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# Journal of Threatened Taxa



Open Access

10.11609/jott.2024.16.12.26187-26330

[www.threatenedtaxa.org](http://www.threatenedtaxa.org)

26 December 2024 (Online & Print)

16(12): 26187-26330

ISSN 0974-7907 (Online)

ISSN 0974-7893 (Print)







ISSN 0974-7907 (Online); ISSN 0974-7893 (Print)

Publisher  
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Cover: Life and death in one night - wolf hunting the hare. Mixed media—gouache, acrylics, pen & colour pencils. © Dupati Poojitha.





Figure 1. Location map of collection site of *Phycolepidozia indica* Gradst., J.-P.Frahm & U.Schwarz in the Western Ghats.



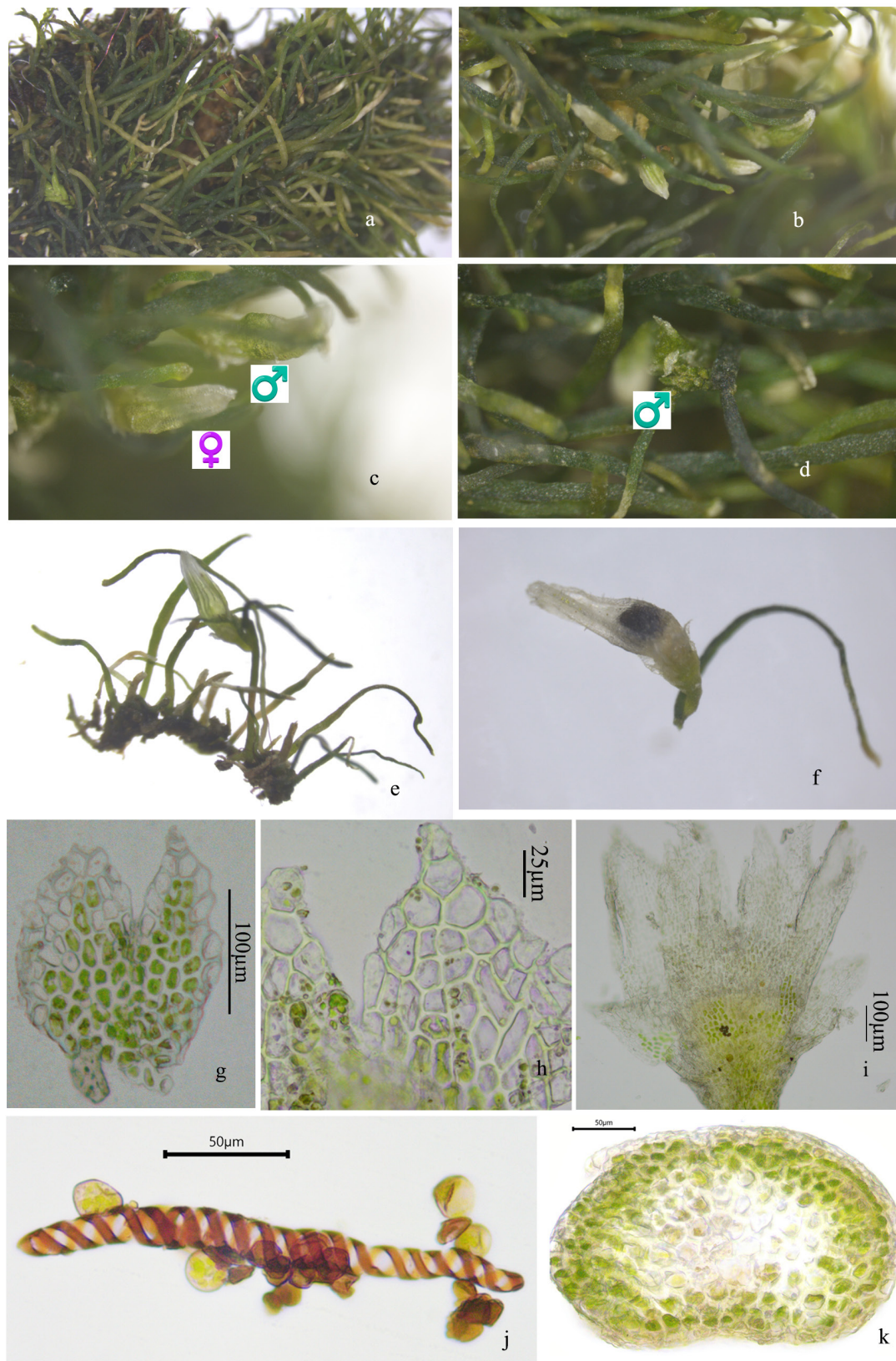


Image 1. *Phycolepidozia indica* Gradst., J.-P.Frahm & U.Schwarz. a—habit showing leafless branches | b—female branch | c—branch showing female and male structure | d—male branch with small bracts | e-f—enlarged view of female branch with sporogonium enclosed within perianth | g—male branch with bract | h—bract cells | i—connate bract and bracteoles | j—spores and elater | k—cross section of stem. © Manju & Krishnendhu.

amidst thick forest in the Wayanad district of Kerala. The leafless liverwort was found growing on a large, rocky patch. The morphological features were studied under a Leica SApo stereo microscope, and internal features using an Olympus CX21liLED compound microscope. The photomicrographs were recorded using Magcam DC5 5.1MP camera and Magnus Analytics MagVision software (version x64.4.8.15674.2-01991008). The voucher specimens are housed in the Calicut University Herbarium (CALI).

