

Cerasus xueluoensis (Rosaceae), a new species from China

Cheng-Hui Nan^{1,2}, Xian-Rong Wang^{1,*}, Geng-Guo Tang¹, Xian-Gui Yi¹ & Shi-Jia Luo³

¹⁾ College of Forest Resources and Environment, Nanjing Forestry University, Nanjing 210037, Jiangsu, China (*corresponding author's e-mail: wangxianrong66@njfu.edu.cn)

²⁾ Nanjing Forest Police College, Nanjing 210023, Jiangsu, China

³⁾ Science and Technology College, Hubei University for Nationalities, Enshi 445000, Hubei, China

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Cerasus xueluoensis C.H. Nan & X.R. Wang, a new species from Hubei and Jiangxi provinces, China, is described, illustrated and compared with its congeners. It is somewhat similar to *C. tomentosa* and *C. tianshanicae*, but it is distinguished by its 2–4-flowered umbellate inflorescences, much longer pedicels (0.6–2.5 cm), a glabrous pistil and black drupes. A key to distinguish it from the other species of subgen. *Microcerasus* in China is provided.

The genus *Cerasus* consists of ca. 150 species distributed mainly in temperate Asia, Europe and North America. Forty-four of them occur in China (Wu *et al.* 2003). The genus is subdivided into two subgenera, subgen. *Cerasus* and subgen. *Microcerasus* (Yü *et al.* 1986).

In 2009, during a floristic survey in Enshi Tujia and Miao Autonomous Prefecture, Hubei Province, China, some flowering specimens of *Cerasus* were collected from the Xueluozhai Mt., Xuanen County, at the altitudes of 1420–1430 m a.s.l. In 2010, during an expedition to the Lushan Mt., Jiangxi Province, China, some closely similar specimens were collected. While consulting the specimens of *Cerasus* from the herbarium of Jinggangshan Nature Reserve Management Office (JN) in 2010, two similar specimens of *Cerasus* with three axillary winter buds were discovered among the material collected from the Jinggangshan Mt. The specimens had been incor-

rectly identified as *Cerasus schneideriana*, which has just one axillary winter bud. All the specimens reported here represent shrubs with three axillary winter buds, and they also share other morphological similarities and a similar habitat. After studying relevant literature (Yü *et al.* 1986, Li *et al.* 2003, Wang & Shang 2007, Wang *et al.* 2007) and national floras as well as herbarium specimens, we concluded that the reported specimens represent a new species of *Cerasus*.

***Cerasus xueluoensis* C.H. Nan & X.R. Wang, sp. nova (Figs. 1 and 2)**

TYPE: China. Hubei Province, Enshi Tujia and Miao Autonomous Prefecture, Xuanen County, Xueluozhai Mt., in alpine shrubbery beside road, ca. 1430 m a.s.l., 3 April 2009 Cheng-Hui Nan 040301 (holotype NF). — PARATYPES: China. Hubei Province, Enshi Tujia and Miao Autonomous Prefecture, Xuanen County, in alpine shrubbery of Xueluozhai Mt.,

