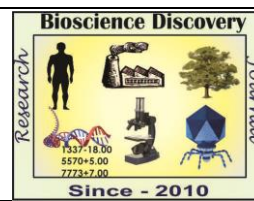


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Print & Online, Open Access, Research Journal Available on <http://jbsd.in>

ISSN: 2229-3469 (Print); ISSN: 2231-024X (Online)

Research Article



Habenaria longicorniculata J. Graham (Orchidaceae), A new distributional record from Sabarkantha district for Gujarat State

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Article Info

Received: 10-02-2019,

Revised: 19-03-2019,

Accepted: 22-03-2019

Keywords:

Habenaria longicorniculata, A new distributional record, Gujarat State

Abstract

Habenaria longicorniculata J. Graham is an endemic species to India belonging to family Orchidaceae. It is reported here as a new distributional record from Vijaynagar forest area in Sabarkantha district of North Gujarat in the Gujarat state. A detailed description, notes, photographs and distributional records are provided for easy identification.

INTRODUCTION

The district Sabarkantha is situated in the North-Eastern part of Gujarat State between 23.03⁰-24.30⁰ N latitudes and 72.43⁰-73.39⁰ E longitudes. Sabarkantha district is recorded with rich in floristic diversity and well explored by various plant taxonomists (Saxton and Sedgwick, 1918; Saxton, 1922; Bhatt and Bedi, 1969; Yogi, 1970; Bhatt and Sabnis, 1987; Punjani, 1997; Patel, 2003; Pandey, 2011; Parmar, 2012). During our intensive botanical explorations in different areas of Vijaynagar forest in Sabarkantha district, eleven individuals of *Habenaria* species were observed by the team, growing among grasses on sloppy terrain. Specimens were collected and properly processed for herbarium by using the standard herbarium methods (Santapau, 1955; Jain and Rao, 1977). After critical examination with dissected floral parts and other morphological features and perusal of relevant literature available, the specimens were identified as *Habenaria longicorniculata* J. Graham (Cooke, 1907; Deva and Naithani, 1986; Shah, 1978; Abraham and Vatsala, 1981). *Habenaria* Willd. is the largest terrestrial orchid in family Orchidaceae with 876 species distributed in the

tropical and subtropical region of the world (Batista *et al.*, 2013) and with 84 species from India (Misra, 2007). *Habenaria longicorniculata* J. Graham was first collected by John Graham from Khandala (Graham, 1839). then near Belgaum (Dalzell and Gibson, 1861). Distribution of the species as per the literature, i.e. from Konkan to Travancore (Hooker, 1890), Malabar and Konkan (Cooke, 1907), Khandala and Deccan (Santapau and Kapadia, 1966). In recent, its reported from districts of Maharashtra i.e. Akola, Aurangabad, Amravati, Pune, Raigad, Satara, Kolhapur, Ratnagiri and Sindhudurg (Lakshminarasimhan, 1996; Almeida 2009; Shivkar and Shinde, 2015). In Gujarat state this species reported from South Gujarat with few localities (Dang district only) (Suryanarayan, 1968; Shah and Suryanarayana, 1969; Shah, 1978; Tadvi, 2013) and in Jessore Wildlife Sanctuary of Banaskantha district, North Gujarat (Desai, 2013). The distribution and current localities recorded of *Habenaria longicorniculata* J. Graham in Gujarat state is depicted in Fig.1. A voucher specimen (SKP-053) has been deposited at the M.S.Univeristy, BARO herbaria, Baroda (Gujarat). In addition, a brief description along with habitat,

distribution, phenological data and photographs is provided here to facilitate easy identification of the species in the wild.

Taxonomic Description

Habenaria longicorniculata J. Graham, Cat. Bombay Pl. 202. 1839; Santapau & Kapadia, Orch. Bombay 29, t.1, f.1, 1966; *Habenaria longecalcarata* A. Rich in Ann. Sci. nat. Ser. II 15:71. T 3B. 1841; Wt. Icon t. 925. *Habenaria longecalcarata* A. Rich var. *viridis* Blatt. & Mc Cann in Journ. Bombay nat. Hist. Soc. 36:20, 1932, Shah FLG 658. 1978. **Figure 2 - 4.**

