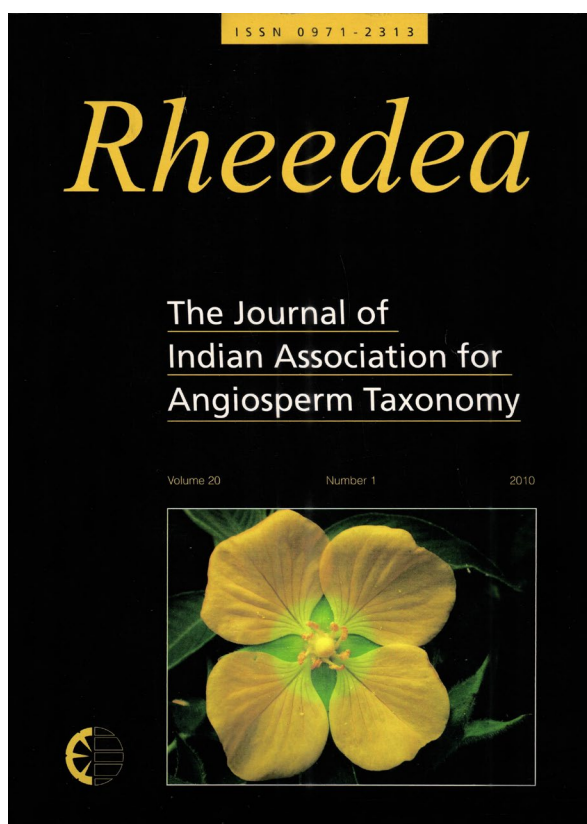




## *Eriocaulon wayanadense* (Eriocaulaceae), a new species from Kerala, India

Vivek C.P., Swapna M.M. & K.K. Suresh



How to cite:

**Vivek C.P., Swapna M.M. & K.K. Suresh 2010.** *Eriocaulon wayanadense* (Eriocaulaceae), a new species from Kerala, India. *Rheedeia* 20(1): 25-27.

<https://dx.doi.org/10.22244/rheedeia.2010.20.01.04>

Received: 27.01.2010

Revised and accepted: 10.05.2010

Published in print: 30.06.2010

Published Online: 30.06.2010

## *Eriocaulon wayanadense* (Eriocaulaceae), a new species from Kerala, India

C.P. Vivek\*, M.M. Swapna<sup>1</sup> and K.K. Suresh<sup>1</sup>

Botanical Survey of India, Southern Regional Centre, Coimbatore – 641 003, Tamil Nadu, India.

<sup>1</sup>Malabar Botanical Garden, G.A. College Post, Kozhikode – 673 014, Kerala, India.

\*E-mail: vvkcpoulose@gmail.com

### Abstract

*Eriocaulon wayanadense* Vivek, Swapna et K.K. Suresh, a new species from Wayanad district, Kerala is described and illustrated. The species is allied to *E. elenorae* Fyson, but differs by the transversely elongated seed coat cells, presence of setiform appendages on seeds and in having a black gland on each female petal.

**Keywords:** *Eriocaulon*, India, Kerala, New species, Wayanad hills

### Introduction

Linnaeus (1753), while establishing the genus *Eriocaulon*, described four species of which three were from India. Subsequently, many species were added to the genus from India from time to time by different workers (Hooker, 1893; Ruhland, 1903; Fyson, 1919 – 1922). Ansari & Balakrishnan (1994) in their revision of Indian Eriocaulaceae recognised 65 species from India and categorised them under 12 sections. Consequent to their publication, researchers focused on the genus *Eriocaulon* and enumerated (Das & Singh, 2001; Gaikwad & Yadav, 2002) or added many new species from India (Yadav *et al.*, 1998; Khanna *et al.*, 2000; Gaikwad *et al.*, 2002, 2004; Pradeep & Sunil, 2003; Punekar *et al.*, 2003, 2004; Punekar & Lakshminarasimhan, 2004; Vijayasankar *et al.*, 2006). Considering the large number of new species added to the genus, Ansari (2009) revised the book of Ansari & Balakrishnan (*l.c.*) by incorporating all the newly described species and retained the 12 sections recognised by them. Further to the publication of the revised edition, two new species were described (Yadav *et al.*, 2008; Shimpale *et al.*, 2009).

