



***HABENARIA GIBSONII* HOOK. AND *AERIDES MACULOSA* LINDL. ARE NEW DISTRIBUTIONAL RECORDS FOR SATPUDA RANGE OF JALGAON DISTRICT, MAHARASHTRA, INDIA**

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Abstract

The present paper deals with addition of two species of Orchidaceae which are reported for the first time from different parts of the Satpuda ranges of Jalgaon district, Maharashtra. These species are *Habenariagibsonii* Hook. and *Aeridesmaculosa* Lindl. are reported for the first time for Satpuda ranges of Jalgaon district, Maharashtra. The study provides a detailed taxonomic description, photographs and relevant information based on fresh collections.

Key words : New distributional records, Satpuda range, Jalgaon district.

Introduction

The Orchidaceae are a unique group of plants, mostly perennial, sometimes short-lived herbs or rarely scrambling vines. They occupy an outstanding position among all the flowering plants because of their long-lasting and bewitchingly beautiful flowers and are commonly valued either for cut flower production or as potted plants in ornamental horticulture. Orchidaceae, is regarded as second largest family of flowering plants. In India, the family is represented by *ca.* 1300 species, 5 subspecies and 28 varieties under 186 genera (Misra, 2007), in Maharashtra 36 genera 119 species and 3 varieties (Barbhuiya and Salunkhe, 2016).

Jalgaon district lies between 20° and 21° North latitude and 74° 55' and 76° 28' East longitudes. Jalgaon is one of the districts in the Khandesh region of North Maharashtra with great diversity of plants. The present paper deals with the addition of two taxa of Orchidaceae to the Satpuda ranges of Jalgaon district, Maharashtra. The Jalgaon district has a total area about 272 sq.km. The total forest area in the district is 72685.27 hectares. On its location in the upper Tapi basin, it forms a distinct topographical unit separated from neighbouring Madhya Pradesh State by Satpura ranges and from the south by

Satmala hilly ranges. The forest of Jalgaon district is of the tropical, dry deciduous type. The vegetation varies with the changes in altitude, aspect and rainfall. While working on floristic of Jalgaon district of Maharashtra we undertook frequent collection tours in every season to study plants.

The highest peak being about 1175 meters. The collected species like *Habenaria gibsonii* Hook. and *Aerides maculosa* Lindl. are rare to Maharashtra and collected from only few places like Kolhapur, Ratnagiri, Raigard, Satara, Pune, Sindhudurg and Nasik. The study region though botanically rich in biodiversity have not been explored extensively except a few sporadic reports on floristic of Khan (2014), Kshirsagar (2008), Valvi (2006) and Khan (2015).

During botanical explorations of Satpuda ranges of Jalgaon district, Maharashtra 02 interesting specimens belonging to Orchidaceae were collected from steep slopes of hills in loose soil as under the shade and Epiphyte on *Terminalia bellerica* (Gaertn.) Roxb., *Terminalia chebula* Retz. Close examination with the help of literature and herbarium specimens reveal that they were not recorded earlier from Satpuda ranges of Jalgaon district. All of them have been identified as *Habenaria*

*Habenaria gibsonii* Hook.*Aerides maculosa* Lindl.**Plate 1 :**

gibsonii Hook. and *Aerides maculosa* Lindl. Which proved to be new records for Satpuda ranges of Jalgaon district. Identification of all these taxa is confirmed by Dr. Milind Sardesai, Department of Botany, Pune University, Pune, who confirmed the identity of the species and also comparing the specimens with those of by BSI western circle, Pune. Detailed descriptions are given below:

Habenaria gibsonii Hook. f. Fl. Brit. India 6: 135. 1890; Santapau & Kapadia in J. Bombay Nat. Hist. Soc. 56: 194. 1959. *Habenaria foliosa* A. Rich. Ann. Sci. Nat., Bot. II, 15:71. 1841; Bhatt & Nagar in J. Econ. Tax. Bot. 38: 3. 2014. *Habenaria foliosa* A. Rich. var. *gibsonii* (Hook. f.) Bennet. in J. Econ. Tax. Bot. 5: 452. 1984; Lakshmi. in Sharma *et al.* Fl. Maharashtra St. Monocot. 37. 1996. *Habenaria digitata* var. *gibsonii* (Hook.f.) Fischer in Gamble, Fl. Pres. Madras 1459. 1928. (Plate-I) UgraHabe-amri, Gibson's Habenaria.

Gibson's Habenaria is a terrestrial, annual tuberous herbs, growing 35-50 cm long. Tuber usually one. Leaves 5-7 x 3-4.5 cm, alternate, ovate-lanceolate, margins wavy. Flowers in lax, racemes inflorescence. Flowers are turned to one side, greenish white; bractfoliaceous, lanceolate, acute at apex. Sepals greenish-white; dorsal sepal greenish, 0.5-0.6 x 0.6-0.7 cm, orbicular, obtuse with 3 nerves; lateral sepal white, 0.8-1 x 0.5-0.6 cm, sub falcate, acute at apex. Lateral petals 2 partite, upper segment 0.8-1.1 x 0.1 cm, sub falcate, acute at apex; lower segment shorter, linear acute at apex. Lip 3 partite middle one linear and two lateral ones 0.8 cm long linear, white. Rostellum shorter than the column, triangular; Column

ca 0.4-0.5 cm long; Pollinia 0.2 cm long; pollinal cap possesses green small appendages on both the side. Capsule ellipsoid, ribbed, brownish; seeds many, minute, brownish, glabrous.

