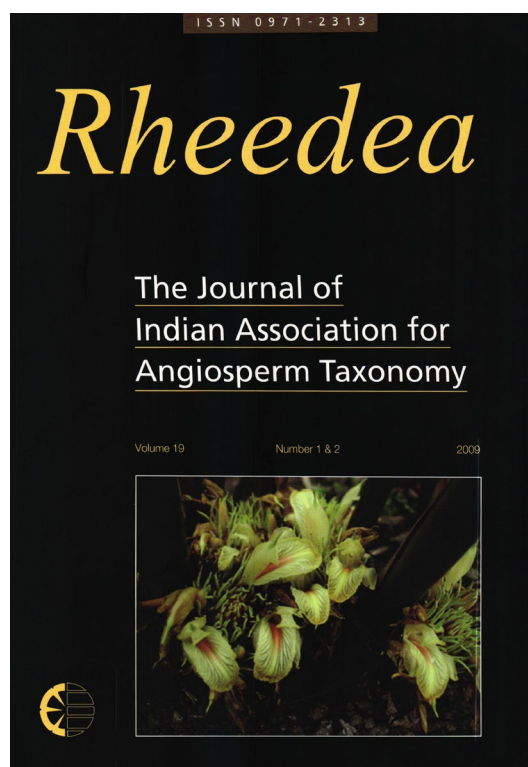




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# Rediscovery of *Ophiorrhiza caudata* (Rubiaceae) from the Western Ghats of Kerala

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## Abstract

*Ophiorrhiza caudata* C. E. C. Fisch. is rediscovered from the Cardamom Hills of Mankulam along the Western Ghats of Kerala after a lapse of 70 years. A detailed taxonomic description and illustration of this species are provided.

**Keywords:** *Ophiorrhiza caudata*, Rediscovery, Western Ghats, Camptothecin

## Introduction

While conducting investigations on *Ophiorrhiza* L. along the Western Ghats of Kerala, the authors collected some interesting specimens of the genus. After critical studies and comparison with the type specimen (*E. Barnes* 1560, K image!) the specimens have been identified as *O. caudata* C. E. C. Fisch., a species thought to be 'Possibly Extinct' by many authors (Nayar & Sastry, 1987; Deb & Mondal, 2001). The type specimen was originally collected by Barnes in 1937 from "Travancore High Range, Kalaar". Despite intensive botanical explorations in this region during the last several years, this species seems to have escaped the attention of botanists.

The genus *Ophiorrhiza* is characterized by the presence of camptothecin, a cytotoxic alkaloid, which is the only naturally occurring topoisomerase-1 inhibitor.

***Ophiorrhiza caudata*** C. E. C. Fisch., Bull. Misc. Inform. 1938: 125. 1938; Sebastine, Bull. Bot. Surv. India 4: 223. 1963; M. P. Nayar & Sastry, Red Data Book Indian Pl. 1: 335. 1987; Deb & Mondal, Bull. Bot. Surv. India 39: 34. 2001; Sasidh., Biod. Doc. Kerala Pt. 6, Fl. Pl.: 226. 2004; M. P. Nayar *et al.*, Fl. Pl. Kerala - Handb.: 530. 2006. **Fig. 1**

Annual herbs, 25 – 50 cm high, glabrous. Stem subterete; internodes 2 – 9 cm long. Leaves elliptic-lanceolate, 4.5 – 11 × 1.5 – 3.5 cm, attenuate at base, entire, narrowly acuminate to caudate with tips 1 – 1.5 cm long, dark green above and pale yellowish green beneath, glabrous or sparsely puberulent

on main nerves beneath; lateral nerves 6 – 8 pairs, broadly curved, ascending, usually extending to margin; petioles 0.5 – 1.5 cm long; stipules interpetiolar, caducous, ovate-triangular, 3 – 6 mm long, acuminate at apex. Cymes terminal, subcapitate, 1 – 2 cm across, erect, glabrous; peduncles 1.5 – 3 cm long, slender, green. Flowers 4 – 6 mm long, white; bracts and bracteoles similar, persistent, ovate-lanceolate, 4 – 5 × 1.5 – 4 mm, oblique, acute, midnerve prominent; pedicels 1 – 1.5 mm long. Hypanthium *c.* 1 × 0.5 mm, cupular. Calyx lobes 5, ovate-lanceolate, 1 – 1.5 × 0.3 – 0.4 mm, acute, shortly keeled at back. Corolla lobes 5, white, ovate-acute, *c.* 3 mm across; tube *c.* 4 mm long, glabrous outside, densely hispid on throat inside. Stamens 5, inserted above middle of corolla tube; anthers oblong, sessile or stalked, *c.* 1 mm long, yellow, longitudinally dehiscent; filaments *c.* 0.5 mm long in long-styled flowers and to 3 mm long in short-styled flowers. Ovary obovoid, 0.5 – 1 mm long; style *c.* 3 mm long; lobes subrotund, minutely papillate.

