
Plants 1–2.5 cm long, olive green. Stems pinnately branched. Leaves imbricate, wide-spreading, 0.45–0.53 × 0.38–0.45 mm, oblong, entire at margin, arched at antical margin, straight or incurved in middle at postical margin, rounded at apex; cells ovate-hexagonal to ovate-rhomboid, trigonous, without intermediate nodular thickenings; apical cells 16–24 × 12–16 µm; median ones 20–32 × 12–25 µm; basal ones 16–30 × 12–20 µm; oil bodies 1–4 per cell, globose, 4–6 µm, smooth; lobules triangular, 0.15–0.22 × 0.075–0.09 mm, flat or swollen, slightly constricted at apex, flat or incurved and free at margin, 2-toothed; first tooth indistinct, second one 1-celled, ovoid, with a hyaline papilla at distal end; keel straight or arched, smooth. Underleaves distant, obliquely inserted, 0.3–0.45 × 0.45–0.53 mm, 4–7 times as broad as stem, orbicular to ovate, 2-lobed and acute at apex, entire at margin. Fe-
Figure 2. *Plagiochila grossa* Grolle & M.L. So. (1) plant dorsal view. (2) plant ventral view. (3–6) leaves. (7) tooth. (8) leaf apical cells. (9) leaf median cells. (10) leaf basal cells. (11) cross-section of stem. (1–11 A. E. D. Daniels 2146).
male inflorescences on short lateral branches or on main axis with 1 or 2 subfloral innovations; bracts oblong or obovate, 0.56–0.61 × 0.32–0.40 mm, rounded at apex, entire at margin; lobules oblong or linear, ca half as long as lobes; bracteoles obovate, 0.48–0.56 × 0.46–0.48 mm, 2-lobed at apex; lobes triangular, acute at apex; sinus narrow. Perianth obovate, inflated, 1.04–1.09 × 0.48–0.51 mm, distinctly 5-keeled; keels smooth.

Habitat: Rupicolous, in evergreen forests, ca 1110 m. Distribution: China and India: Tamil Nadu (Western Ghats of Kanyakumari).

Specimens examined: Tamil Nadu, Kanyakumari Dist., W. Ghats, Muthukuzhivayal, ca 1110 m, 31.3.2009. A.E.D. Daniels & J.L. Mabel 223, 230.

_Graphis grossa_ Grolle & M.L. So, Syst. Bot. 23: 461. 1999; M.L. So, Syst. Bot. Monogr. 60: 78. 2001. – Type: China, Sichuan, Mt. Emei, on tree bark, 3077 m, 1988, Gao & Wang 40286 (KUN). (Fig. 2)

Plants filiform, 7–10 mm long, pale to grey-brown. Stems ca 0.15 mm and 6–8-celled across, brown with cortex undifferentiated from medulla; cortical cells 1- or 2-layered, moderately thick-walled, 8–16 × 6–12 µm; medullary ones thin-walled, 15–30 × 14–25 µm. Branches lateral, intercalary and flagelliform when injured. Rhizoids on aerial stem, frequent. Leaves remote, subobliquely to obliquely spreading, 0.63–0.83 × 0.45–0.53 mm, ovate to oblong-ovate, sometimes faintly revolute at dorsal margin, long-decurrent at base, nearly straight; apex distinctly and asymmetrically 2- or 3-lobed; apical tooth ca 0.09 × 0.06 mm, ending in a hyaline cell; cells thin-walled with distinct trigones; apical cells 10–20 × 9–18 µm; median ones 12–20 × 10–18 µm; basal ones 18–30 × 12–22 µm; cuticle smooth. Underleaves filiform, 0.4–0.6 × 0.06–0.08 mm, deeply bifid. Sex organs and sporophyte not seen.

Habitat: Rupicolous and, corticolous in evergreen forests. Hidden in the moss _Trachycladiella sparsa_ (Mitt.) M. Menzel and hardly visible which in turn is corticolous on a stunted _Listea_ sp. (*Lauraceae*), a tree in moist evergreen forests, 1110–1800 m.

Distribution: China and India: Tamil Nadu (Western Ghats of Kanyakumari and Tirunelveli).


**Acknowledgements** – The senior author is thankful to the Ministry of Environment and Forests, Govt. of India, New Delhi, for funding a project under the AICOPTAX and to M. Sanjappa, Botanical Survey of India, Kolkuta, for his keen interest in the work and encouragement. The junior author is grateful to the said ministry for a Junior Research Fellowship. The authors are thankful to the Tamil Nadu State Forest Dept for permission to explore the said region and help in the field, R.-L. Zhu, East China Normal Univ., Shanghai, China, M. L. So, Hong Kong Baptist Univ., Hong Kong and M. J. Wigginton, Peterborough, England for help with literature and also for confirming the identity of _Cheirolejeunea trifaria_, S. C. Rose, Scott Christian College (Autonomous) for encouragement and to P. Daniel, Botanical Survey of India, Coimbatore for going through the original ms and suggestions for improvement.

**References**