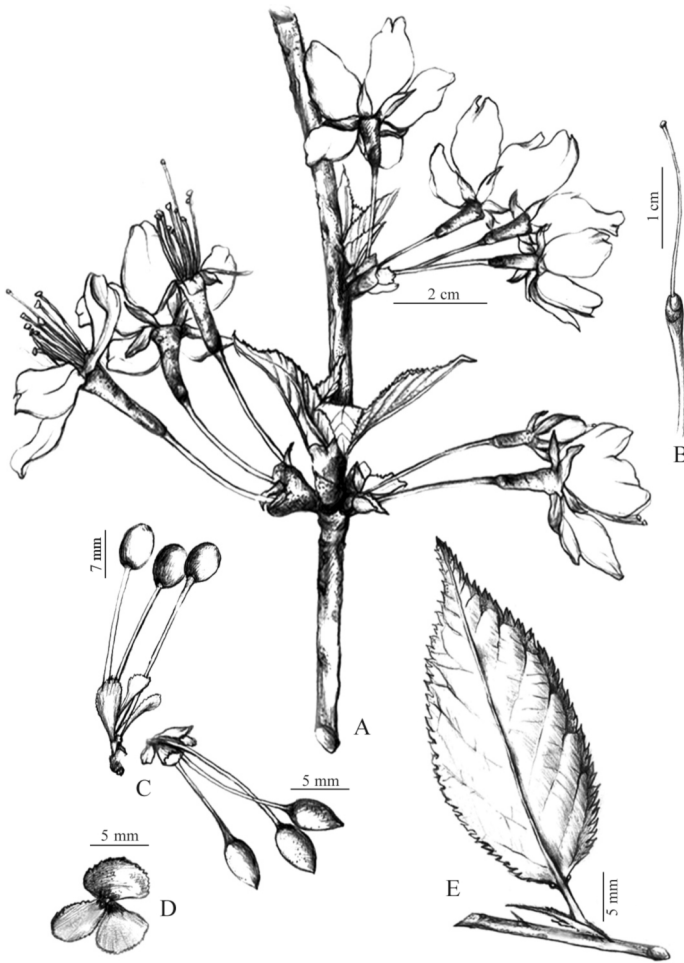


Fig. 1. *Cerasus xueluoensis* (from the holotype, drawn by J. Miao). — **A:** Flowering branch. — **B:** Pistil. — **C:** Fruits and bracts. — **D:** Bracts. — **E:** Branch with a leaf.

beside road, ca. 1420–1430 m a.s.l., *Cheng-Hui Nan* 040302, 040303 (NF); same locality, *Cheng-Hui Nan* 052201, 052202, 052203 (NF). Jiangxi Province, Jiujiang City, Lushan District, Lushan Mt., in alpine shrubbery of Wulaofeng Mt., in sparse *Pinus taiwanensis* forest, ca. 1100–1200 m a.s.l., *Cheng-Hui Nan* 071801, 071802 (NF); Jiangxi Province, Jinggangshan City, Jingguangshan Mt., in alpine shrubbery of Leidashi, 1220 m a.s.l., *Ren-Lin Liu* 00342 (JN); Jiangxi Province, Jinggangshan City, Jingguangshan Mt., in forest in Dabali, 500 m a.s.l., *Ren-Lin Liu* 930158 (JN).

ETYMOLOGY: The specific epithet is derived from the type locality on the Xueluozhai Mt.

Shrubs or small trees, 0.5–3 m tall. Axillary winter buds 3, lateral buds flower buds, central bud a leaf bud. Both sides of young branchlets heterochromatic, lighted side purplish, opposite side yellowish green, pilose or glabrous; old branches yellowish gray, glabrous, barks of some branches peeling and splitting. Winter buds

ovoid, glabrous. Stipules lanceolate and purplish, margin gland-tipped fimbriate. Petiole 5–9 mm, glabrous or sparsely pilose when young, apex without nectaries. Young leaves reddish brown or brown-green, abaxially pilose; leaves elliptic to obovate-elliptic, 3–7 × 1.5–3 cm, abaxially pale green and subglabrous or pilose when young, adaxially green and glabrous, base subrounded to broadly cuneate, tiny disciform apical glands 1–3, margin serrate or biserrate and teeth without or with glands, apex acuminate to caudate; secondary veins 6–8 on each side of midvein. Inflorescences umbellate, 2–4-flowered; involucre bracts brown, obovate-elliptic or spatulate, ca. 5–7 × 3–4 mm, abaxially glabrous, adaxially densely yellowish-brown villous; peduncle un conspicuous; bracts green, obovate, spatulate, fan-shaped or lobate, 5–7 mm, persistent in fruit, margin



Fig. 2. *Cerasus xueluoensis* (from the holotype, photo by C. H. Nan). — **A:** Glabrous inflorescences. — **B:** Sparsely pilose inflorescences. — **C:** Habit. — **D:** Fruit before ripening. — **E:** Axillary buds.

serrate, teeth with a tiny capitate apical gland. Flowers opening nearly at same time as leaves. Pedicel purplish or greenish brown, 0.6–2.5 cm, glabrous or sparsely pilose, apically enlarged when fruiting. Hypanthium narrow tubular, 6–10 × 1.5–2.5 mm, purplish or reddish-brown, outside glabrous or sparsely pilose, apically enlarged. Sepals ovate-triangular, 3–5 mm, margin entire, apex acute to acuminate, erect when flowering. Petals white, obovate, 1–1.5 × 0.6–0.8 cm, apically 2-lobed, base cuneate. Stamens 30–40, 0.7–1.5 cm, glabrous. Style glabrous, ca. 2 cm longer than stamens; stigma dilated. Drupe black, purple before ripening, oval and glabrous, ca. 8–9 × 6–7 mm, mesocarp bitter; core flat oval, ca. 7–8 × 4–5 mm, pale yellowish brown. Flowering March–April, fruiting May–June.

DISTRIBUTION AND HABITAT: *Cerasus xueluoensis* is known only from the Xueluozhai Mt. (Xuanen County, Hubei Province), the Lushan Mt. (Jiujiang County, Jiangxi Province) and the Jinggangshan Mt. (Jinggangshan County). It grows in alpine shrubbery and in sparse pine forests, at altitudes between 1100 and 1500 m a.s.l.

