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NOTE

Does *Habenaria panchganiensis* Santapau & Kapadia (Orchidaceae) Exist?

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ABSTRACT: *Habenaria panchganiensis* Santapau & Kapadia is treated as conspecific to *Habenaria suaveolens* Dalzell. Detailed description, habitat, distribution, threats, status, illustration and photographs are provided.

KEY WORDS: *Habenaria panchganiensis, Habenaria suaveolens,* Orchidaceae, Western Ghats.

INTRODUCTION

The genus *Habenaria* was established in 1805 by Willdenow in the 4thedition of Species Plantarum. It is one of the largest genera of Orchidaceae comprising of about 600–800 species distributed throughout the tropics as well as the subtropics and as far north as the southern part of the Russian Far East (Govaerts et al., 2013). The genus is distributed throughout India and represented by 72 species (Misra, 2007) of which 36 are endemic. About 45 species of *Habenaria* are known to occur in the Western Ghats of India, of which 21 species are endemic (Jalal and Jayanthi, 2012). *Habenaria suaveolens* Dalzell and *Habenaria panchganiensis* Santapau & Kapadia too belong to this endemic category.

Habenaria suaveolens was first collected and described by Dalzell in 1850 from the Konkan region of Maharashtra and Bababudan hills of Karnataka. After a decade, in 1861, Dalzell and Gibson included this species in their Bombay Flora too. Consequently, in 1890 Hooker included this species in his Flora of British India based on Dalzell's collection. Later in 1908, T. Cooke included this orchid in his Flora of Bombay Presidency (vol. 2). There was no record of collection of this plant by any botanist or plant explorer from this region after Dalzell in 1850.

In 1932, Blatter & McCann collected an orchid from Panchgani in Maharashtra and described it as a new species *Habenaria variabilis* Blatt. & McCann. They pointed out that *H. variabilis* shows similarity with *H. suaveolens* but treated it as a different species though it resembled *H. suaveolens* in many characters. Moreover they also stated that "*Habenaria variabilis* Blatt. & McCann is a highly variable plant regarding its size and shape of lip and doubted that *Habenaria variabilis* could be a hybrid between *Habenaria suaveolens* Dalzell and another unknown *Habenaria* species".

Later on in 1957, Father H. Santapau & Z. Kapadia while studying the orchids of Bombay Presidency, found that the name *Habenaria variabilis* Blatt. & McCann already exists and published by Ridley in Journal of Botany (London), in 1886 based on specimen collected from Abyssinia (Presently Ethiopia, Africa). They had not seen Ridley'stype specimen but based on the description, they concluded that these two orchids are quite different and cannot have the same name. Based on priority of the older they proposed the new name *Habenaria panchganiensis* Santapau & Kapadia for the Indian population based on the type locality and *H. variabilis* Blatter & McCann was considered as an illegitimate name of *H. variabilis* Ridley.

During the studies of orchids of northern Western Ghats of India, the authors collected several specimens of *H. panchganiensis* from different localities. A whole lot of variations with regard to the size of plant and shape of lip of this species were observed during the recent study. Consultation of relevant protologue, existing literature, specimens deposited at BSI (Herbarium, Pune) and comparison with Dalzell's type sheets available in Kew Herbarium catalogue, it is evident that *H. panchganiensis* does not stand different from *H. suaveolens*. Moreover, the pencil drawing made by Dalzell over the type sheet reflects that there is no difference between these two species hence *Habenaria panchganiensis* Santapau & Kapadia is treated as a species conspecific to *Habenaria suaveolens* Dalzell.

A detailed description and notes on the distribution of *Habenaria suaveolens* Dalzell from the Western Ghats of Maharashtra is provided. The voucher specimen has been deposited at BSI.

TAXONOMIC TREATMENT

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Type: Dalzell, *s.n*., Vengrul-Malvan (K).

Habenaria variabilis Blatt.& McCann in J. Bombay Nat. Hist. Soc. 36: 19, tt.4-5, 1932 *non* Ridl. 1886.

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Plantaginorchis suaveolens (Dalzell) Szlach. & Kras-Lap.in Richardiana 6: 32. 2006.

