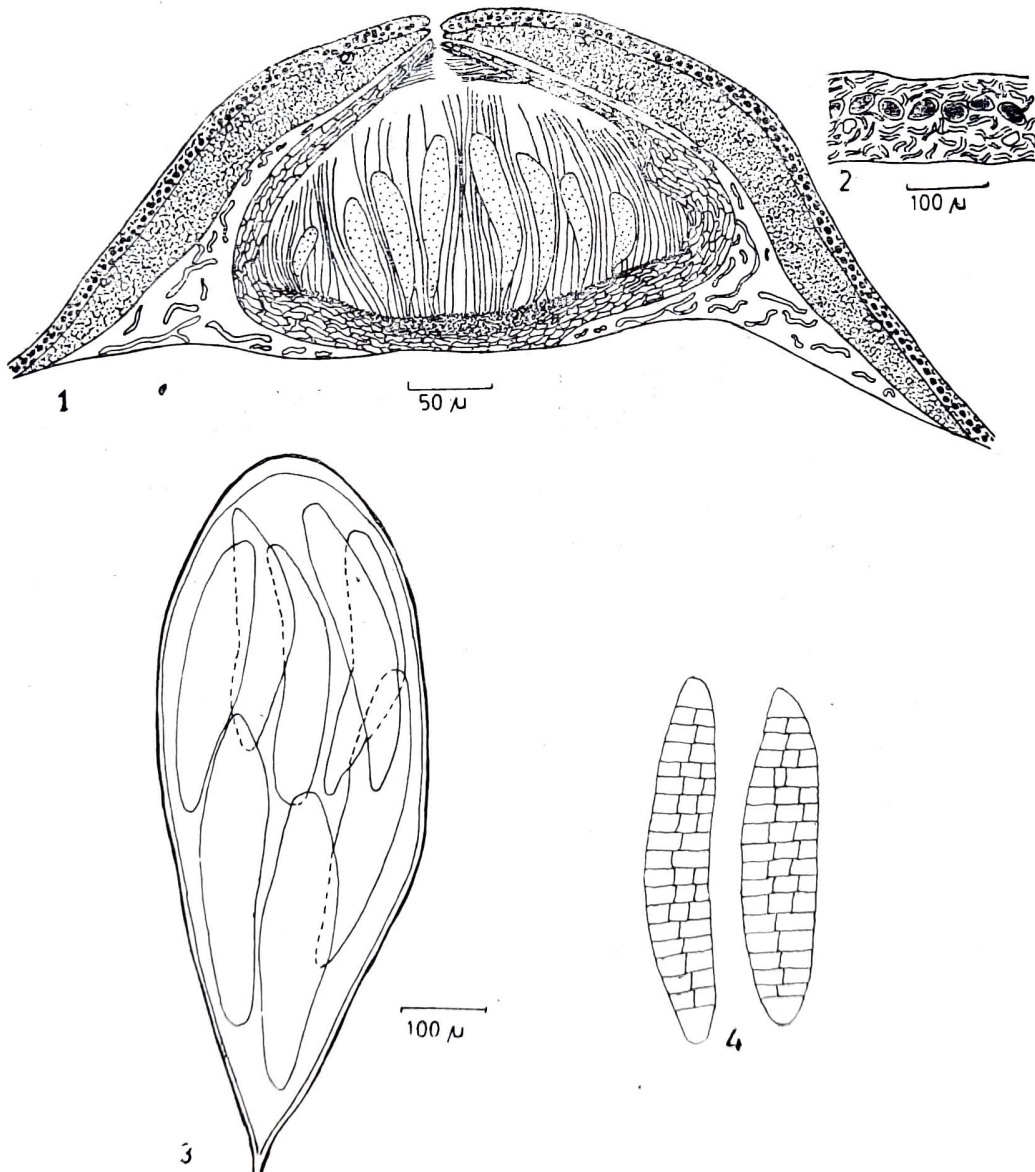
# A NEW SPECIES OF *PHYLLOBATHELIUM* (LICHENS) FROM ARUNACHAL PRADESH, INDIA

The lichen genus *Phyllobathelium* (Müll. Arg.) Müll. Arg., is represented by 3 species (*Phyllobathelium epiphyllum*, *P. megapoticum* and *P. thaxteri*) from tropical America (San-  
tesson, 1952). Taxonomic studies on lichens of Arunachal Pradesh have resulted in the discovery of a new species, *P. indicum*. However, the genus as such is a new record for Indian flora. The occurrence of this taxon in India has great phytogeographical interest as it was known earlier only from tropical America.

