

# Extended distribution of *Peristylus parshii* Rchb. f. (Orchidaceae: Orchidinae) with new report to Karnataka, India

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## ABSTRACT

The *Peristylus* species was collected from the region of Kodagu which was identified as *Peristylus parshii* Rchb. f. hitherto the species was reported from places of Arunachal Pradesh, Manipur, Meghalaya, Sikkim, Andaman & Nicobar Islands, Kerala. The present report is Karnataka (Brahmgiri Wildlife Sanctuary) deliberates an extended distribution of *P. parshii* from Karnataka, India. The species described with all picture photographs for identification and easy key identification in the state.

**Keywords:** Brahmgiri Wildlife Sanctuary, Lax inflorescence, Ovoid spur, *Peristylus Blume*, Terrestrial orchid.

## Introduction

*Peristylus* Blume is distributed Tropical & Subtropical Asia to Mongolia and Pacific with a count of 102 species in the world (2). In India there are around 36 species of *Peristylus* species (6). Nayar, *et al.*, reported 11 *Peristylus* species from Western Ghats of India (1). Sharma, *et al.*, reports 8 *Peristylus* species in Karnataka (5). Sringseshwara & Sanjappa reported 197 wild orchids, in that 11 *Peristylus* species were recorded (7). Flora of Karnataka, volume 3 records 8 *Peristylus* species from different districts of Karnataka (1). Ravikumar, *et al.*, in their present updated work in Seed plants of Karnataka, India: A Concise Dictionary reported 10 *Peristylus* species (*Peristylus aristatus* Lindl., *Peristylus brachyphyllus* A. Rich., *Peristylus densus* (Lindl.) Santapau & Kapadia, *Peristylus goodyeroides* (D.Don) Lindl., *Peristylus lawii* Wight, *Peristylus plantagineus* (Lindl.) Lindl., *Peristylus richardianus* Wight, *Peristylus secundus* (Lindl.) Rathakr., *Peristylus spiralis* A.Rich., *Peristylus stocksii* A. Rich) (3). Flora of Coorg (Kodagu), Karnataka recorded two *Peristylus* species in their work in Orchidaceae family (9). Survey was conducted at Keerti reserve forest and Napuklu road to Brahmgiri Wildlife Sanctuary (Bhagmandla and Talacauvery) collected an interesting *Peristylus* species which was up to 85 cm tall, Spadix inflorescence with highly scented flowers and with scrotiform spur. After analyzing this characters under the microscope which was identified as *Peristylus parishii* Rchb.f. which was not reported early from Karnataka, but recently reported from Waynad, Kerala (4) (Figure 1). So the present work reports the distribution of the species with its extended diversity and a new report to Karnataka.

## Taxonomic treatment

*Peristylus parishii* Rchb.f. Trans. Linn. Soc. London 30: 139 (1874). Salim *et al.*, *Peristylus parishii* (Orchidaceae); New Record Kerala, Indian Forester, 147 (5): 506-507 (2021).

Figure 2, 3

Terrestrial herbs up to 60-80 cm long. Tubers dark brown, 1-2, Ovid shape, 1-2 cm long, small roots above the tubers. Leaves 2-4, 5-7 × 3-5 cm, many veins, lanceolate, linear wavy margin sometimes, base ovate, acuminate apex, pale to dark green. Inflorescence lax, long up to 40 cm, spadix, flowers many arranged spirally. Bract linear lanceolate, acute apex, 1-veined, 8 × 2 mm, whitish shiny green. Flower green, highly scented, many in number. Dorsal sepal boat-like, ovate shape, blunt apex, creamish tinged, 1 × 1 mm, 1-veined. Lateral sepals creamish tinged, sickle-shaped, 1.5 × 1 mm. Petals green, 2 × 1 mm, linear ovate to acute apex, 1-veined. Labellum 4 × 2-3 mm, green, 3-lobed, side lobes linear bent sideways, middle lobe tongue like, yellowish green, front lobe is undulate. Spur scrotiform, ovoid shape green, 1 × 1 mm. Column greenish yellow with two sacks.

