**Supplementary material**

**S 1. Nomenclature, description and distribution details of species**

***Elaphoglossum beddomei*** Sledge, Bull. British Mus. Nat. Hist. Bot. 4: 88. 1967; Manickam & Irudayaraj, Pterid. FI. Western Ghats, 288. 1992; Nayar & Geevarghese, Fern FI. Malabar, 246 . 1993;  Fraser-Jenkins et al., An Annot. Checklist of Indian Pterido. 29. 2021.

*Elaphoglossum stigmatolepis* *sensu* Beddome, Ferns South India, 67, t. 199. 1864.

Rhizome short creeping, 0.3-0.5 cm thick, scaly all over; scales lanceolate, 4-5 x 0.5-1 mm, uniformly dark brown, acuminate, gland tipped, fimbriate at base. Stipes crowded, 8-10 cm x 23-25 mm, tetragonal, deeply grooved, pale brown, sparsely hairy in young, glabrous in mature. Lamina simple, elliptic, 33-35 x 3-4 cm, narrowed towards base and apex, base narrowly cuneate, apex acute, margins entire with cartilaginous border; mid rib distinctly raised on both sides, shallowly grooved above, veins slightly distinct below, simple or forked; lamina pale green, texture coriaceous; minute fimbriate, brown scales on both surfaces; fertile fronds with longer stipes, otherwise similar to sterile fronds, but slightly compressed; sori acrostichoid; spores reniform, brown.

Distribution: Epiphytic or lithophytic in fully shaded forest areas. Between 900-2200 m.

Specimens examined: India, **Kerala**, Kannur district, Aralam Wildlife Sanctuary, Ambalappara, 06 April 2016, *P. Vijisha* *11776,* 27 December 2017, *P. Vijisha 12263* (ZGC); Astippara, 07 April 2016, *P. Vijisha* *11794,* 27 December 2017*, P. Vijisha 12276* (ZGC). Wayanad district, On the way to Chembra Peak, 04 January 2021, *Manju A.C. 8298* (ZGC). Palakkad district, Silent Valley, 29 March 1980, *Nayar & Geevarghese 29280* (CALI); Walakkad, *S. Sequeira 007871* (KFRI); Sispara, *Stephan & Michael* *008185* (KFRI); Palakkad, *N.C. Nair 64283* (MH); Kunthipuzha, 10 January 2018, *Manju A.C. 7982* (ZGC); Valiyaparathodu-Madhrithodu, 27 December 2019, *Thulasi, R.* *14635* (ZGC); Poochippara to Walakkad trek path, 28 December 2019, *Thulasi, R.* *14685* (ZGC); Walakkad to Sispara trek path, 29 December 2019, *Thulasi, R.* *14700* (ZGC); 3 January 2022, *Thulasi, R.* *14987* (ZGC); 4 January 2022, *Thulasi, R.* *15003* (ZGC); Walakkad, 25 June 2022, *Manju A.C. 17610* (ZGC). Idukki district, Pettimudi, 10 December 1990, *P.V. Madhusoodanan 43833* (CALI); Vellimala, 25 September 1999, *K.P. Rajesh 62874* (CALI); Mathikettan Shola National Park, Choondal, 2 August 2019, *Thulasi, R. & Manju*, *A.C.* *14388* (ZGC). Kollam District, Shenduruni, Darbhakulam, N.C. Nair & S.R. Ghosh 51679 (MH); CCF Mukk, 20 September 2019, *Manju A.C. 8213* (ZGC). Thiruvananthapuram district, *J. Joseph 46502, 46507* (MH); Agasthyamalai, *J. Joseph 44620* (MH); Northern vic. of Ponmudi Guesthouse, above P. Tea Estate, Dense, shady forest on N.W. facing hillside, 05 December 1977, *Kramer, KU & Nair, GB 6178* Digital image (L); Agasthyamala Biosphere Reserve, On the way to Agasthyarkoodam, 22 February 2023, *Manju A.C. 17302* (ZGC). **Tamil Nadu**, Anamallays, 3500 ft., *Anon., s.n*., 'Herb. Col. R.H. Beddome Received 1885' Digital image of holotype BM001066164 (BM); Neilgherry Hills, 5000 feet, 1870, 'Col. F. Henderson's Ferns Purchased 1896', Digital image E00906857 (E); Coimbatore District, Valparai, Anaimalai hills, Neerar-Dam-Idliar road, 13 June 1985, *V.S. Manickam & K.M. Matthew RHT 33072* Digital image (H); Nilgiri District, Ooty, Doddabetta, 16 December 2022, *Manju A.C. 17665* (ZGC).