*Phyllobathelium indicum* Sinha et Singh  
sp. nov.

Fig. 1; text-figs. 1-4.

Thallus tenuissimus, laevigatus, dispersus, viridicinereus; perithecia simplicia, viridi-cinereus vel pallido-cinereus, 0.6-1.2 mm across; basin versus dilatatus; paries externus flavidus vel fuscus, K<sup>+</sup> fusco-rubescens; paries internus incoloratus, K<sup>-</sup>; asci 6(8) spori, obclavati vel clavati; spores deco-



Text-figures 1—4. *Phyllobathelium indicum* Sinha et Singh; 1. V. S. through perithecium, 2. V. S. of a portion of thallus, 3. An ascus with spores, 4. Spores.





Figure 1. Leaf showing part of Holotype *Phyllobathelium indicum* Sinha et Singh ( $\times 2.4$ ), Circled portion.

lores, ellipsoideae, murales, septis transversalibus 10-35, longitudinalibus 1-2; sporae 54-108  $\mu\text{m}$  longae et 10-22  $\mu\text{m}$  latae; paraphyses simplices. Alga ad *Trentepohlia* pertinet.

Thallus thin, crustaceous, dispersed in small to irregular patches, 8-20 mm across, greenish grey, smooth, 15-27  $\mu\text{m}$  thick, externally interwoven hyphal tissue 4-14  $\mu\text{m}$  thick and underneath a single cell irregular algal layer 8-13  $\mu\text{m}$  thick; few small groups of crystals present here and there below the algal layer; alga a species of *Trentepohlia*, cells angular to rounded, most of them elongate, 4-9  $\mu\text{m}$  in length; hypothallus absent.

Perithecia simple, greenish grey to pale grey, 0.6-1.2 mm across, surface smooth, ostiolar portion brownish to blackish, not concave; base distinctly spreading; outer perithecial wall yellowish brown to dark brown, paraplectenchymatous, 45-72  $\mu\text{m}$  thick,  $\text{K}^+$  intensely brown with reddish tinge, covered by a thalline matt up to ostiolar region; few small crystals present below the algal layer; inner perithecial wall colourless, 18-20  $\mu\text{m}$  thick, prosoplectenchymatous, cells 7.50  $\mu\text{m}$  long, 2-4  $\mu\text{m}$  thick, perithecial chamber globose to flask shaped, 260-500  $\mu\text{m}$  in diameter; ostiole 10-15  $\mu\text{m}$  across; paraphyses many, colourless; asci 6(8) spored, vertical, obclavate to clavate, 115-200  $\times$  25-72  $\mu\text{m}$ ; spores colourless, ellipsoid, muriform, transversely 10-35 septate, longitudinally 1-2 septate, ends acute in younger stages, obtuse at maturity, 54-108  $\times$  10-22  $\mu\text{m}$ ; paraphyses

simple, colourless, longer than asci, ca 1.5  $\mu\text{m}$  thick.

This new species does not resemble any of the species so far known. It is distinguished by smooth thallus, simple perithecia with distinct spreading base, large-sized spores with obtuse ends and long paraphyses.

The taxon grows on the leaves of shrubs in association with *Porira epiphylla*, *P. nitidula* and *Sporopodium xantholeucum* in moist tropical evergreen forest of Arunachal Pradesh.

*Holotype*—Arunachal Pradesh, Changlang District, Namdapha Biosphere Reserve, at 40th Mile, alt. ca 850 m, dt. 23-02-1982 leg K. P. Singh F. 50 (Assam).

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### References

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