On the Xueluozhai Mt., *C. xueluoensis* is found in alpine shrubbery beside a road, at 1420–1430 m a.s.l. There are only few small populations of about 10 individuals each, accompanied by *Lindera reflexa*, *Hydrangea strigosa*, *Broussonetia kazinoki*, *Spiraea henryi*, *Loropetalum chinense*, *Rosa multiflora* var. *cathayensis*, *Rubus coreanus*, *Akebia quinata*, *A. trifoliata*, *Miscanthus sinensis*, *Parathelypteris glanduligera*, *Pteridium aquilinum* var. *latiusculum*, *Houttuynia cordata*, *Lysimachia clethroides*, *Gonostegia hirta*, and *Ligularia japonica*.

On the Lushan Mt. and the Jinggangshan Mt., more than 50 individuals are found at 1100–1500 m a.s.l., in alpine shrubbery and in sparse *Pinus taiwanensis* forests. They are growing with *Pyrus calleryana*, *Symplocos paniculata*, *Rhododendron simsii*, *Lindera obtusiloba*, *L. reflexa*, *Spiraea japonica*, *Photinia parvifolia*, *Viburnum sympodiale*, *Rubus trianthus*, *Smilax china*, *Weigela japonica* var. *sinica*, and *Eupatorium lindleyanum*.

Cerasus xueluoensis has three axillary winter buds, as in the other species of subgen. *Micro-*

Table 1. Main morphological differences between *C. xueluoensis* and two closely similar species.

Character	<i>C. xueluoensis</i>	<i>C. tomentosa</i>	<i>C. tianshanica</i>
Leaf	blade elliptic to obovate-elliptic, 3–7 × 1.5–3 cm, abaxially subglabrous or pilose when young, adaxially glabrous	blade ovate-elliptic to obovate-elliptic, 2–7 × 1–3.5 cm, abaxially densely gray tomentose but glabrescent, adaxially pilose	blade obovate-ob lanceolate, 0.8–1.6 × 0.3–0.7 cm, glabrous
Inflorescence	2–4-flowered	1–2-flowered	1-flowered
Pedice	6–25 mm	almost absent to 2.5 mm	ca. 1.5 mm
Hypanthium	narrow tubular, 6–10 × 1.5–2.5 mm, outside glabrous or sparsely pilose, apically enlarged	tubular to cup-shaped, 4–5 mm, outside pubescent or glabrous	tubular, 2–8 × ca. 2.5 mm, outside glabrous
Stamen	30–40	20–25	ca. 22
Pistil	glabrous	ovary hairy or only hairy at base or apex	basally sparsely villous
Fruit	black	red	purplish red

cerasus. It resembles *C. tomentosa* and *C. tianshanica* by having the three axillary winter buds, a tubular calyx tube and erect sepals, but can be distinguished by several characters (Table 1). The following key should be useful when identifying species of subgen. *Microcerasus* in China.

Key to species of *Cerasus* subgen. *Microcerasus* in China

- 1. Hypanthium longer than wide; sepals erect or spreading 2
- 1. Hypanthium as long as wide; sepals reflexed 4
- 2. Inflorescences umbellate, 2–4-flowered; pedicel 6–25 mm; stamens 30–40; pistil glabrous; fruit black *C. xueluoensis*
- 2. Flowers solitary or 2 in a fascicle; pedicel to 2.5 mm or flowers sessile; stamens 20–25; pistil villous; fruit red or purplish red 3
- 3. Leaf blade ovate-elliptic to obovate-elliptic, 2–7 cm, adaxially densely tomentose *C. tomentosa*
- 3. Leaf blade obovate-ob lanceolate, 0.8–1.6 cm, glabrous *C. tianshanica*
- 4. Leaf blade broadest below midleaf, base rounded *C. japonica*
- 4. Leaf blade broadest at about or above midleaf (sometimes below in *C. pogonostyla* var. *obovata* and *C. glandulosa*), base cuneate or broadly cuneate 5
- 5. Leaf blade abaxially pilose hirsute to pilose along veins 6
- 5. Leaf blade abaxially glabrous, sparsely pubescent, or with tufted hairs in vein axils 7
- 6. Leaf blade abaxially pilose along veins or sometimes between veins; style basally pilose *C. pogonostyla*

- 6. Leaf blade abaxially densely brown hirsute; style glabrous *C. dictyoneura*
- 7. Leaf blade with 6–8 secondary veins on each side of midvein; hypanthium outside pilose; style slightly shorter than stamens; drupe 1.5–1.8 cm in diam. *C. humilis*
- 7. Leaf blade with 4 or 5 secondary veins on each side of midvein; hypanthium outside glabrous; style slightly longer than stamens; drupe 1–1.3 cm in diam. *C. glandulosa*

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