Pollinaria 1 pair, cream yellow, viscidium pad is large with small projections on it. Ovary 8 × 2 mm, green, with many nerved. Capsule 8 mm long, brown when dry, shiny, many-seeded. Flowering Season: June-July; Fruiting season: July-October. Specimen examined: India, Karnataka, Kodagu, Brahmgiri Wildlife Sanctuary, Keerti Reserve forest and Napuklu road, 14/08/2024, 0368, Shreyas Betageri & Prashant Karadakatti, (HKSCD 20674).

**Distribution:** India [Arunachal Pradesh, Manipur, Meghalaya, Sikkim, Andaman & Nicobar Islands, Kerala & Karnataka (present record)]; China South-Central, China Southeast, East Himalaya, India, Myanmar, Nepal, Thailand, Vietnam.

**Conservation status:** As per the present survey at that region, this species is seen at roadside understory of forest and road cuttings at Keerti reserve forest, Kodagu. And also seen few individuals at Napuklu road on the way to Bagmandla, Virajpeth at road cuttings.

**Note:** *Persitylus parshii* is distributed commonly throught out Kodagu district, but may be misconceived with *Peristylus goodyeroides* (D.Don) Lindl. and *Peristylus densus* (Lindl.) Santapau & Kapadia by its colour and structure and labellum. So present work reports easy key up to species level.

## Key to *Peristylus Blume* species in Karnataka

|    |  |                         |
|----|--|-------------------------|
| 1  | Large herbs up to 80 cm                          | 2                       |
| 1  | Small herbs up to 50 cm                          | 4                       |
| 2  | Inflorescence densely arranged, spur round shape | 3                       |
| 2  | Inflorescence loosely arranged, spur ovoid shape | <i>P. parshii</i>       |
| 3  | Labellum boat shaped                             | <i>P. plantagineus</i>  |
| 3  | Labellum tri-lobed                               | <i>P. goodyeroides</i>  |
| 4  | Spur straight, linear                            | <i>P. densus</i>        |
| 4  | Spur scrotiform, not linear                      | 5                       |
| 5  | Inflorescence densely arranged                   | 6                       |
| 5  | Inflorescence loosely arranged                   | 7                       |
| 6  | Leaves small, bract equal to flower              | <i>P. secundus</i>      |
| 6  | Leaves large, bract larger than flower           | <i>P. brachyphyllus</i> |
| 7  | Flowers white                                    | <i>P. lawii</i>         |
| 7  | Flowers yellowish-green                          | 8                       |
| 8  | Labellum side lobes upwards                      | <i>P. richardianus</i>  |
| 8  | Labellum side lobes sideways                     | 9                       |
| 9  | Labellum side lobes bent backwards               | <i>P. aristatus</i>     |
| 9  | Labellum not as above                            | 10                      |
| 10 | Inflorescence spirally arranged                  | <i>P. spiralis</i>      |
| 10 | Inflorescent regular arrangement                 | <i>P. stocksii</i>      |