While exploring the wetlands of Kerala, the authors came across an interesting specimen of *Eriocaulon* from the Western Ghats of Wayanad district. On critical analysis the plant was found to be allied to, but distinct from the earlier described species, *E. elenorae* Fyson. After comparing with the type specimen of the above species at MH is described here as a new species.

***Eriocaulon wayanadense*** Vivek, Swapna et K.K. Suresh, *sp. nov.*

*Eriocaulon elenorae* Fyson affinis, sed cellulis testae transverse elongatis; seminibus setiforme appendiculatis et atreo - glande unicae in quoque femineo - petalo praesenti differt.

**Typus:** INDIA, Kerala, Wayanad district, Kammana, 720 m, 25.12.2009, C.P. Vivek 5128 (Holotypus, CAL; Isotypii, MH, CALI, MBGS).

Acaulescent herbs; rootstock absent. Leaves rosulate, linear, up to 7 × 0.2 cm, acute at apex, glabrous. Peduncles many, crowded, up to 22 cm long, glabrous; sheaths c. 2 cm long, glabrous; limb ovate, entire, acute. Heads globose, c. 5 mm, overcrowded by large projecting odd female sepals, creamy white. Receptacles ovoid or hemispherical, pilose. Involucral bracts ovate-elliptic, c. 2 × 1 mm, entire, acute or subacuminate, reflexed, glabrous, straw-coloured. Floral bracts oblanceolate, c. 1.8 × 0.8 mm, acuminate at apex, chartaceous, hirsute towards apex except tip, black. Male flowers: Pedicels c. 0.2 mm long. Sepals connate into a spathe; spathe obovate, c. 1 × 0.8 mm, grey, 3-lobed; lobes subequal, ovate, acute, sparsely hirsute at apex. Stipe of corolla c. 0.7 mm long. Petals 3, equal, c. 0.15 × 0.08 mm, glabrous, with a black gland. Anthers 6, globose, black. Female flowers: Pedicels c. 0.1 mm long. Sepals 3, free, unequal, straw-coloured; two lateral ones elliptic-oblanceolate, c. 1.3 × 0.15 mm, acuminate at apex, inconspicuously keeled, pilose along keels and margins towards apex; middle one elliptic-lanceolate, acute, keeled; keel pouch-like, c. 0.8 mm across, pilose along margins and on keels towards tip. Petals 3, free, linear-elliptic, c. 1.4 mm long, acute or subacuminate, sparsely hairy at apex with a black gland; stipe between sepals and

