

阳西静容卫矛(卫矛科)——华南一新变种

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摘要: 报道了中国广东省阳西县沟谷雨林内 1 新变种——阳西静容卫矛(*Euonymus chengii* var. *yangxiensis* Y. S. Ye & L. F. Wu), 并提供简要描述和照片。阳西静容卫矛隶属于卫矛科(Celastraceae)浅裂卫矛组(*Euonymus*), 蒴果顶端浅裂, 与原变种静容卫矛(*E. chengii* J. S. Ma)和中华卫矛(*E. nitidus* Benth.)相似, 主要区别是该变种叶缘顶部 2/3 以上具锯齿, 侧脉明显, 花少且大, 蒴果大, 萼片伸展。

关键词: 卫矛科; 阳西静容卫矛; 新变种; 广东

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Euonymus chengii var. *yangxiensis* (Celastraceae) —— A New Variety from South China

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Abstract: *Euonymus chengii* J. S. Ma var. *yangxiensis* Y. S. Ye & L. F. Wu (Celastraceae), var. nov., a new variety with larger leaves characterized by crenulate margins above middle, venation distinct on both surfaces and bigger capsules is described and illustrated. It is restricted to the most typical tropical ravine rainforest in Yangxi City, Guangdong Province in South China. It belongs to sect. *Euonymus*, a section whose capsules with emarginated apex, and resembles *E. chengii* J. S. Ma and *E. nitidus* Benth.

Key words: Celastraceae; *Euonymus yangxiensis*; New variety; Guangdong

Celastraceae, a family mainly in the tropics and subtropics, some in temperate regions, contains ca. 97 genera and 1194 species. Of which, 14 genera and 192 species are in China^[1]. *Euonymus* L., a big genus in Celastraceae, comprises nearly 130 species^[1], mostly occurring in subtropics and warm areas. In China, *Euonymus* contains 90 species belong to five sections^[1]. Many species in this genus have economic values both in ornaments and medicines.

During an investigation in the field of Yangxi City, a peculiar *Euonymus* specimen was collected

in a typical tropical ravine rainforest of Guangdong Province. The density of this *Euonymus* species in rainforest was very low. In total, about 10 individuals have been found in the survived valley rainforest, while the surrounding forests have been seriously damaged. The *Euonymus* species occurs understory, associated with *Fagraea ceilanica* Thunb., *Erythroxylum sinense* Y. C. Wu, *Psychotria asiatica* L., *Casearia membranacea* Hance, *Ardisia villosa* Roxb., trees mainly including *Acacia lebbbeck* (L.) Willd, *Acmena acuminatissima* (Bl.) Merr. et Perry, *Ficus hispida*

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L. f., *Diospyros philippensis* (Desr.) Gurke, *Vitex quinata* (Lour.) Wall., pteridophytes and lianas.

The specimen was examined in the Herbarium of South China Botanical Garden of Chinese Academy of Sciences (IBSC) and was concluded as a new variety of *E. chengii* J. S. Ma in *Euonymus* sect. *Euonymus*, a section with apex emarginated capsules, includes 37 species and of which 19 are endemic to China^[1]. For *E. chengii*, we once found it in E'huangzhang Nature Reserve, Guangdong Province, mainly in hillside or valley forest. The new variety is somewhat resembling

to *Euonymus nitidus* Benth.

Herbarium materials of *Euonymus chengii* J. S. Ma var. *yangxiensis* Y. S. Ye & L. F. Wu, *E. chengii* and *E. nitidus* were examined in the herbaria of IBSC and PE. Field surveys were conducted in Yangxi City of Guangdong Province where *E. chengii* var. *yangxiensis* grown. The holotypes of *E. chengii* var. *yangxiensis* (Fig. 1) and *E. chengii* (Fig. 2) were used for comparison. Texture and morphologies of leaves, fruits, flowers and seeds of representative samples for three species (Table 1) were also compared.