Terrestrials, 8–27 cm tall. Tuber 1 or rarely 2, ovoid-oblongoid, 1.5–2 cm, with many fleshy roots arising from above. Leaves 3–5, subradical, arising above ground, conduplicate, distichously clustered at the base, oblong-lanceolate, 2–11 × 0.6–1 cm, acute. Scape 6–17 cm, longitudinally ribbed, erect, sterile bract 1 at the middle of scape, oblong–lanceolate, 2–2.5 × 0.4–0.6 cm, acute. Spike 5–8 cm long, 3–5 flowered, secund or sub-secund. Flowers white, c. 2 cm across, faintly fragrant. Fertile bracts shorter or equaling the ovary, ovate–lanceolate, 1.2 × 1.8 × 0.6–0.8 cm, acuminate. Sepals, slightly unequal, 3-nerved; dorsal sepal, broadly ovate, 10–12 × 4–6 mm, concave; lateral sepals, ovate-lanceolate, 10–14 × 5–6 mm, spreading, acute, falcate. Petals, ovate-acute, covered by dorsal sepal, 10–12 × 4–6 mm. Lip 3-lobed, broadly ovate, 15–22 × 14–24 mm, glabrous; side lobes 6–9 mm wide, obliquely truncate, entire, denticulate or crenulate, 5–7 nerved; midlobe slightly longer than the side lobes, broadly or narrowly lanceolate, 8–10 × 3–5 mm, subacute, 5- nerved. Spur 8–10 mm long, slightly bent near base, shorter than the ovary, subclavate at apex, white at base turning greenish towards apex. Column 4–5 mm, yellowish green, apex acute, with a central longitudinal groove on back. Pollinia oblong, 2–2.5 mm long, yellow; caudicles slender, white, transparent, longer or slightly shorter than the pollinia. Stigmatic processes very short, greenish yellow. Ovary with pedicel 2.2–2.5 cm long, curved, strongly 6–ribbed. Capsules green, spindle-shaped, 2.2–2.4 cm long with 6 strong ridges (Figs. 1 & 2).

Flowering & Fruiting: July–September.

Specimens examined: **INDIA** (Maharashtra State): *J.S. Jalal- 200442*, Venna lake-Mahabaleshwar (N 17º 56' 07.7" & E 73º 39' 55.2") (19th July 2012, BSI); *J.S. Jalal 200444*, Panchgani (N 17º 55' 23.0" & E 73º 48' 23.9") (20th July 2012, BSI); *J.S. Jalal 200545*, Laxmi dam- Radhanagari (N 16º 24' 01.0" & E 73º 57' 16.8") (29th July 2012, BSI); *J.S. Jalal* 195004, Jalvadi near Chokul- Shindhudurg (N 15º 56' 12.9" & E 74º 00' 11.7") (28th August 2013, BSI); *A.S. Rao-77909*, Panchgani (Satara), 6th October 1962 (BSI); B.G. Kulkarni-106301A, Ambolighat-Ramghat road (Ratnagiri), 25th August 1965 (BSI); R.S. Rao-131562, Ambolighat (Ratnagiri), 8th August 1971 (BSI).

Distribution: It is sparsely scattered in the Konkan and Deccan part of Maharashtra between elevations 10 m to 1600 m in Ahmednagar district (Kalsubai Hill), Ratnagiri district (Gothane plateau), Satara district (Mahabaleshwar, Panchgani, Kaas plateau), Kolhapur district (Radhanagari, Ambolighat- Ramghat road) and, Sindhudurg district (Vengurla, Malvan).

Habitat: It prefers to grow on exposed lateritic rocky plateaus in association with *Cyanotis* sp., *Hedyotis* sp., *Eriocaulon* sp., grasses, mosses & liverworts (Fig.3). These plateaus look reddish in colour due to high composition of oxides of iron and aluminum. The soil cover is very thin on the plateaus and appears almost barren during winter and summer seasons. The early phase of monsoon starts in June when the vegetative growth of this plant starts. The climax flowering season was observed during end of July to the beginning of September.

Threats: The species is highly specific to lateritic plateaus of northern Western Ghats. Due to developmental activities such as construction of roads, resorts, windmill farms and mining on the plateaus the population of this species is facing tremendous pressure. The species which was once abundant in the Panchgani plateau has now become almost a rare sighting due to the immense pressure and disturbance caused by tourism. Recently, Watve (2013) also highlighted the importance and status of these lateritic plateaus that supports diverse micro-habitats and plant communities discussing the biotic pressures on these plateaus.

Conservation status: Endemic to northern Western Ghats. This species has not yet been assessed for the IUCN Red List till date. Effort is taking during the present study to assess this species following the criteria of IUCN Red list categories (2009). It is assessed preliminarily under the category, Endangered B2a, b (iii).

