

## *Rhododendron qiaojiaense* (Ericaceae), a new species from Yunnan, China

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*Rhododendron qiaojiaense* L.M. Gao & D.Z. Li *sp. nova* (Ericaceae) is described from northeastern Yunnan, China, and illustrated. The new species is compared with the morphologically similar *R. decorum* and *R. vernicosum*.

Key words: Ericaceae, new species, *Rhododendron*, taxonomy

*Rhododendron* is a large genus of the family Ericaceae (Yang *et al.* 1999, Wu *et al.* 2003), consisting of about 1000 species traditionally divided into eight subgenera; it is widely distributed in the northern hemisphere (Chamberlain *et al.* 1996, Fang *et al.* 2005). However, based on *RPB2* gene sequence data, only three subgenera in *Rhododendron* were recently suggested (Goetsch *et al.* 2005). A total of 571 species occur in China (Fang *et al.* 2005). Subsection *Fortunea* is one of the 24 subsections of subgenus *Hymenanthes* (Chamberlain *et al.* 1996), with 31 species, of which 28 are endemic to China (Fang *et al.* 2005).

During an expedition to the Yaoshan nature reserve of Yunnan in May 2005, we found a population of *Rhododendron* that resembled *R. decorum*. After a careful morphological study, literature search (Chamberlain 1982, He *et al.* 1994, Fang *et al.* 2005), and examination of many specimens, it became clear that these plants represented a new species of *Rhododendron* subgenus *Hymenanthes*, subsection *Fortunea*.

***Rhododendron qiaojiaense* L.M. Gao & D.Z. Li, *sp. nova* (Figs. 1 and 2)**

*Species nova affinis R. decori, sed laminis oblongis vel late oblongis, base truncatis vel rotundis, corollis late campanulatis, ceraceis, caducis maturitate, filamentis 1.5–2 cm longis, glabris differt.*

ETYMOLOGY. The epithet of the new species refers to its geographical distribution in Qiaojia County, northeastern Yunnan province of China.

TYPE: China, Yunnan Province: Qiaojia County, Oiaoshan primitive forest, 27°11'24"N, 103°04'34"E, alt. 2600–2700 m, 25.V.2005 L. M. Gao, S. D. Zhang & N. N. Lin 03-1686 (holotype KUN; isotype KUN)

Evergreen shrubs or small trees, 2–4 m tall; young branches robust, yellow-green, old branches gray brown, glabrous. 4–5 leaves clustered at end of branches, pseudo-verticillate; petiole cylindrical, 3–4 cm long, glabrous; leaf blade thickly leathery, oblong to broadly oblong,

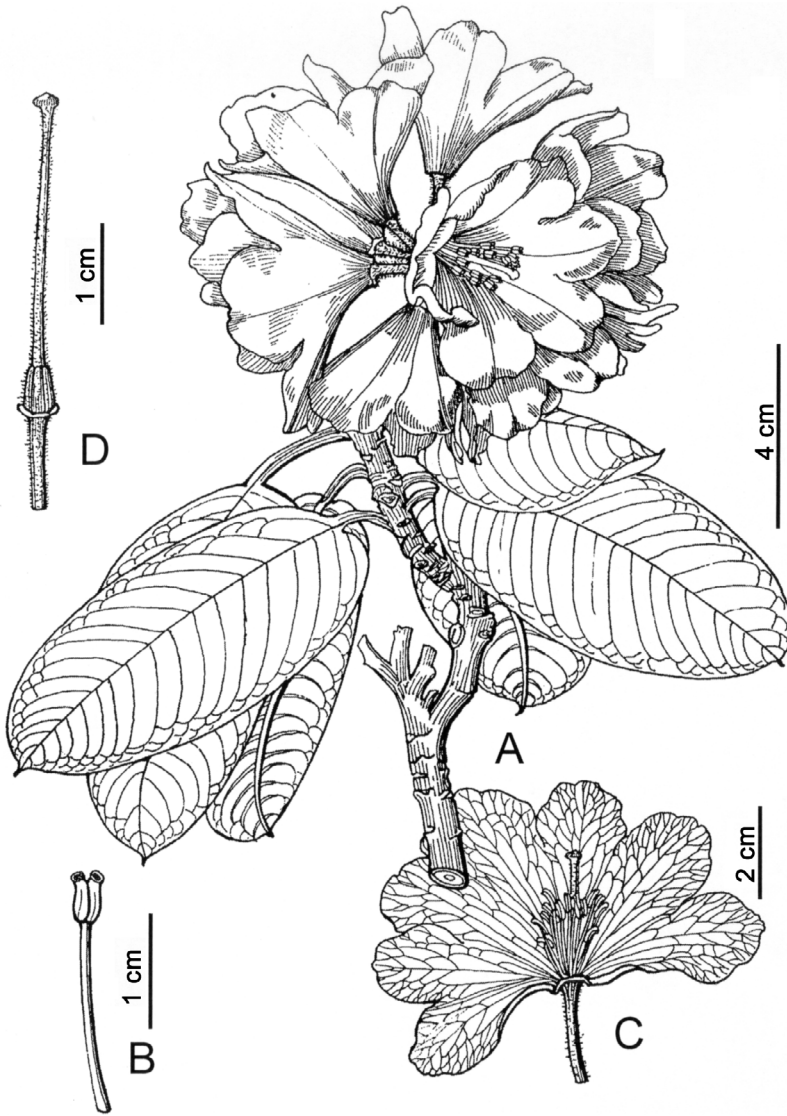


Fig. 1. *Rhododendron qiaojaense* (from the holotype, drawn by Ling Wang). — A: Flowering branches with leaves. — B: Stamen. — C: Flower with stamens and pistil. — D: Gynoecium.