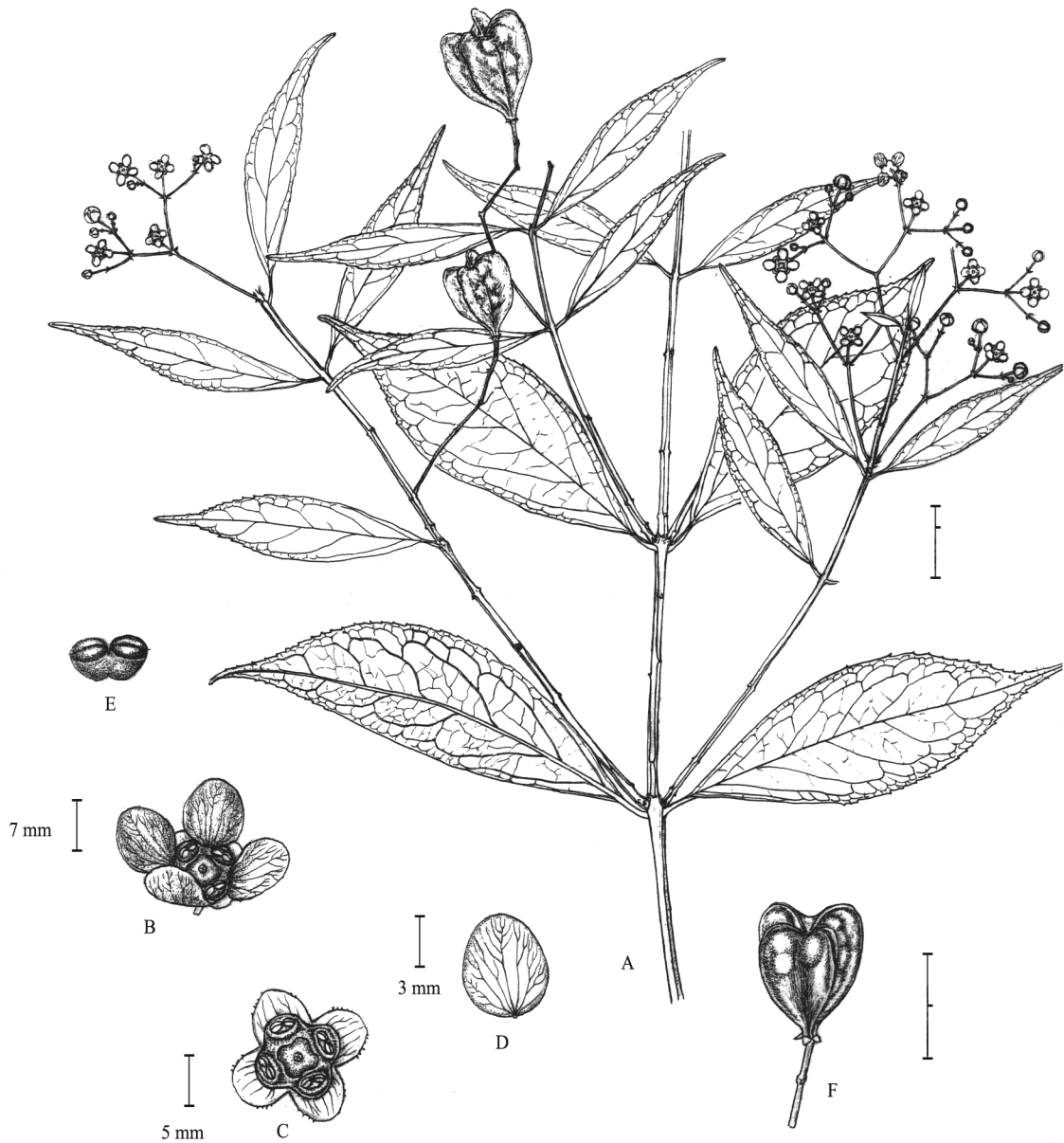


Fig. 1 *Euonymus chengii* var. *yangxiensis* Y. S. Ye & L. F. Wu. A. Flowering and fruiting branch; B. Flower; C. Flower without sepals; D. Petal; E. Stamen; F. Capsule. (Drawn from holotype)



Fig. 2 Habitat of *Euonymus chengii* var. *yangxiensis*.