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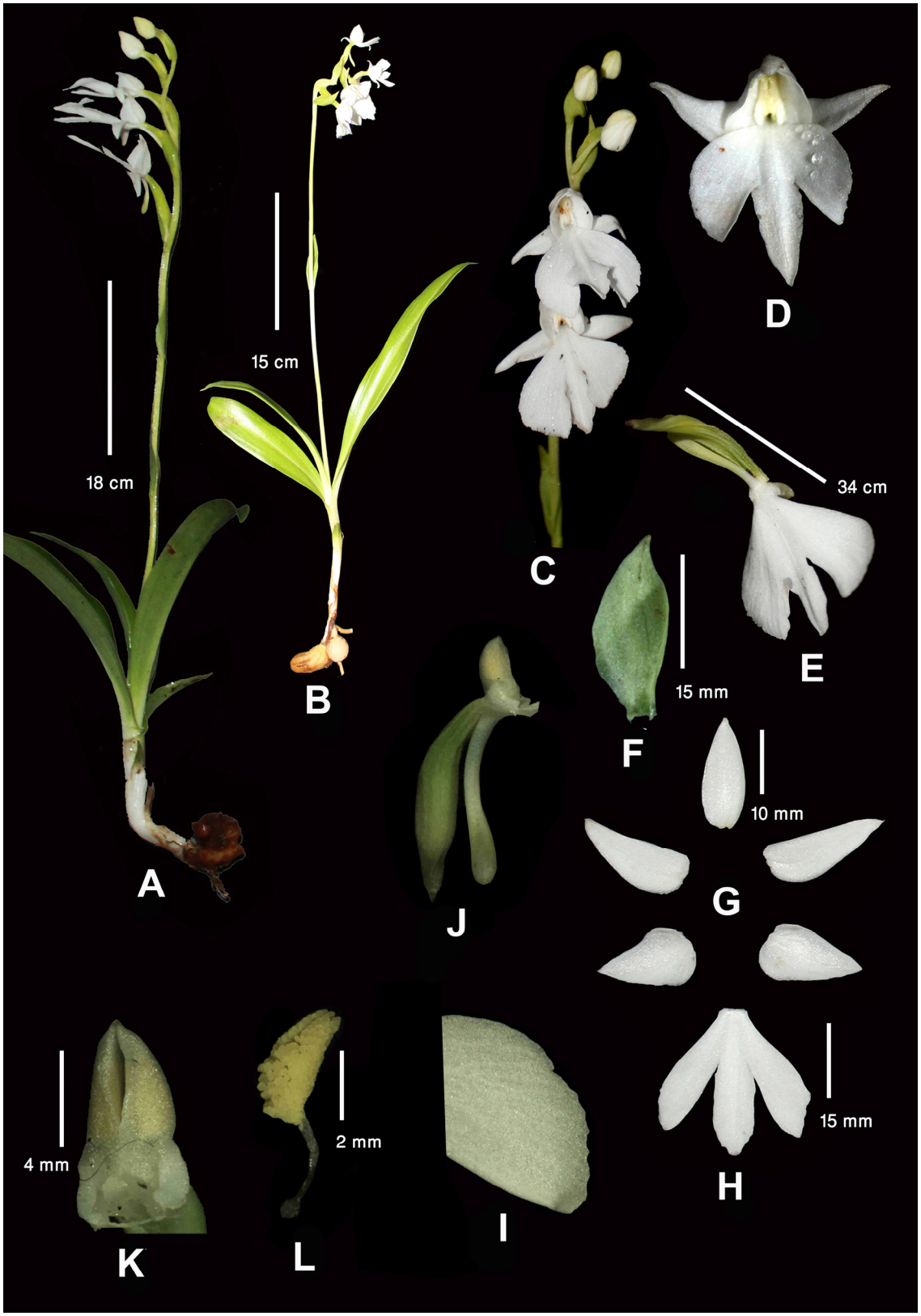


Fig. 1. Habit & dissected parts of *Habenaria suaveolens* Dalzell. A & B: Habit. C: Spike. D: Front view of flower. E: Lip with ovary & spur. F: Floral bract. G: Sepals & petals. H: Lip. I: Side lobe of the lip showing serration. J: Column, spur & ovary. K: Column. L: Pollinia.