Terrestrial herb, Avg. height 33 inch, Tubers sub-globose with several slender roots. Leaves clustered at the base of the short stem with amplexicaul sheaths. Inflorescence racemose, few flowered. Flowers pedicellate, green in colour, fragrant. Dorsal sepal green, 3-nerved, ovate, concave. Lateral sepal opened backwards, longer than the dorsal sepal, white with greenish tinge on the

margins, Petal greenish, forms hood along with dorsal sepal, somewhat ligulate, Anther pollinia 2, caudicle longer than the pollinia, viscidium inconspicuous. Rostellum little shorter than the anther. Stigmatic processes 2, dark green (darkest in the flower), ovary ribbed. Spur 10-15 cm long, whitish at base becomes darker green at the apex, slightly pointed at apex, bulges at the opening. Labellum white, side lobes slightly larger than the midlobe. Sidelobes deflexed outwards.

Flowering: August-September **Fruiting:** October

Status: Near threatened (Kumar *et al.*, 2001)

Distribution: Endemic to Western ghat, India (Shivkar and Shinde, 2015)

Specimen examined: Banaskantha; Jessore Wildlife Sanctuary (24.46500000 N & 72.72916667 E, ca 800 m), PRD-1854, Dt. 27.08.2012; Sabarkantha; Vijaynagar, Zer-Bhankhara forest (24.12111111 N, 73.47027778 E, 571 m), SKP-053, Dt. 19.08.2018



Figure 4. Herbarium specimen of *Habenaria longicorniculata* J. Graham



Figure. 2. *Habenaria longicorniculata* J. Graham; a Habit; b. Inflorescence; c. Flower



Figure 3. Author with *Habenaria longicorniculata* J. Graham

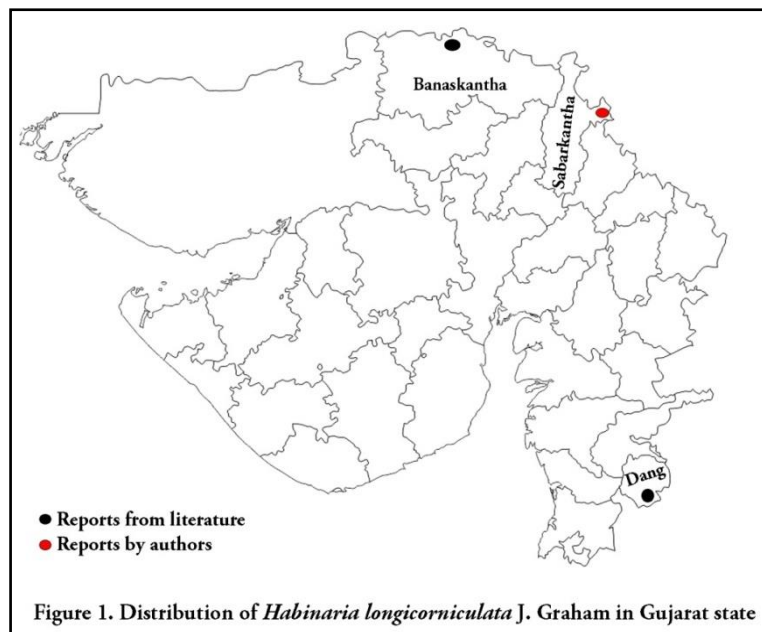


Figure 1. Distribution of *Habenaria longicorniculata* J. Graham in Gujarat state

Field Notes: The field investigation revealed that this species is found on hill slopes, among grasses and other herb species like *Blepharis repens*, *Azanza lampus*, *Chlorophytum tuberosum*, *Cassia absus*, *Indigofera constricta*, *Vigna* sp. They are surrounding associated species of this plant species. The population is confined to only one locality with eleven (11) individual from Vijaynagar Zer Bhankhara forest of Sabarkantha district. Several explorations in different forest area of North Gujarat Region could not locate this species as well as by any researchers from the Gujarat state, so this species needs urgent survey in the state as well as surrounding area where the species was reported for the first time.

Acknowledgement

The authors are highly thankful to all the informants for sharing us their valuable knowledge and company in the forest area during the field trips. We would also like extend our sincere gratitude to our colleagues for their support during field visit.

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How to cite this article

Bhasker Punjani, Suresh Patel, Prashant Desai, Yagnesh Chaudhary and Vinod Pandey, 2019. *Habenaria longicorniculata* J. Graham (Orchidaceae), A new distributional record from Sabarkantha district for Gujarat State. *Bioscience Discovery*, **10**(2):53-57.