Fig. 3 Type of *Euonymus chengii*. A. Type of *E. chengii*; B. Leaves; C. Capsules.

Table 1 Diagnostic characters of *Euonymus chengii* var. *yangxiensis*, *E. chengii* var. *chengii* and *E. nitidus*

Character	<i>E. chengii</i> var. <i>yangxiensis</i>	<i>E. chengii</i> var. <i>chengii</i>	<i>E. nitidus</i>
Height (m)	1–2	3	2–10
Leaves			
Texture	Papery	Papery	Leathery to thickly papery
Shape	Elliptic to ovate-elliptic	Elliptic	Elliptic or oblong-elliptic
Margin	Crenulate above middle	Entire	Subentire
Veins	Evident	Obscure	Obscure
Length (cm)	9–11.5	5–9	6.5–10
Width (cm)	3.5–4.5	2.5–3.5	3–4
Petiole length (mm)	6–10	Sessile to sub-sessile	5–8
Flower			
Number	Some	Some	Many
Diameter (mm)	10–14	10–14	5–6
Fruit			
Capsule length (cm)	2.7– 3.3	ca. 2	1.5–1.7
Capsule diameter (cm)	ca. 2.8	1.5	1.4–1.6
Persistent calyx-lobes	Spreading, margin reflexed	Stick to capsule	Stick to capsule
Seeds per locule	1–3	2	2

Euonymus chengii J. S. Ma var. *yangxiensis* Y. S. Ye & L. F. Wu, var. nov. Fig. 1.

Shrubs to 2 m high; young branches distinctly 4-angled, twigs slender. Leave blades chartaceous, elliptic or ovate-elliptic, 9–11.5 cm × 3.5–4.5 cm, apex acute to caudate-acuminate, base cuneate, margin crenulate above middle, venation distinct on both surfaces, nerves 3–5 per side; petiole 6–10 mm long. Cymes supra-axillary, many-flowered, peduncle slender, ca. 2 cm long. Bracts lanceolate, ca. 1.5 mm long, caducous. Flowers light green, 4-merous, pedicels ca. 3 mm long. Sepals nearly round, margin entire, nearly 2 mm long and 2 mm broad. Petals ovate or nearly round, 3–3.2 mm × 2.8–3 mm broad. Disc flat and round, stamens inserted on the outer margin of the disc, no filament, pistill lied on the centre of the disc. Capsule obovoid, light yellow, 2.7–3.3 cm long, ca. 2.8 cm in diam., 4-angled, apex emarginated, opening by 4 valves at maturity. Seeds 1–3 in each locule, globose or subglobose, orange, covered with orange aril. Flowering in June; Fruiting more than one year (so fruits can be seen with second-

year flowers at the same individual).

China. Guangdong(广东): Yangxi(阳西), alt. 380 m, 2004–06–08, Hua-gu Ye(叶华谷) 10695 (holotype, IBSC!).

Euonymus chengii var. *yangxiensis* is similar to *E. chengii* var. *chengii*, but differs from it by the larger leaves with crenulate margins above middle, venation distinct on both surfaces, and by the bigger capsule to 2.7–3.3 cm long and ca. 2.8 cm in diameter with spreading and margin reflexed persistent calyx-lobes. It is also similar to *E. nitidus*, but differs from it by the papery leaves with venation distinct on both surfaces, flowers fewer but larger, and by the bigger capsule in diameter with spreading and margin reflexed persistent calyx-lobes. The morphological differences between three species are presented in Table 1 and Fig. 2.

Reference

[1] Ma J S, Funston M. *Euonymus* [M]// Wu Z Y, Raven P H. Flora of China Vol. 11. Beijing: Science Press & St. Louis: Missouri Botanical Garden Press, 2008: 439–463.