Other occurrences: It was noticed as growing in the forests and adjacent habitats in Pathanamthitta District (Ranni Forest, Kakki, Gavi 01 November 2021) and Wayanad district (Thollayiram kandi, 10 June 2023, 02 December 2023) of Peninsular Indian State of Kerala (Personal observations: K.P. Rajesh).

| Location | Longitude | Latitude |
| --- | --- | --- |
| Kerala, Kannur district, Aralam | 75.79892 | 11.9318 |
| Kerala, Kannur district, Aralam | 75.79906 | 11.93185 |
| Karnataka | 75.768 | 12.8352 |
| Kerala, Kozhikode district, Anakkampoyil | 76.10148 | 11.4848 |
| Kerala, Wayanad district, Chethalayam | 76.26457 | 11.7757 |
| Kerala, Wayanad district | 76.28122 | 11.75864 |
| Kerala, Palakkad district, Silent Valley, Walakkad | 76.41199 | 11.3365 |
| Kerala, Palakkad district, Silent Valley, Walakkad | 76.41489 | 11.17787 |
| Kerala, Palakkad district, Kunthi River bank | 76.41925 | 11.14611 |
| Kerala, Palakkad district, Cheriyawalakkad | 76.42235 | 11.16793 |
| Kerala, Palakkad district, Silent Valley, Sispara | 76.42337 | 11.18101 |
| Kerala, Palakkad district, Silent Valley, Poochippara | 76.42587 | 11.10987 |
| Kerala, Palakkad district, Silent Valley, Walakkad | 76.42591 | 11.1854 |
| Kerala, Palakkad district, Silent Valley, Padavayal | 76.43122 | 11.1145 |
| Kerala, Palakkad district, Silent Valley, Padavayal | 76.43126 | 11.16408 |
| Kerala, Palakkad district, Bank of Kunthipuzha | 76.43779 | 11.10231 |
| Kerala, Palakkad district, Silent Valley, Padavayal | 76.4541 | 11.12823 |
| Kerala, Palakkad district, Bank of Kunthipuzha | 76.46775 | 11.11702 |
| Kerala, Palakkad district, Attappadi | 76.48347 | 11.14219 |
| Kerala, Palakkad district, Nelliyampathy | 76.67446 | 10.424 |
| Kerala, Ernakulam district, Idamalakudy | 77.00684 | 10.1999 |
| Kerala, Idukki district, Munnar, | 77.08052 | 10.15169 |
| Kerala, Thiruvananthapuram district, Ponmudi | 77.14154 | 8.7543 |
| Kerala, Thiruvananthapuram district, Bonaccord | 77.17934 | 8.68351 |
| Kerala, Thiruvananthapuram district, Agasthyamalai hills | 77.17999 | 8.765838 |
| Kerala, Idukki district, Periyar Tiger Reserve | 77.19455 | 9.596457 |
| Kerala, Kollam district, Shenduruny, | 77.21764 | 8.858973 |
| Kerala, Pathanamthitta district, Ranni | 77.21829 | 9.32648 |
| Kerala, Idukki district, Mathikettan Shola | 77.24573 | 9.985709 |
| Kerala, Idukki district, Mathikettan Shola | 77.2463 | 9.9846 |
| Tamil Nadu, Tirunelveli hills | 77.27199 | 8.74751 |

Table S 1: Coordinates of the representative populations of *Elaphoglossum beddomei* Sledge.

| **Model** | **Variables** | **True Skill Statistics (TSS) value** | **Area Under the receiver operating characteristic Curve (AUC)** | **Overall accuracy** |
| --- | --- | --- | --- | --- |
| Model 1 | Bio18, bio8, bio16, bio7, bio17 | 0.4581143 | 0.779 | 0.6727164 |
| Model 2 | Bio18, bio8, bio16, bio17 | 0.4088571 | 0.802 | 0.7656562 |
| Model 3 | Bio18, bio8, bio16 | 0.6852 | 0.838 | 0.9346829 |

Table S 2. Summary of various models developed to select the good prediction model.