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## *Orthosiphon aristatus* (Lamiaceae): A new record for the flora of Odisha, India

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### ABSTRACT

*Orthosiphon aristatus* (Blume) Miq. (Lamiaceae) is reported for the first time from Odisha state from Similipal Biosphere Reserve. Brief botanical description, nomenclature, distribution and ecological notes of the taxon has been provided in the present paper.

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The genus *Orthosiphon* Benth. belongs to the tribe Ocimoideae of the family Lamiaceae and is comprised of about 40 species. The species of the genus occur mostly in the Old World tropics, South Africa, Madagascar and tropical and sub-tropical Asia (Mabberley, 2008). The genus is represented by 8 species in India (Hooker, 1885) and only 3 species are known to occur wild in Odisha (Saxena and Brahmam, 1995). Similipal, the largest Biosphere Reserve in Eastern India, lies between 20° 17' to 22° 34' N latitude and 85° 40' to 87° 10' E longitude. The flora of Similipal is quite rich in terms of species diversity and also interesting from phytogeographical point of view. During botanical exploration in Similipal, few interesting specimens belonging to the family Lamiaceae have been collected. Critical study of specimens of the genus *Orthosiphon* and perusal of relevant literature (Hooker, 1885; Haines, 1921-25; Kanjilal *et al.*, 1939; Saxena and Brahmam, 1995; Singh *et al.*, 2001) revealed the identity of the specimens as *Orthosiphon aristatus* (Blume) Miq. The occurrence of the species in Similipal Biosphere Reserve is a new distributional record for the state of Odisha. The identity of the specimen has been confirmed by comparing with the specimens available

in Central National Herbarium (CAL), Howrah, India. A detailed description with photographs, notes on phenology, distribution and ecology have been provided to ascertain identity of the species. The specimens have been preserved as herbarium specimens in the Herbarium of Similipal Tiger Reserve, Baripada, Odisha, India.

***Orthosiphon aristatus*** (Blume) Miq., Fl. Ned. Ind. 2 : 943.1858; Kanjilal *et al.*, Fl. Assam 3: 502. 1939; Mukh. in Rec. Bot. Surv. India 14(1): 26. 1940; *Ocimum aristatum* Blume, Bijdr. 14: 833. 1826. *Orthosiphon stamineus* Benth. in Wall., Pl. Asiat. Rar. 2: 15. 1830; Hook. f. Fl. Brit. India 4: 615. 1885; Fischer. in Rec. Bot. Surv. India 12(2) : 125.1938. *Orthosiphon grandiflorus* Haines, Bot. Bihar Orissa 731.1922 (Repr. ed. 2:731, 1988). (Fig. 1.)

Erect undershrub, up to 2 m high; stems quadrangular, sparsely pubescent. Leaves simple, opposite, decussate, ovate, 3-10.5 x 2-5 cm, chartaceous, base cuneate, margins coarsely dentate, apex acuminate, glandular punctate beneath. Petioles 1-4 cm long. Verticillasters laxly-flowered, terminal, up to 15 cm long racemes; bracts broadly ovate, ca 3 mm long, ciliolate. Flowers bisexual, zygomorphic. Calyx campanulate, 3-6 mm long, upper lip broad, orbicular, two lower lip subulate. Corolla bluish purple, tube upto 1.5 cm

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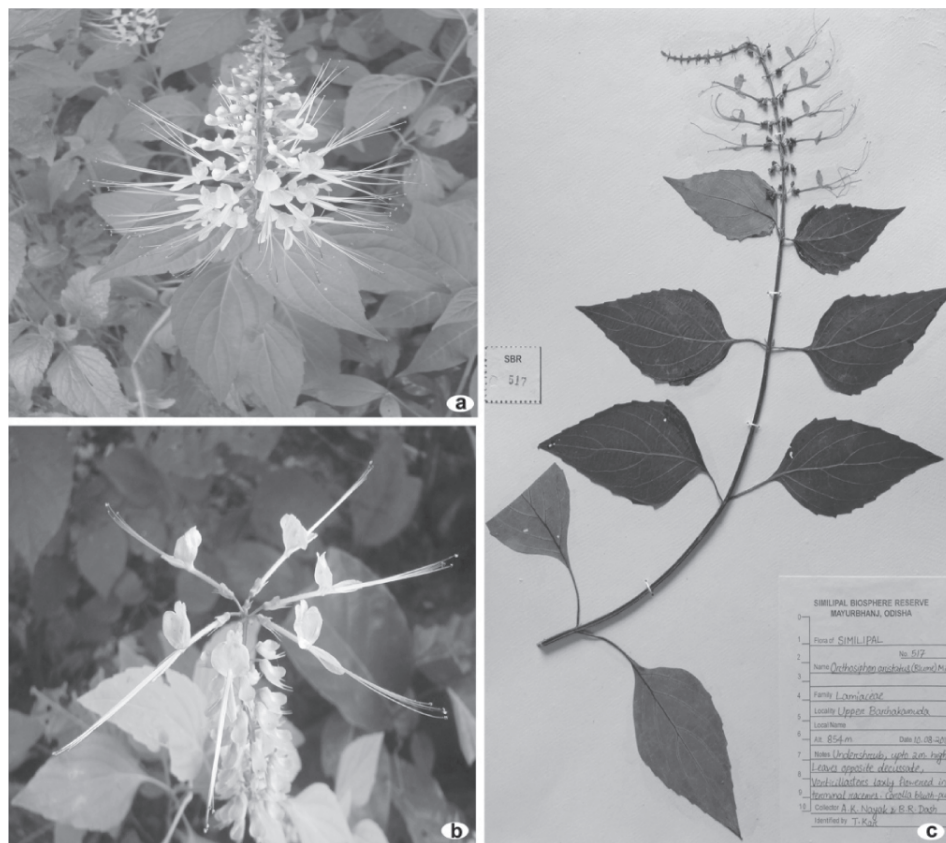


Fig.1. *Orthosiphon aristatus* (Blume) Miq.: a. Habit; b. Close-up view of flowers; c. Herbarium image

long, slender, puberulous outside, distinctly bilipped; upper lip shallowly 4 lobed, recurved; lower lip horizontal and concave. Stamens 4, long exserted, declinate. Ovary superior, 4-partite; ovules one in each cell; style gynobasic, 4-5 cm long; stigma club-shaped and shortly bifid. Nutlets ovoid-oblong, upto 3 mm long, compressed, rugulose.

**Flowering and Fruiting.:** August-October.

**Specimens collected:** Upper Barhakamuda (Similipal), A.K. Nayak and B.R. Dash, SBR 517, 10<sup>th</sup> August, 2013..

**Habitat:** The species is found in shady places of moist deciduous forests; rare at an altitude of 854 m.

**Distribution:** India (Assam, Andaman and Nicobar Islands, Andhra Pradesh, Jharkhand, Manipur, Mizoram, Odisha), Australia, Thailand, Myanmar, Vietnam, Malesia, Indonesia, Philippines.

**Specimens Examined:** Visakhapatnam Dist. (A.P.): Balakrishnan, 785, 24.09.1961 (CAL); Arong Car Nicobar: Nair, 4583, 06.10.1976 (CAL); Sungri, Assam: Panigrahi, 14335, 24.07.58 (CAL); Eastern Manipur: Prajer 184, 12.07.1890 (CAL); Singbhum, Bihar: H. H. Haines 194, September, 1899 (CAL); Mount Stuart Anamalais: CEC Fischer; 3455, 12.07.1912 (CAL).

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