**Fig. 1**

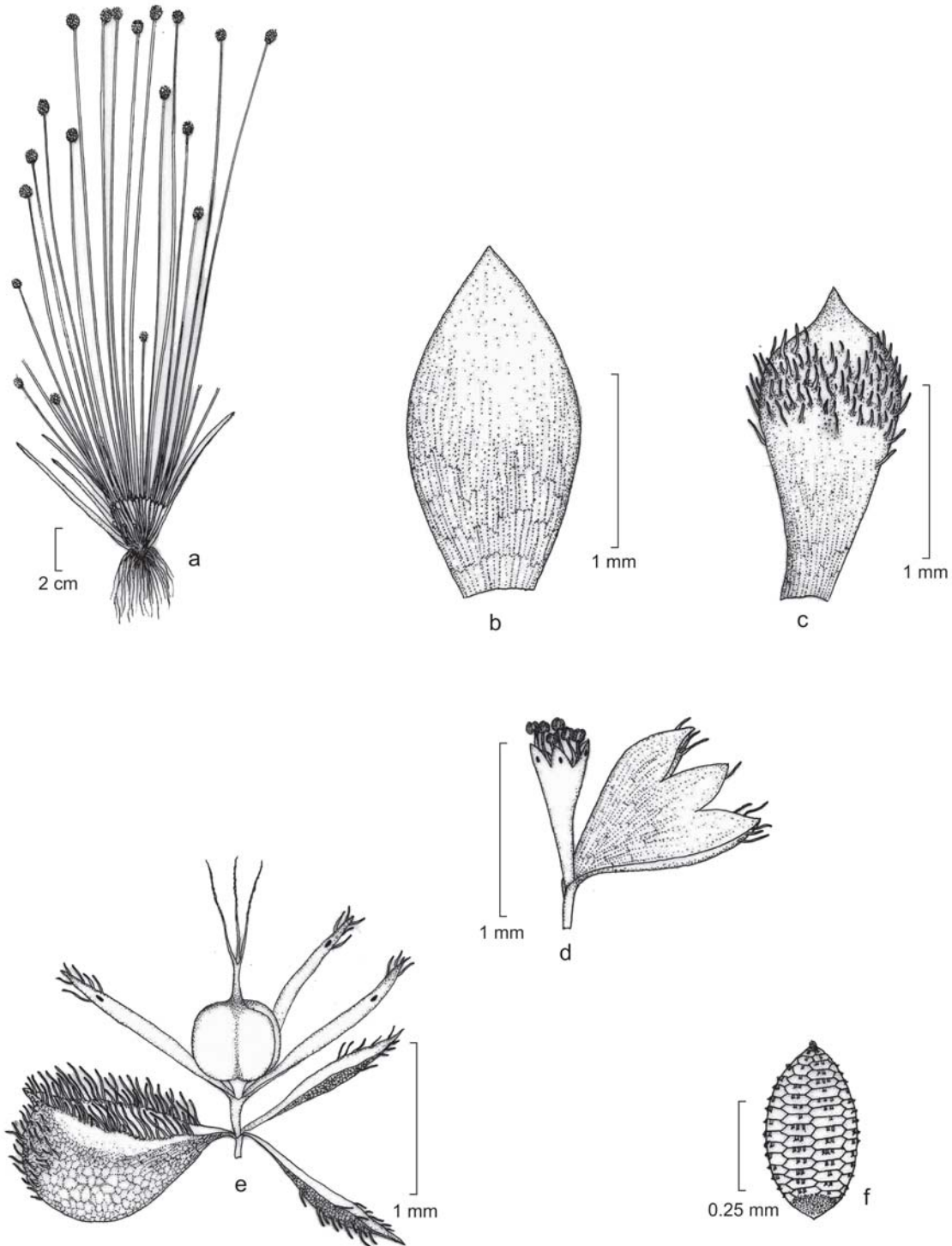


Fig. 1. *Eriocaulon waynadense* Vivek, Swapna et K.K. Suresh, *sp. nov.*: a. Habit; b. Involucral bract; c. Floral bract; d. Male flower; e. Female flower; f. Seed.

petals *c.* 0.2 mm long. Ovary ovoid-globose, with *c.* 0.1 mm long stalk; style 3-fid. Seeds ellipsoid, *c.* 0.5 × 0.25 mm, apiculate, yellow; cells of seed coat transversely elongated, aligned in 6 or 7 vertical rows; appendages 1 – 4 from transverse radial walls, setiform, minutely dilated at apex.

*Flowering & Fruiting:* December – February.

*Habitat & Distribution:* This species grows at an altitude of *c.* 700 m, in moist, sand-rich clayey soils of arecanut plantations. It grows in large colonies along with *E. conica* (Fyson) C.E.C. Fisch., a very

rare species endemic to Western Peninsular India (Ansari & Balakrishnan, 1994).

*Etymology:* Specific epithet is based on the type locality, namely, Wayanad district, Kerala.

*Notes:* *Eriocaulon wayanadense* is allied to *E. elenorae* Fyson mainly for the characteristic large pouch-like keel of the odd female sepal, but can be differentiated by the transversely elongated seed coat cells and by the presence of setiform appendages on seeds. This species falls under Section – III of Ansari & Balakrishnan (*l.c.*), but is quite distinct from all other species described under this section.

### Acknowledgements

The authors acknowledge the Kerala State Council for Science, Technology and Environment, for funding the Science Research Scheme project and the authorities of Malabar Botanical Garden, Kozhikode, for providing research facilities. We are thankful to Dr. R. Ansari, Ex-Managing Director, Malabar Botanical Garden, Kozhikode, for helpful comments on our specimens and for constant encouragement. We also wish to thank Dr. V.J. Nair, Emeritus Scientist, Botanical Survey of India, Coimbatore, for the Latin diagnosis.

