

Peristylus lawii (Orchidaceae): A New Record for Rajasthan State, India

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Abstract

This article deals with *Peristylus lawii* (Orchidaceae) first time distribution records from the State of Rajasthan. A brief description, phenology, habitat notes, illustration and photographs are provided.

Keywords: *Peristylus lawii*, Orchidaceae, Phulwari ki Nal and Rajasthan

Introduction

The genus *Peristylus* Blume is represented by 106 species and three varieties, of which 34 species and two varieties are found in India [1, 2]. It is distributed from the Mascarenes, tropical and subtropical Asia to the Pacific region [3]. The generic name, *Peristylus* is derived from the Greek words 'Peri' which means around and 'Stylus' which means column, probably referring to the shape of the column, which is in the form of protuberance from the apical portion of the ovary. The genus can be differentiated from its allies by the ascending ovary, close and parallel to the peduncle and stigmatic surfaces in the form of small protuberances on the edge of the lip and not extending as stalked appendages as in *Habenaria* [4]. So far, *Peristylus stocksii* (Hook.f.) Kraenzl. and *Peristylus constrictus* (Lindl.) Lindl. are the only known species from Rajasthan [5, 6]. A small population of *Peristylus lawii* Wight is discovered during the month of July 2020 from Phulwari Ki Nal Wildlife Sanctuary, Udaipur District, Rajasthan. *Peristylus lawii* Wight is described by Wight based on Law's collection from Concan & Mysore [7]. It is related to *P. stocksii* (Hook.f.) Kraenzl but can be distinguished by the mostly clustered leaves and lip with a globose spur. The present report makes it third species of *Peristylus* from the state.

Material and Methods

During the recent plant exploration of Rajasthan, few interesting plants were collected from Phulwari Ki Nal Wildlife Sanctuary, Udaipur District, Rajasthan (Figure-1). The Phulwari Ki Nal Wildlife Sanctuary is located on the banks of Wakal River (Sabarmati in Gujrat) in the middle of the Aravalli Hill Range in Udaipur district of Rajasthan around 123 km southwest of Udaipur near the border of Rajasthan and Gujarat States. The sanctuary covers the area of 492.68 square kilometers. The floral constituents of the Phulwari Wildlife Sanctuary are mostly edaphoclimatic climax type forests. Phulwari Ki Nal Wildlife Sanctuary is a small forest in semi-arid region of India, this is another biodiversity hotspot of Rajasthan State as the many interesting plant species occur in that area [8, 9].

During the field tour fresh specimens of plants were collected for critical study. On detailed study and critical

examination they were identified as *Peristylus lawii*. A further scrutiny of literature (Bhandari, 1978; Sharma & Tiagi, 1979; Shetty & Singh 1991 Sharma & Kotia, 2008, Sharma, 1999 & 2003) [10, 11, 12, 5, 8, 9] revealed that this species is hitherto unreported from Rajasthan. For identification, detailed morphological description, phenological data, illustration (Plate -1) and field photographs (plate -2) are mentioned. The specimen was deposited in the RUBL.

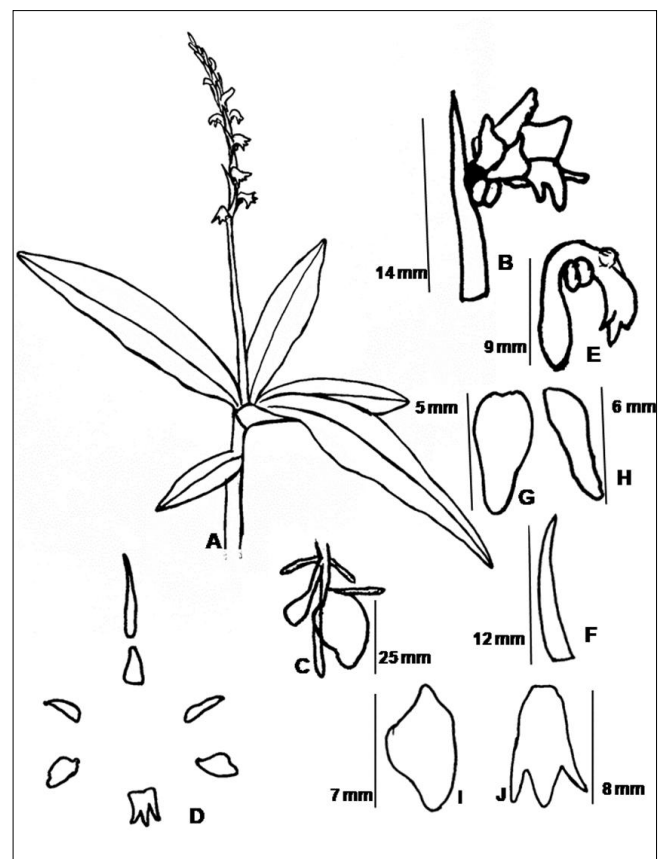


Plate 1: Illustration of *Peristylus lawii* Wight: A. Plant; B. Close up of Flower; C. Tuber; D. Dissected floral bracts; E. Lip with column and spur; F. Bracts; G. Dorsal sepal; H. Lateral sepal; I. Lateral petal; J. Lip.



