

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

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A new species, *Rhododendron cochlearifolium* Xiang Chen & Jiayong Huang (Ericaceae), from Guizhou Province, China is described and illustrated. It differs from the most morphologically similar species *R. irroratum* and *R. agastum* mainly by having small and spoon-like leaf blades, a more floriferous inflorescence, a shorter rachis, a corolla with no nectar pouches, glabrous filaments and a densely tomentose, eglandular ovary.

Plants of the genus *Rhododendron* (Ericaceae) are well known because of their highly appreciated horticultural value. There are 571 species of the genus found in China, 409 of which are endemics (Fang *et al.* 2005). The southwest to central region of China, including Guizhou Province, represents a hotspot for *Rhododendron* species. Baili Rhododendron Nature Reserve, a 125.8 km<sup>2</sup> highland located in northwest Guizhou, is a very significant concentration of *Rhododendron* species (Yang *et al.* 2006), comprising approximately 35 species (Chen *et al.* 2010a).

Between the years 2007 and 2010, we conducted an intensive taxonomic survey of *Rhododendron* in the area. Based on careful examination of hundreds of similar herbarium specimens and the relevant literature (Ming 1984, Fang & Ming 1986, Zhang & Chen 1990, Hu & Fang 1994, Chen & Wu 2003, He & Zhao 2007, Chen

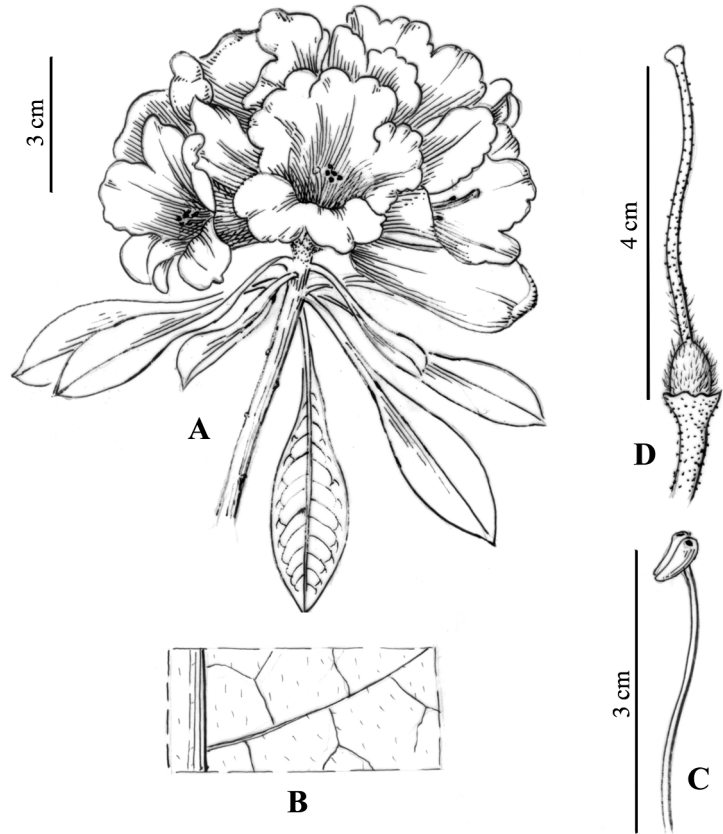
*et al.* 2010b, Gibbs *et al.* 2011), we now describe one previously undescribed species.

### ***Rhododendron cochlearifolium* Xiang Chen & Jiayong Huang, *sp. nova* (Fig. 1)**

(*R.* subgen. *Hymenanthes* sect. *Ponticum* subsect. *Irrorata*)

TYPE: China. Guizhou: Baili Rhododendron Nature Reserve, Pudi, 27°14'N, 105°51'E, alt. 1744 m, slope, in thickets dominated by *R. delavayi* and *R. agastum*, 14 Apr. 2009 Xiang Chen 09042 (holotype HGAS). — PARATYPE: China. Guizhou: Baili Rhododendron Nature Reserve, Pudi, 27°14'N, 105°51'E, alt. 1744 m, slope, in thickets dominated by *R. delavayi* and *R. agastum*, 31 Mar. 2009 Xiang Chen 09041 (HGAS).