Flowering and Fruiting : July-September

GPS Reading : N 21° 21' 28.64" E 75° 31' 33.85" (Elevation 472m)

Distribution : Rare. In Satpuda ranges grow on steep slopes of hills in loose soil as under the shade. In Maharashtra reported from Kolhapur, Ratnagiri, Raigard and Satara.

Specimens examined : Jalgaon Dist., Devjiri forest, TAK 2518; Vaijapur forest TAK 2537; LangdhaAamba, TAK 2791.

Aerides maculosa Lindl. in Edwards's Bot. Reg. 31: 58, 1845; Jalal & Jayanthi in Lankesteriana 18(1): 30.2018. *Aerides maculosum* Lindl. in Edg. Bot. Reg. t. 58. 1845; Hook.f. Fl. Brit. India 6: 45. 1890; Lakshmi. in Sharma *et al.* Fl. Maharashtra St. Monocot. 13. 1996. *Saccolabium speciosum* Wight, Icon. Pl. Ind. Orient. 5: t. 1674 (1851). *Aerides schroederi* Rchb.f., Allg. Gartenzeitung 23: 226 (1855). *Aerides illustris* Rchb. f., Gard. Chron., n.s., 18: 71 (1882). *Aerides maculosa* var. *schroederi* (Rchb.f.) A.H.Kent in H. J. Veitch, Man. Orchid. Pl. 7: 73 (1891). (Plate-I) Fox Brush Orchid, Cat's-tail Orchid, ThipkeIridAmri.

Epiphytic herbs, roots thick, many succulent on host. Leaves channelled, linear-oblong or oblong, entire, 10-20 x 2-3 cm, green mottled with purple, with 2 unequal, rounded lobes at apex. Fragrant flowers in simple or

branched, up to 20 cm long racemes, pedicellate; peduncles terete, stout, sheathed; bracts minute, ovate. Sepals ovate-orbicular, subequal; lateral sepals mucronulate. Petals faintly pinkish white, oblong-elliptic. Labellum straight, 3-lobed; mid lobe deep rosy pink, finely crisped on margin; lateral lobes pinkish white, smaller than mid lobe, spreading spur hook like, curved downwards. Column pink, oblong. Capsules obovoid 3-5 cm long, strongly ribbed, seeds many, brownish.

Flowering and Fruiting : May-August

GPS Reading : N 21° 21' 26.93" E 75° 31' 33.11" (Elevation 479m)

Distribution : Occasional. Epiphyte on *Terminalia bellerica* (Gaertn.) Roxb., *Terminalia chebula* Retz., *Careya arborea* Roxb. Flowers little fragrant and showy. In Maharashtra reported from Kolhapur, Ratnagiri, Sindhudurg, Raigad and Nasik.

Specimens examined : Jalgaon Dist., Devjiri forest, TAK 2397; Langdha Aamba, TAK 2811; Waghjira forest TAK 2471.

Materials and Methods

Satpuda ranges, which is one of the major hotspot of plants in Jalgaon district. During botanical exploration of Jalgaon district in Maharashtra two interesting species *Habenaria gibsonii* Hook. (Orchidaceae) N 21° 21' 28.64" E 75° 31' 33.85" (Elevation 472m) from Devjiri forest, grow on steep slopes of hills in loose soil as under the shade, *Aerides maculosa* Lindl. (Orchidaceae) N 21° 21' 26.93" E 75° 31' 33.11" (Elevation 479m) from Devjiri forest, Epiphyte on *Terminalia bellerica* (Gaertn.) Roxb., *Terminalia chebula* Retz., *Careya arborea* Roxb., flowers little fragrant and showy. The species was identified with the help of pertinent literature (Hook, 1890; Santapau and Kapadia, 1959; Lakshminarasimhan *et al.*, 1996; Jalal and Jayanthi, 2018) and the taxa were confirmed by Dr. Milind Sardesai Department of Botany, Pune University, Pune and by consulting the BSI western Circle, Pune, herbarium as well. The voucher specimens have been deposited in the herbarium of Department of Botany, H. J. Thim College of Arts and Science Mehrun, Jalgaon, Maharashtra. The plants have been described with their Latin names, followed by authors citations. Detailed descriptions of the taxa, flowering and fruiting period and distributions, precise locations and exsiccate numbers are appended at the end.

Results and Discussion

We have gone through all pertinent literature (Kshirsagar, 2008; Patil, 2003) and by consulting the BSI Herbarium Pune. To find out the occurrence, distribution and habitat of species. We found that, these species were

not reported in any of the Jalgaon and even Dhule and Nandurbar floras. This clearly reveals that, these species are rare to flora of Maharashtra State, even India as a whole. These species are new record to the flora of Jalgaon district of Maharashtra State. The voucher specimen is deposited in the herbarium of Department of Botany, H. J. Thim College of Arts and Science Mehrun, Jalgaon. On close examination of herbarium specimens and detailed scrutiny of literature published till today on these taxa, it can be claimed that these are new records for Satpuda range of Jalgaon district of Maharashtra.

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