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 km² 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

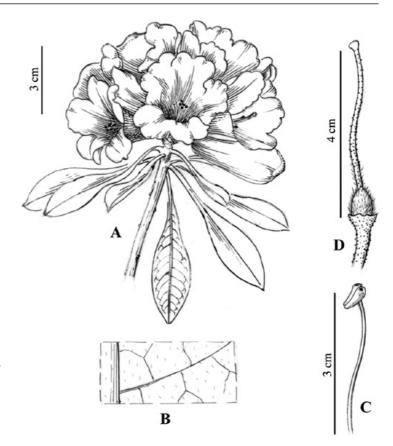


Fig. 1. Rhododendron cochlearifolium (drawn by H. Xie from the holotype). — A: Flowering branch. — B: Magnification of leaf blade abaxial surface. — C: Filament. — D: Gynoecium.

sometimes oblanceolate, $4.5-11 \times 1.3-2.8$ 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 tubularcampanulate, purplish-pink, with many purplishred 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 cylindric, 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 *Rhododen-dron 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

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

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

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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