Evergreen shrubs, ca. 3 m tall; bark rough; branchlets densely tomentose and slightly glandular-hairy. Petiole 1–2 cm, slightly tomentose and glandular-hairy; leaf blade spoon-like or



**Fig. 1.** *Rhododendron cochlearifolium* (drawn by H. Xie from the holotype). — **A:** Flowering branch. — **B:** Magnification of leaf blade abaxial surface. — **C:** Filament. — **D:** Gynoecium.

sometimes oblanceolate, 4.5–11 × 1.3–2.8 cm; base gradually tapering into petiole; apex acute or mucronate; adaxial surface green, glabrous; abaxial surface pale green, with whitish, continuous, and shiny thin indumentum; midrib slightly grooved adaxially, prominent abaxially, sparsely glandular-hairy below middle; lateral veins 10–14-paired, obscure adaxially, slightly raised abaxially. Inflorescence racemose-umbellate, 11–16-flowered; rachis 13–15 mm, densely grayish-white pubescent. Pedicel reddish green, 1.2–1.6 cm, densely glandular-hairy; calyx minute, ca. 1 mm, glandular; corolla tubular-campanulate, purplish-pink, with many purplish-red spots, 4–4.5 cm long, 4.5–5 cm wide when flattened, lobes 5, suborbicular, 1.5–2.2 cm, emarginate, tube both outside and inside glabrous, base without nectar pouches; stamens 10, unequal, 2.8–3.4 cm, filaments glabrous, anthers brown, ca. 2.5 mm; ovary conoid, 3–5 mm, densely pale yellowish-white tomentose; style greenish-white, 3.3–4 cm, glandular-hairy

to the tip, slightly pubescent near base; stigma yellowish-brown, ca. 2 mm wide. Capsule cylindrical, straight or slightly curved, ca. 18 mm long. Flowers in April, fruits in August–October.

This species is most similar to *R. irroratum* and *R. agastum*, but is distinguished mainly by having small and spoon-like leaf blades, a more floriferous inflorescence, a shorter rachis, a corolla with no nectar pouches, glabrous filaments and a densely tomentose ovary that lacks glands (Table 1).

There was just one population of *Rhododendron cochlearifolium* that includes 13 mature individuals found during the 2007–2010 field research. The current major threats to the species are human disturbance or damage (recreation/tourism), since the type locality is a scenic spot in a rural mountain setting, and habitat loss is occurring (due to agriculture), despite the fact that the region is a provincial nature reserve. However, several new recruits were found under the mature ones and one of the authors, Jia-Yong

**Table 1.** Morphological comparison of *Rhododendron cochlearifolium*, *R. irroratum* and *R. agastum*.

Characters	<i>R. cochlearifolium</i>	<i>R. irroratum</i>	<i>R. agastum</i>
Leaf blade	usually spoon-like or sometimes oblanceolate, 4.5–11 × 1.3–2.8 cm; base gradually tapering into petiole; apex acute or mucronate; abaxial surface indumentum thin, whitish, continual, and shiny	oblanceolate to narrowly elliptic, 7–14 × 2–4 cm; base rounded or broadly cuneate; apex acuminate; abaxial surface glabrous	elliptic to elliptic-lanceolate, 7–12 × 2–5 cm; base rounded or broadly cuneate; apex obtuse, slightly cuspidate; abaxial surface indumentum thin, pale olive to fawn, veil-like
Flowers	11–16	7–15	5–10
Rachis	13–15 mm, densely grayish-white pubescent	20–40 mm, pubescent and rufous glandular	15–30 mm, pubescent and glandular
Corolla	nectar pouches inexistence	nectar pouches existence	nectar pouches existence
Filaments	glabrous	pubescent at base	pubescent at base
Ovary	densely tomentose	densely glandular-hairy	densely glandular-hairy
Style	glandular to the tip, slightly pubescent near base	glandular only, sometimes to the tip	glandular only, sometimes to the tip
Distribution	1744 m, NW Guizhou	1800–3500 m, NW Guizhou, SW Sichuan, N Yunnan	1900–2500 m, NW Guizhou, N and W Yunnan

Huang, has collected seeds of *R. cochlearifolium* and begun a propagation experiment to determine the ideal habitat and thereby increase the possibility of preserving and enlarging the population if required in the future.

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