

Occurrence of *Selaginella arbuscula* (Kaulf.) Spring. - Selaginellaceae in Eastern Ghats, South India

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Introduction

The genus *Selaginella* P. Beauve. has about 700 species distributed throughout tropics (Malberley, 2008). In India sixty two species were reported by Dixit (1992). The species *Selaginella indica* (Milde) Trayon, *S. wigtilii* Hieron, *S. bryopteris* (L.) Bak. *S. involvens* (Sw.) Spring., *S. tulerata* (Buch. Ham. ex D. Don) Spring., *S. radiacata* (Hook. et Greu.) Spring., *S. vaginalia* Spring., *S. repanda* (Desv.ex Poir) Spring., *S. ciliaris* (Retz.) Spring., *S. catractrum* Alston and *S. jainii* Dixit are reported from the Eastern Ghats of South India.

Recently, a species of *Selaginella* was collected during the floristics studies of the Yercaud hills (Latitude is: 11.775251 & Longitude is: 78.2092576) of the Eastern Ghats of South India. On critical examination and scrutiny of literature, it was identified as *S. arbuscula* (Kaulf.) Spring. So far known to occur only in United States, Makawao Forest Reserve, Maui, Hawaii (Endemic), Kauai, Oahu, Molokai, Lanai and Sandwich Islands. The present collection confirmed the occurrence of *S. arbuscula*, therefore forms a new distribution record for India.

The *Selaginella arbuscula* grows intermingled with *S. umbrosa* and gives an similar appearance, probably due to this, it might have been remained unnoticed. It is closely allied to *S. umbrosa* in its overall morphology. However, the former differs from the latter in the presence of solitary strobili, branching from the base and rhizophores arising from the stems. It is restricted in the hills of Yercaud of the Eastern Ghats of South India.

Selaginella arbuscula (Kaulf.) Spring. in Bull. Acad. Brux. 10: 227. 1843. *Lycopodioides arbuscula* (Kaulf.) Kuntze; Rev. Gen. Pl. 1: 825. 1891. *Lycopodium arbusculum* Kaulf. Enum. Fil., p. 19. 1824. *Lycopodium pennigerum* Gaudich.; Bot. Freyc. Voy.1: 288. 1826. (Fig. 1&2).

Evergreen creeping, medium sized, terrestrial, dark green leaves, ovate to ovate-lanceolate, long-acuminate, tips acute, bipinnate, sori arranged in many ways on the undersides of the leaf. Strobili at tips of branches. Stems erect from decumbent bases, unbranched in lower ½ and pinnately branching abundantly above (occasionally branching near base). Usually flattened in one plane, c.6.60 cm long, without swollen joints, blade like portion ranging from much branched and lanceolate, dark green to light green rhizophores restricted to bases of stems (rarely, along, lower ¼), often inconspicuous, filiform, less than 3cm long, c.0.2 mm in diameter; Sterile leaves on main stem of 2 kinds in 4 rows, slightly separated at bases becoming more imbricate in upper stems and branches, lateral leaves flat to firm, convex to ovate – oblong, c.2-6x1-3.5 mm, membranous, tip acute, apiculate to long-acuminate;

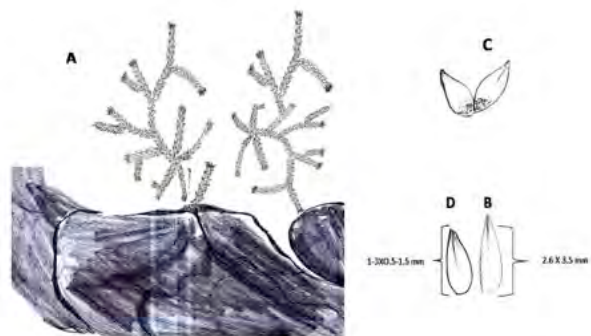


Fig 1. Illustration of *Selaginella arbuscula* (Kaulf.) Spring.

A - Mature individual, B - Adaxial leaf surface, C - Abaxial leaf surface with sori, D - Trophophyll



Fig 2. *Selaginella arbuscula* (Kaulf.) Spring.

ovate, trophophylls ovate-lanceolate to narrowly triangular, c.1-3x0.5-1.5 mm tips acute; fertile leaves ovate to ovate-lanceolate, keeled, long acuminate, tips acute. Strobili at tips of branches, narrower than stems, c.3-50 mm long, square.

Phenology: Sporophylls are formed: December & Sorus matured: January to February.

Uses: Malayali tribes use the leaf paste mixed with cow milk to treat skin infection.

References

- Dixit, R.D. (1992).** *Selaginellaceae of India*. Bishen Singh Mahendra Pal Singh Dehra Dun, India.
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