*Flowering:* August – November.

*Habitat:* Shola forests, usually in wet shady places above 1100 m.

*Distribution:* INDIA, Kerala, Idukki District.

*Specimens Examined:* INDIA, Kerala, Idukki District, Kallar, 26.10.2008, *Ginu Joseph* 1692 (Sacred Heart College Herbarium, Thevara, Kochi); Mankulam, Cardamom Hills, 15.11.2008, *Ginu Joseph* 86952 (CALI).

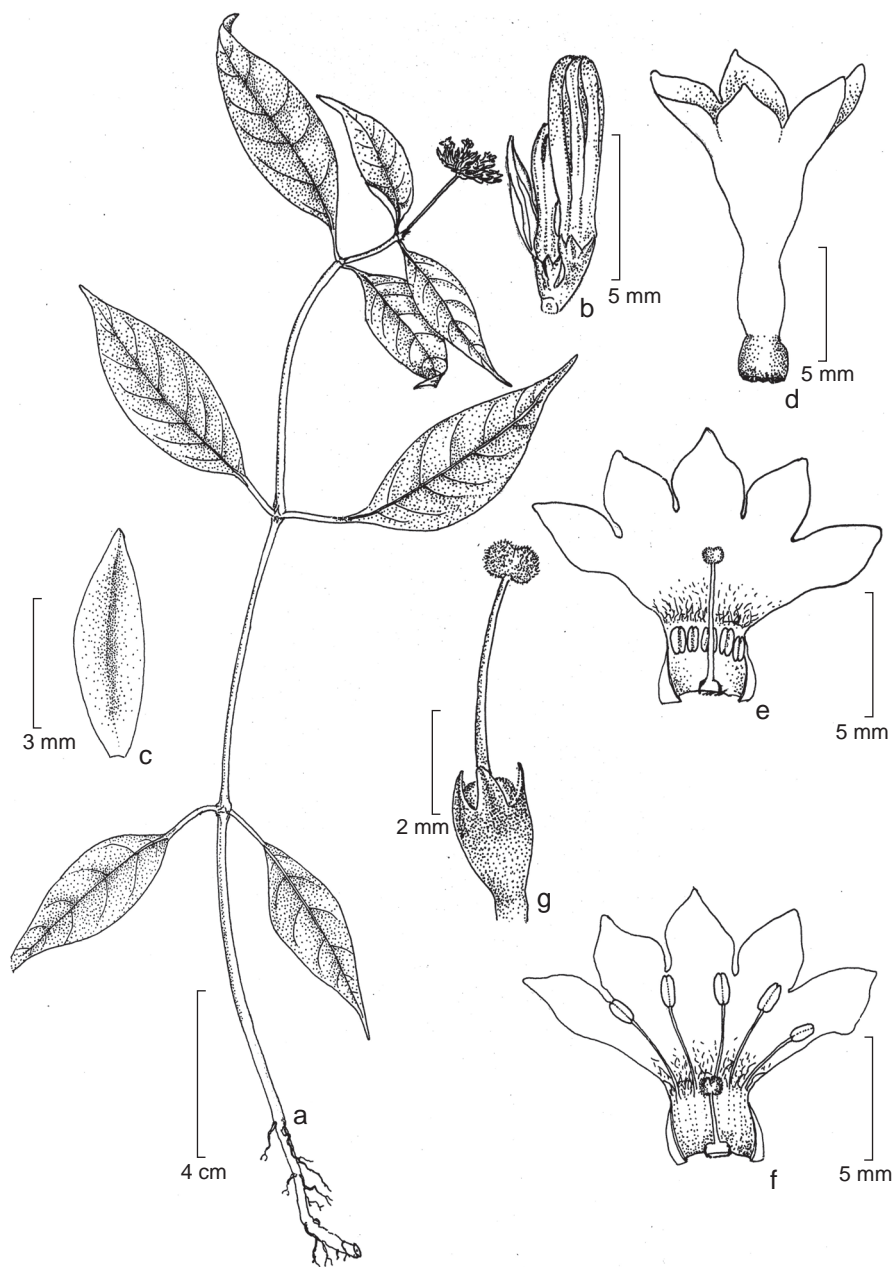


Figure 1. *Ophiorrhiza caudata* C. E. C. Fisch.: a. Habit; b. Flowers; c. Calyx lobe; d. Corolla; e, f. Split open corollas of heterostylous flower; g. Pistil.

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