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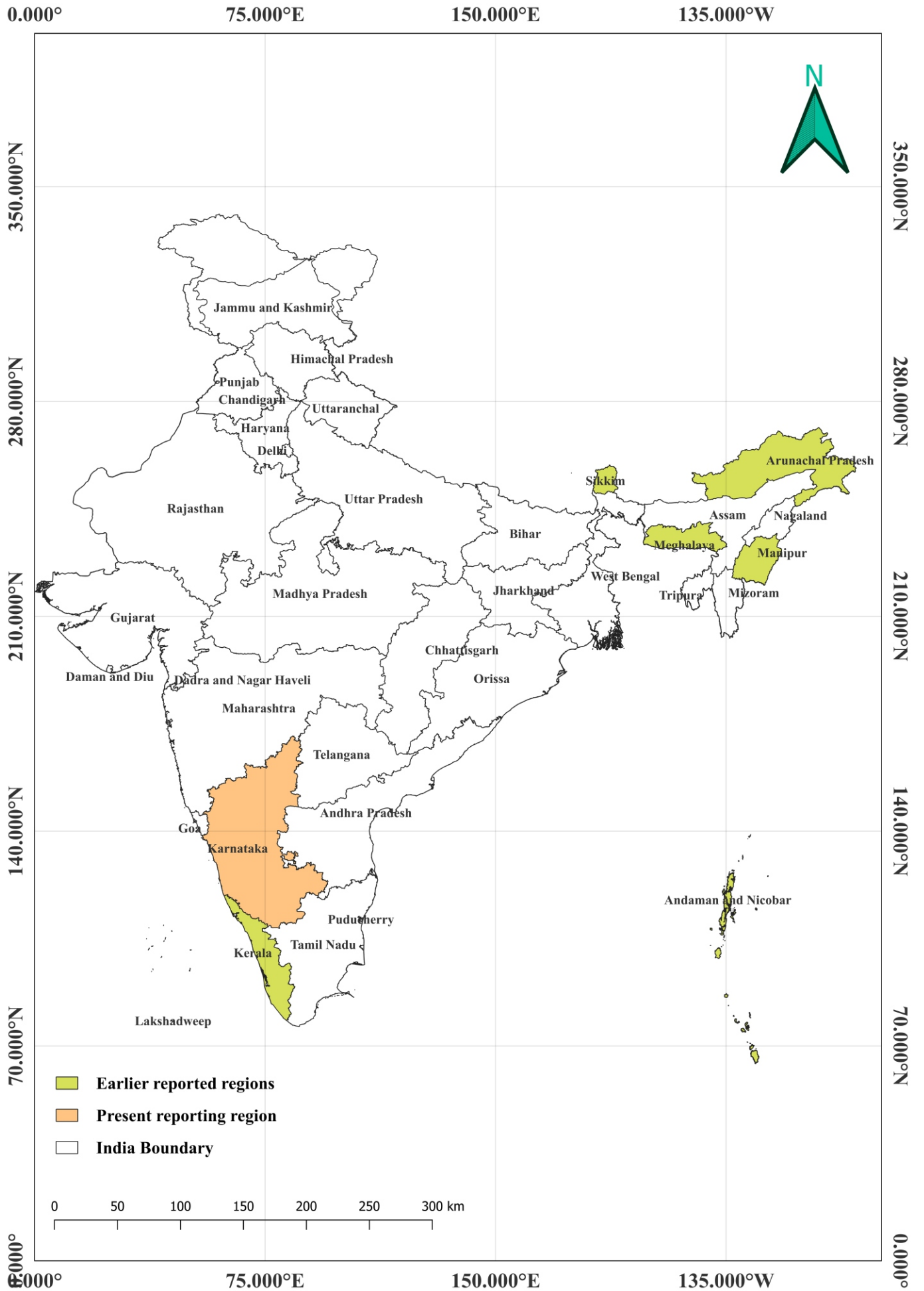


Figure 01. Distribution map of *Peristylus parishii* Rchb.f. in India using QGIS 7.0 version