5.5–11 × 3–5 cm; apex obtuse to rounded, rarely acute; base truncate or rounded, rarely slightly cordate; adaxial surface dark green, shiny; abaxial surface pale green, glabrous; midrib prominent abaxially, lateral veins 13–15, flat abaxially, impressed adaxially, veins reticulate, conspicuous. Inflorescence terminal, lax, 8–10-flowered, botryose umbellate; rachis 20–25 mm long, sparsely glandular. Pedicel 2.5–4.5 cm long, glandular-hairy, white; calyx lobes 7, small, ca. 1 mm long, triangular, glandular and gland-fringed; corolla broadly campanulate, pink to pink-purple, thickly ceraceous, caducous in

anthesis, lacking a blotch or flecks inside; 4–4.5 cm long, 5–6 cm in diameter, outer surface glabrous; lobes 7, obovate, 1.5–1.8 cm; apex entire; stamens 14, unequal, filaments white, glabrous, 1.5–2 cm long, anthers oblong-elliptic, yellow brown, 2–3 mm long; ovary conical, ca. 5 × 3 mm, densely white glandular; style 2–3 cm long, densely white glandular-hairy to tip, rarely pink purple, equal or slightly longer than corolla; stigma capitate, green or purple, small, diameter ca. 2 mm. Capsule cylindrical, slightly curved, roughened, glandular hairy. Flowering from May to June.



Fig. 2. Flowering specimen of *Rhododendron qiaojiaense* (photo taken by Lian-Ming Gao).

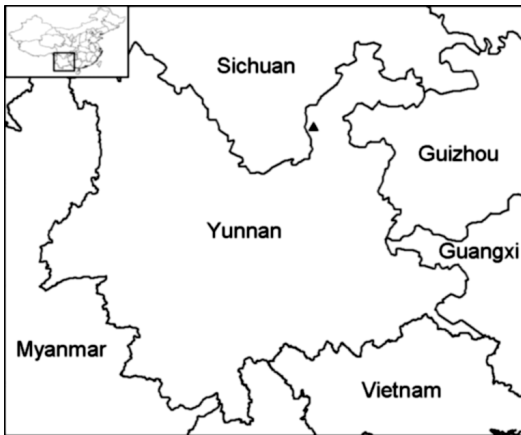


Fig. 3. Locality of *Rhododendron qiaojiaense*.

*Rhododendron qiaojiaense* grows at the edge of mixed forest, or in mixed forest together with *R. pachytrichum*, *R. argyrophyllum*, *Enkianthus deflexus* and *Taxus wallichiana* var. *chinensis* etc. between 2600 and 2700 m. It is known only from the type locality in Qiaoshan, Qiaojia County, in the northeast part of Yunnan province (Fig. 3).

*Rhododendron qiaojiaense* resembles *R. decorum* and *R. vernicosum*, especially in the leathery leaf blade, small calyx, glandular-hairy pedicel, glabrous outer surface of corolla, densely glandular ovary, and glandular-hairy style. The major morphological differences among *R. qiaojiaense*, *R. decorum* and *R. vernicosum* are summarized in Table 1.

The geographic ranges of these three species are different. *Rhododendron qiaojiaense* is

Table 1. Morphological differences among *Rhododendron qiaojiaense*, *R. decorum* and *R. vernicosum*.

	<i>R. qiaojiaense</i>	<i>R. decorum</i>	<i>R. vernicosum</i>
Leaf			
Shape	oblong to broad oblong	oblong, oblong-ovate or oblong-elliptic	oblong-ovate to oblong-elliptic
Base	truncate or rounded, rarely slightly cordate	cordate or cuneate to nearly rounded	rounded
Abaxial surface	glabrous	glabrous	minute punctulate hairs
Inflorescence	rachis 20–30 mm long	rachis 20–25 mm long	rachis about 10 mm long
Flowers			
Corolla shape	broadly campanulate	funnel-campanulate	widely broadly campanulate
Color	pink to pink-purple	white to pale pink	pale pink to white
Texture	ceraceous	non-ceraceous	non-ceraceous
Blotch or flecks inside	glabrous	blotches inside	flecks inside or glabrous
Corolla caducous	in anthesis	after anthesis	after anthesis
Filaments	1.5–2 cm long, glabrous	2–3 cm long, puberulent at base	2–3 cm long, glabrous
Ovary	densely white glandular	densely white glandular	densely red-glandular
Style	densely white glandular-hairy to tip	densely white glandular-hairy to tip	red glandular-hairy to tip

known only from the NE of Yunnan, where it is sympatric with *R. decorum*. However, *R. decorum* occurs also in SW China, i.e. west Guizhou, southwest Sichuan, Yunnan and SE Xizang. *Rhododendron vernicosum* is endemic to SW China, occurring in NW Yunnan, SW Sichuan and SE Xizang.

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