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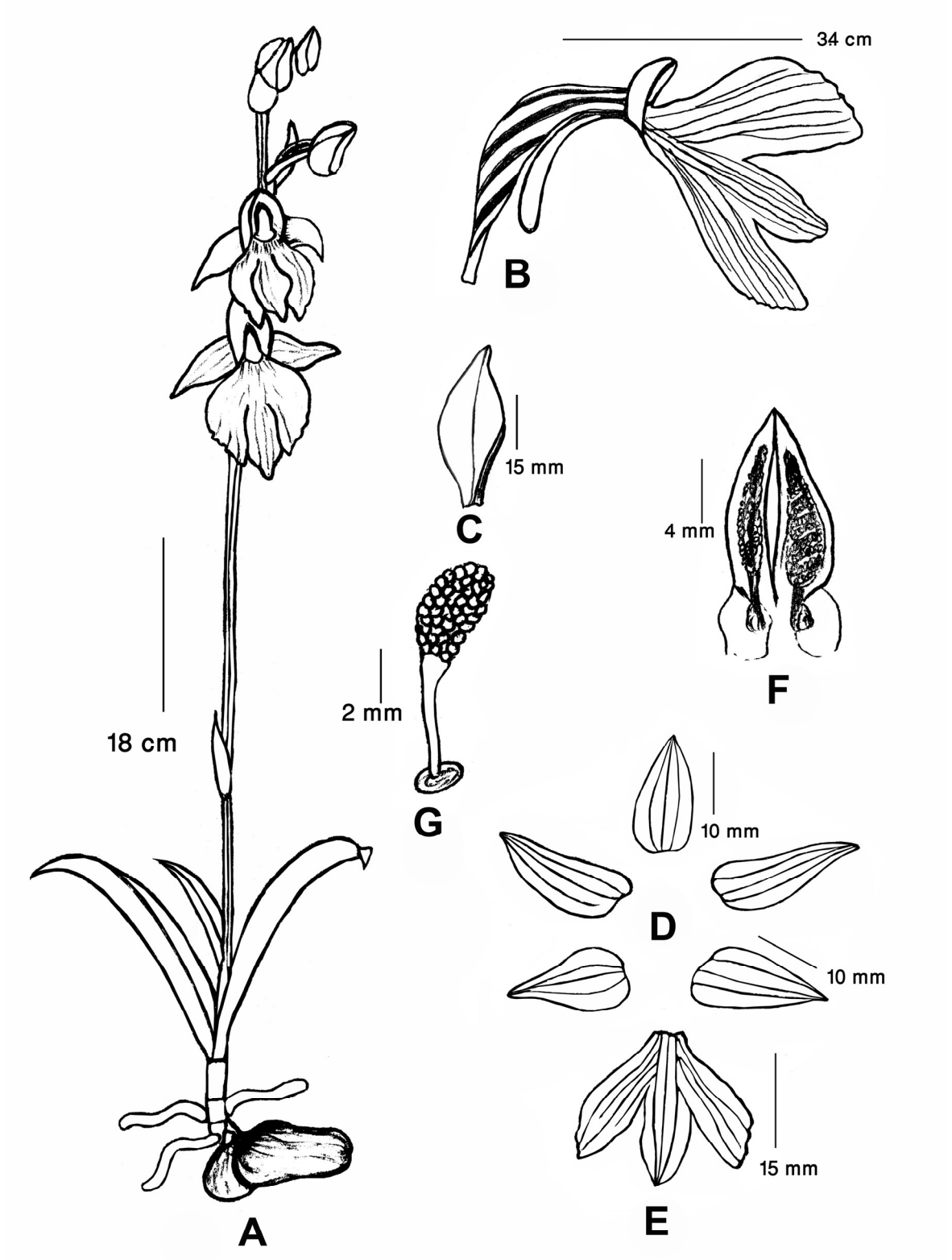


Fig. 2. Illustration of *Habenaria suaveolens* Dalzell. A: Habit. B: View of lip, column, spur and ovary with pedicel. C: Floral bract. D: Sepals & petals. E: Lip. F: Column. G: pollinia.

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Fig. 3. A, B & C: Typical lateritic rocky plateau habitat of *Habenaria suaveolens*.

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Habenaria panchganiensis（蘭科）存疑之探究

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摘要：蘭科的玉鳳蘭屬物種*Habenaria panchganiensis*被處理為同屬物種*Habenaria suaveolens*的同物異名，本文旨在探討此種處理是否合宜，並提供分類描述、生長棲地、族群分布、受危狀態和圖片以供討論。

關鍵詞：*Habenaria panchganiensis*、*Habenaria suaveolens*、蘭科、西高止山。

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