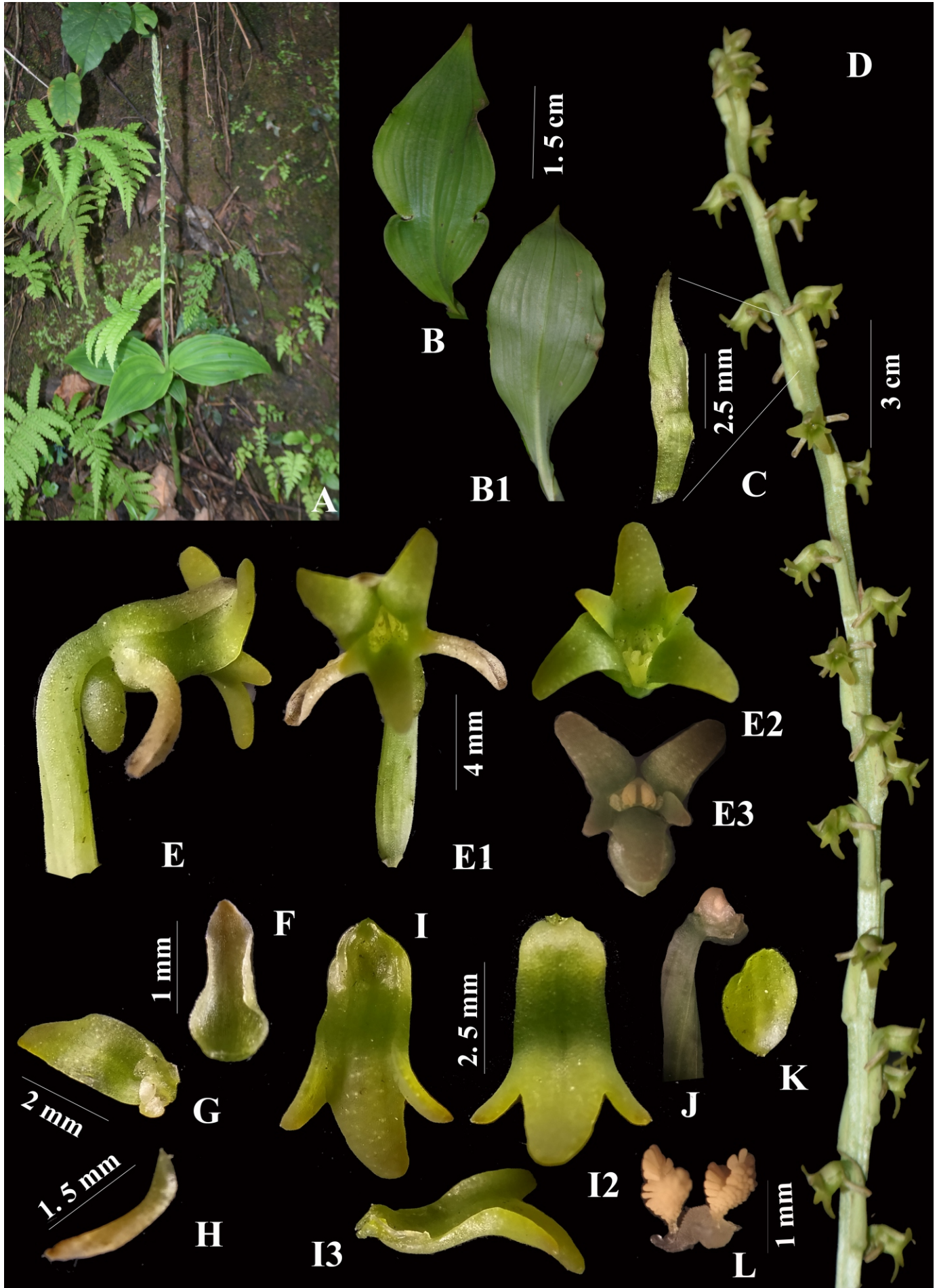


Figure 02. *Peristylus parishii* Rchb.f. A. Habitat; B. B1. Dorsal & ventral leaf; C. Bract; D. Inflorescence; E. E1. E2. Side view, front view, down view of flower; E3. Flower without lateral sepals; F. Dorsal sepal; G. Petal; H. Lateral sepal; I. I1. I2. Dorsal, ventral and side view of labellum; J. Ovary with column; K. Scrotiform spur separated; L. Pollinaria. (Photography by Shreyas Betageri & Prashant Karadakatti)





Figure 03. *Peristylus parishii* Rchb.f. herbarium deposition at Karnatak Science College, Dharwad (HKSCD)

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