

# Notes on three *Asplenium* species recently collected from Maharashtra, India

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## Abstract

Three species of *Asplenium* namely, *A. inaequilaterale* Willd., *A. yoshinagae* subsp. *indicum* (Sledge) Fraser-Jenk. and *A. obscurum* Blume belonging to family Aspleniaceae are recently collected from Maharashtra. Brief taxonomic descriptions and field photographs are provided.

## Keywords

Pteridophytes, new record, *Asplenium*, Maharashtra.

## Introduction

*Asplenium* L. is one of the largest and cosmopolitan genera with c. 720 species, chiefly distributed in tropical areas of the world, though the species are recorded from all the continents (Kramer & Green, 1990). In India the genus is represented by c. 65 species (Dixit 1984; Singh & Bir, 1989) with preponderance in South India (Manickam & Irudayaraj, 1991) and NE India.

During field exploration in Maharashtra, the author collected three interesting specimens of the genus *Asplenium* L. These are identified as *Asplenium inaequilaterale* Willd., *Asplenium yoshinagae* subsp. *indicum* (Sledge) Fraser-Jenk and *Asplenium obscurum* Blume. These species are less frequently encountered in the state; hence providing new information regarding distributional data seems to be important.

## Taxonomy

*Asplenium inaequilaterale* Bory ex Willd., Linnaeus Sp. Pl., ed. 4 [Willdenow], 5(1): 322. 1810. Dixit, Cens. Ind. Pterid. 118. 1984; Singh & Bir, Indian Fern J. 6 (1-2): 272. 1989.

Lithophyte or epiphyte. Rhizome erect, upto 1 cm thick, scaly, scales ovate lanceolate, dark brown, apex acuminate, entire margin. Stipes upto 20 cm long pale

brown, grooved above. Lamina ovate lanceolate, 7 – 28 cm long, simple pinnate; pinna 20 pairs, basal pinna reduced, pinna alternate, oblique, acroscopic base truncate, margin serrate, costules 10 pairs forked twice, Sori up to 10 pairs, median on the veins, spores reniform, 30 – 25µm.

*Fertile:* July-December

*Distribution:* India [Madhya Pradesh; S. India- Karnataka, Tamil Nadu], Sri Lanka, Japan, S. America.

*Specimen examined:* Maharashtra, Radhanagri, 800 m, Rawat, V. K. 199849, 25/02/2012 (BSI).

*Notes:* Grey green stipe, thin, herbaceous texture and rachis are the important distinguish characters in the field. This species found in deep rock crevices (Tiger Den) in dark condition in association with other ferns and angiospermic plants. *Asplenium obscurum* Blume is the closely related species but the species in discussion is distinct in having erect rhizome. Further, *Asplenium obscurum* differ in having pinna size decreasing in the distal part of the frond.

*Asplenium yoshinagae* subsp. *indicum* (Sledge) Fraser-Jenk., Pakistan Syst. 5: 97. 1991. *Asplenium indicum* Sledge, Bull. Brit. Mus. Nat. Hist., Bot. 3: 264. 1965,



**Fig. 1.** **A.** *Asplenium yoshinagae* subsp. *indicum*; **B.** *Asplenium obscurum* (inset showing arrangement of sori); **C-D.** *Asplenium inaequilaterale* .

nom. nov. for *A. planicaule* Wall. ex Mett.

Lithophyte or epiphyte. Rhizome erect, densely scaly, apex acuminate, margin entire. Stipes covered by soft pale brown scale, up to 18 cm. Lamina simple pinnate linear lanceolate up to 40 cm long; pinna up to 30 pairs, sub opposite at base, alternate above, few pairs reduced slightly, largest pinna 3 cm, acroscopic base truncate, lobes serrate, veins forked reaching up to margin; pinna pale green, glabrous; sub coriaceous texture, Sori one per lobe, spores reniform.

*Distribution:* India [S. India. Eastern Himalayas, Northeastern India], Sri Lanka, Bhutan, Malaysia, China, Japan, Philippines. This is apparently new record for Maharashtra.

*Specimen examined:* Maharashtra, Mahabaleshwar (near Lingmala Dhabdhaba) 1000–1200 m, Rawat, V. K., 199866, 15/08/12 (BSI).

*Notes:* The species is characterised by the irregularly, deeply lobed pinna margin and small or medium sized frond, densely scaly stipe and rachis. This species found on low tree trunk in clump and in pendulous condition.

*Asplenium obscurum* Blume, Enum. Pl. Javae 2: 181-182. 1828; Dixit, Cens. Indian Pterid. 20.1984.

Lithophyte or epiphyte; rhizome short creeping, dens scaly, scaly ovate- lanceolate, about 3 mm, acuminate. Stipes scattered up to 25 cm long green, scaly at base, grooved, glabrous. Lamina oblong lanceolate about 37 cm long, apex acuminate, up to 25 pairs; pinna opposite, stalked, basal pairs not reduced; largest pinna dimidiate, falcate, excised margin, veins forked, free, glabrous, texture herbaceous, Sori on the sub basal parts, indusia pale brown, entire; spores dark green, 50-30 µm, indusia dark.

*Distribution:* India [S. India - Tamil Nadu; Central

India-Madhya Pradesh; Eastern Himalayas - Assam, Meghalaya], Sri Lanka, Nepal, Myanmar, China, Taiwan, Thailand, Africa.

*Specimen examined:* Maharashtra, Mahabaleshwar (Pratapgarh Road), 800-1000 m, Rawat, V. K. 199820, 22/02/12 (BSI).

*Notes:* The important characters of this species for identification in field are the presence of green stipe, serrate pinna margin, sori location is away from costa and herbaceous frond.

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