### Taxonomic Treatment

***Phycolepidozia indica*** Gradst., J.-P. Frahm & U. Schwarz, Taxon 63(3): 499. 2014. – Type: INDIA, Western Ghats, Karnataka State, Coorg District, trail to the summit of mount Tandiamol, 25.9 km south-west of Madikeri, 1,610 m, on a shaded rock in remnant forest along the trail, 12.2208 °N, 75.6095 °E, 11 November 2012, U.Schwarz, J.-P.Frahm & F.Schumm s.n. (PC). (Image 1).

Plant monoecious, pale green to dark green, green to blackish when dried, caespitose, bristles like mats on rocks, shoots leafless, arising from rhizomes, 2.30–5.29 mm long, 0.12–0.17 mm thick. Stem straight to remotely angled, irregularly branched, branches 0.51–2.63 mm long, 0.11–0.15 mm thick with pointed tip, devoid of leaves, but with alternately protruding few-celled hyaline projections on lateral sides representing vestigial leaves; in surface view the dorsal epidermal cells oblong, thick walled, green; ventral epidermal cells short, rectangular and pale green. Stem cross section shows 18–21 cells across, 280–300 × 170–180 µm in diameter; the outer cortical cells green, chlorophyllous, thick walled, small sized, 8–15 × 5–13 µm, arranged in 4–5 layers of cells; the inner medullary cells hyaline, non chlorophyllous, thin walled, larger, 18–23 × 13–19 µm, arranged in 4–5 layers of cells; branches greenish, arising from ventral sides in straight angles, erect, small hyaline projections on either side of stem representing the leaf position. Rhizoids hyaline and smooth, arising from the rhizomes, also present on shoot tip. Gametoecea leafy, colourless, arising from short branches. Androecia terminal or intercalary in position, mostly adjacent to the perianth, comprising 6–7 leaf-like bifid appendages or bracts, 0.9–1.2 mm, cells chlorophyllous, 19–30 × 11–15 µm. Gynoecia terminal on short branches, bracts and bracteoles connate, female bract in 2–3 series, innermost bract 0.3–0.4 mm long; perianth 0.8–1.2 × 0.30–0.37 mm, 6-keeled with green base and hyaline tip, orange to brown cover on its tip, cells hyaline, 46–81 × 11–24 µm. Cells of perianth and male and female bracts

contain 5–8 globular oil bodies. Seta very thin, 3 mm long; capsule cylindrical; spores immature, spherical, 17–19 µm in diameter, brownish yellow; elaters 213–239 × 15–18 µm, brownish, with strong bi-spiral bands.

**Habitat:** The species was collected near to semi evergreen forest from a shady large rocky patch where water drips regularly.

**Distribution:** India, southern Western Ghats, Karnataka (Coorg District), and Kerala (Wayanad district – present study), endemic.

**Specimen examined:** India: Kerala, Wayanad District, Thollayiram kandi, Tentgram (1,180 m), 02.12.2023, 11.4903 °N, 76.0995 °E, coll. K.P. Rajesh, #202511 (CALI).

### DISCUSSION

Schuster (1966) considered *Phycolepidozia* under a separate family Phycolepidoziaceae R.M.Schust. when he first described *P. exigua*. However, based on the molecular analysis Gradstein et al. (2014) concluded that the genus is closely related to Cephaloziellaceae and included it under Cephaloziellaceae. The Wayanad region is known with a rich Bryoflora comprising more than 170 species, including endemics such as *Trichostomum wayanadense* Nair et al., *Amphidium gangulii* Nair et al., *Pinnatella enrothiana* Manju et al., *Acidodontium indicum* Vineesha et al., etc (Nair et al. 2005; Manju et al. 2023; Vineesha et al. 2023). The present finding of a curious genus, *Phycolepidozia*, also signifies the quality of the habitats in the Wayanad region in supporting a rich biodiversity. However, due to the small size of the plant, the chance to ignore or miss many species is high. The continued intensive surveys in the habitats of the Western Ghats are proved worthy in documenting many more taxa. The present location of the species, Wayanad, is about 82 km (aerial distance) from the earlier known localities in Karnataka State. Like *P. exigua*, the present species is also very rare as it is known only from two locations with very small extent of occurrence and area of occupancy and hence may be threatened.

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Print copies of the Journal are available at cost. Write to:  
The Managing Editor, JoTT,  
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3A2 Varadarajulu Nagar, FCI Road, Ganapathy, Coimbatore,  
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**Journal of Threatened Taxa** is indexed/abstracted in Bibliography of Systematic Mycology, Biological Abstracts, BIOSIS Previews, CAB Abstracts, EBSCO, Google Scholar, Index Copernicus, Index Fungorum, JournalSeek, National Academy of Agricultural Sciences, NewJour, OCLC WorldCat, SCOPUS, Stanford University Libraries, Virtual Library of Biology, Zoological Records.

NAAS rating (India) 5.64



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ISSN 0974-7907 (Online) | ISSN 0974-7893 (Print)

December 2024 | Vol. 16 | No. 12 | Pages: 26187–26330

Date of Publication: 26 December 2024 (Online & Print)

DOI: 10.11609/jott.2024.16.12.26187-26330

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