### Literature cited

- Ansari, R. & N.P. Balakrishnan 1994.** *The Family Eriocaulaceae in India*. Bishen Singh Mahendra Pal Singh, Dehra Dun (Rev. ed. by R. Ansari, 2009).
- Das Das, S. & N.P. Singh 2001.** Taxonomic studies on Eriocaulaceae in Karnataka State. *J. Econ. Taxon. Bot.* **25**: 449 – 484.
- Fyson, P.F. 1919 – 1922.** The Indian species of *Eriocaulon*. *J. Indian Bot. Soc.* **1**: 51 – 55; **2**: 133 – 150, 192 – 207, 259 – 266, 307 – 320; **3**: 12 – 18, 91 – 115.
- Gaikwad, S.P. & S.R. Yadav 2002.** Eriocaulaceae in Maharashtra. In: Pullaiah, T. (Ed.), *Biodiversity of India*. Vol. 1. Regency Publications, New Delhi. pp. 256 – 341.
- Gaikwad, S.P., Sardesai, M.M. & S.R. Yadav 2002.** A new species of *Eriocaulon* L. (Eriocaulaceae) from Maharashtra, India. *Rheedea* **12**: 133 – 136.
- Gaikwad, S.P., Sardesai, M.M., Yadav, U.S. & S.R. Yadav 2004.** A new species of *Eriocaulon* L. (Eriocaulaceae) from Karnataka, India. *Rheedea* **14**: 63 – 65.

**Hooker, J.D. 1893.** *The Flora of British India*. Vol. 6. L. Reeve & Co. Ltd., London. pp. 571 – 585.

**Khanna, K.K., Mudgal, V. & A. Kumar 2000.** A new species of *Eriocaulon* (Eriocaulaceae) from Madhya Pradesh, India. *Nord. J. Bot.* **20**: 413 – 414.

**Linnaeus, C. 1753.** *Species Plantarum*. Impensis Laurentia Salvi, Stockholm.

**Pradeep, A.K. & C.N. Sunil 2003.** *Eriocaulon ansarii* Pradeep & Sunil (Eriocaulaceae), a new species from India. *Candollea* **58**: 321 – 323.

**Punekar, S.A. & P. Lakshminarasimhan 2004.** *Eriocaulon peninsulare* (Eriocaulaceae), a new species from India. *Nord. J. Bot.* **23**: 173 – 175.

**Punekar, S.A., Lakshminarasimhan, P. & M.K.V. Rao 2003.** *Eriocaulon balakrishnanii* (Eriocaulaceae), a new species from Western Ghats of India. *Nord. J. Bot.* **22(5)**: 609 – 611.

**Punekar, S.A., Malpure, N.V. & P. Lakshminarasimhan 2003.** Five new species of *Eriocaulon* L. (Eriocaulaceae) from Western Ghats, India. *Rheedea* **13**: 19 – 27.

**Punekar, S.A., Malpure, N.V. & P. Lakshminarasimhan 2004.** Three new species of *Eriocaulon* L. (Eriocaulaceae) from Peninsular India. *Sida* **21**: 625 – 635.

**Ruhland, W. 1903.** Eriocaulaceae. In: Engler, A. (Ed.), *Das Pflanzenreich*. Heft 13, Vol. 7, Family No. IV 30. Leipzig: W. Engelmann.

**Shimpale, V.B., Bhagat, R.B., Deshmukh, R.B. & S.R. Yadav 2009.** A new species of *Eriocaulon* L. (Eriocaulaceae) from Maharashtra, India. *Rheedea* **19**: 47 – 49.

**Vijayasankar, R., Ravikumar, K. & N.M.G. Babu 2006.** A new species of *Eriocaulon* L. (Eriocaulaceae) from Anamalai Hills of Kerala, India. *Rheedea* **16**: 59 – 61.

**Yadav, S.R., Gaikwad, S.P. & M.M. Sardesai 1998.** A new species of *Eriocaulon* L. (Eriocaulaceae) from India. *Rheedea* **8**: 145 – 147.

**Yadav, S.R., Potdar, G.G., Kumar, A.A., Ottaghvari, M. & Anand Sonkar 2008.** *Eriocaulon epedunculatum*, a new species of Eriocaulaceae from Western Ghats of India. *Kew Bull.* **63**: 503 – 505.

Received: 27.1.2010

Revised and Accepted: 10.5.2010