Plate 2: *Peristylus lawii* Wight: A. Plant in habitat; B. Close up of Inflorescence; C. Tuber; D. Dissected floral bracts; E. Flower with front view; F. Flower with Lateral view; G. & H. Bracts; I. & J. Dorsal sepal; K. & L. Lateral sepal; M. & N. Lateral petal; O. & P. Lip; Q. Lip with R. Column, spur and pedicle; S. Pollinium.

Taxonomic Description

Peristylus lawii Wight, Icon. Pl. Ind. Orient. 5: 12, t.1695. 1851; T. Cooke, Fl. Bombay 216. 1907; Santapau and Kapadia, Orchids Bombay 53, t.10, C-D. 1966; Pradhan, Ind. Orchids 1: 97. 1976; Shah, Fl. Gujarat 2: 661. 1978; Deva & H.B. Naithani, Orchid Fl. N.W. Himalaya 191, f.102. 1986; S. Misra, Orch. Orissa 160. 2004; Kumar & al., Checkl. 3(4): 299. 2007; Jalal, Orch. Maharashtra: 192, f.4.53. 2018. *Habenaria lawii* (Wight) Hook.f., Fl. Brit. India 6: 162. 1890.

Type: Maharashtra, Law s.n. (K Photo!).

Terrestrial herbs, up to 28 cm high. Tubers 1-2, ellipsoid to globose, up to 2.3 cm long; roots arising above the tubers, horizontal. Stem pale green, erect, terete, glabrous. Leaves 4-5, clustered about middle of the stem, subequal 5-12 x 2.5-3 cm, elliptic or narrowly-oblong, entire, acute, sheathing at base, membranous, glabrous, mid-vein prominent. Inflorescence a terminal spike, laxly flowered up to 12 cm long. Floral bracts narrowly obovate-lanceolate, apex acuminate, longer than the ovary. Flowers 13-14 mm long, white, resupinate; sepals spreading, free, white, 1-veined, dorsal sepal elliptic, obtuse, forming a hood with petals; lateral sepals sub-falcate, obtuse, entire. Petals erect, concave, incurved base, adnate to dorsal sepals and lip, ovate obtuse 1-veined. *Lip* short, 2-3 mm, 3-lobed, midlobe slightly broader and longer than the laterals; lateral lobes angular, shorter. Spur short, 1 mm across, green, globular-scotiform.

Flowering and Fruiting: July & August.

Habitat: Terrestrial, in moist deciduous forests, in open situations under cover with loamy or gravelly-loamy soil, 150-1200 m. found growing under the forest *Madhuca indica*, near the margin of seasonal stream, humus rich black soil.

Distribution: India (Andhra Pradesh, Bihar, Chhattisgarh, Gujarat, Jharkhand, Karnataka, Kerala, Maharashtra, Madhya Pradesh, Tamil Nadu, Odisha, Uttarakhand); Nepal, Myanmar.

Specimens examined: India, Rajasthan, Udaipur District, Phulwari Ki Nal Wildlife Sanctuary, 12/07/2019, Amit Kotiya 211746 (RUBL).

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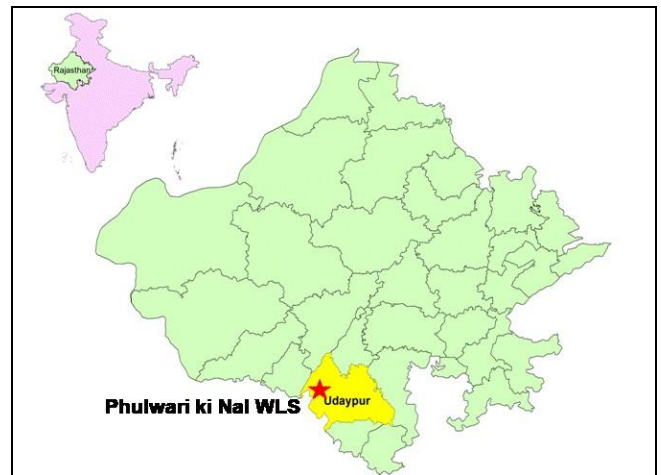


Fig 1: Showing the collection point of *Peristylus lawii* Wight

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