

Capparis gialaiensis (Capparaceae), a new species from Vietnam

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Capparis gialaiensis Sy, a new species of Capparaceae from Vietnam is described and illustrated. It is morphologically closest to *C. longistipitata*, but differs in length of thorns, filaments and gynophore, shape of the leaf and shape and size of petals. Color photographs, a table comparing the new species with closely allied species and a key are provided to facilitate species identification.

Capparis is the type genus of Capparaceae and contains approximately 600 species (Zhang & Tucker 2008), distributed in tropical and subtropical regions worldwide and some in temperate regions. So far, 35 species, 3 subspecies and 2 varieties have been recorded in Vietnam (Pham 1999, Ban & Dorofeev 2003, Zhang & Tucker 2008). During a recent survey in Gia Lai Province, a peculiar species of *Capparis* was collected. It was growing on the basaltic soils of the small hillocks in open, secondary forest areas of Son Lang Commune. After checking the type specimens and comparison with morpho-

logically similar taxa (Gagnepain 1908, 1943, Jacobs 1960, 1965, Chayamarit 1991, Pham 1999, Hu 2007, Zhang & Tucker 2008; see also Appendix), we concluded that the plant in Gia Lai Province represents an undescribed species.

***Capparis gialaiensis* Sy, sp. nova** (Figs. 1–3)

TYPE: Vietnam. Gia Lai Province, K'Bang district, Son Lang commune, 14°20'44.8"N, 108°34'46.7"E, alt. 810 m a.s.l., 23 May 2013, T.T. Bach et al. VK 5402 (holotype HN; isotype KRIB!). — PARATYPES: Vietnam. Gia Lai Prov-

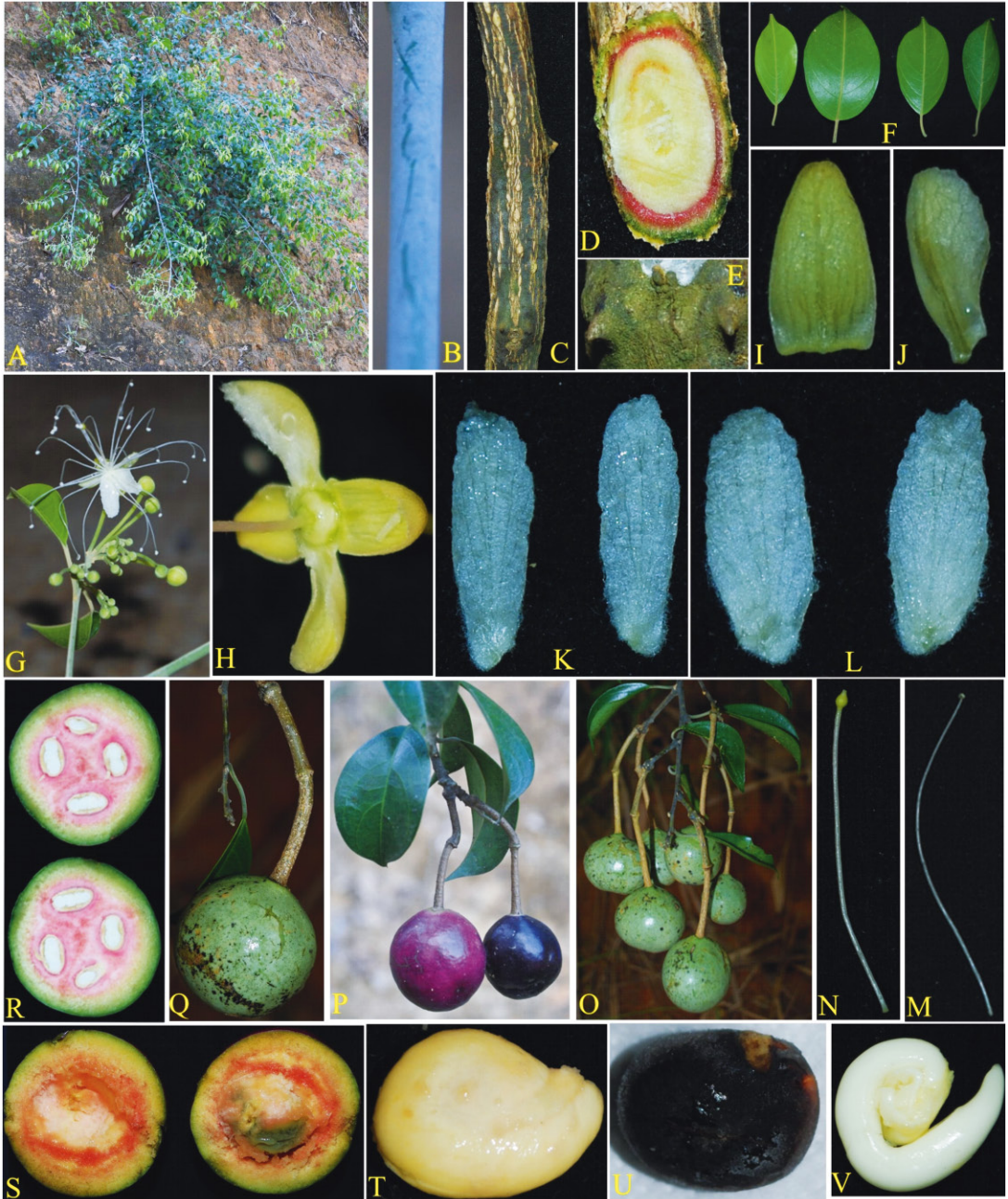


Fig. 1. *Capparis gialaiensis*. — **A:** Habit. — **B:** Young stem. — **C:** Mature stem. — **D:** Cross section of stem. — **E:** Spines. — **F:** Leaf. — **G:** Inflorescence. — **H:** Sepals. — **I:** Outer sepals. — **J:** Inner sepals. — **K and L:** Petals. — **M:** Stamens. — **N:** Gynophore and ovary. — **O:** Bunch of young fruit. — **P:** Bunch of mature fruit. — **Q:** Single fruit. — **R and S:** Cross Section of fruit. — **T:** Young seed. — **U:** Mature seed. — **V:** Embryo.

ince, K'Bang district, Son Lang commune, 14°20'44.8"N, 108°34'46.7"E, alt. 810 m, 23 May 2013, *T.T. Bach et al. Thuong 60* (HN!); Gia Lai Province, K'Bang district, Son Lang commune, 14°21'02.1"N, 108°33'00.9"E, alt. 907 m, 19 November 2013 *T.T. Bach et al., Quang 68* (HN!).

ETYMOLOGY: The species is named after the type locality, Gia Lai province in Vietnam.

Scandent shrubs, up to 10 m high. Innovations hairy. Spines 0.5–1 mm long, recurved

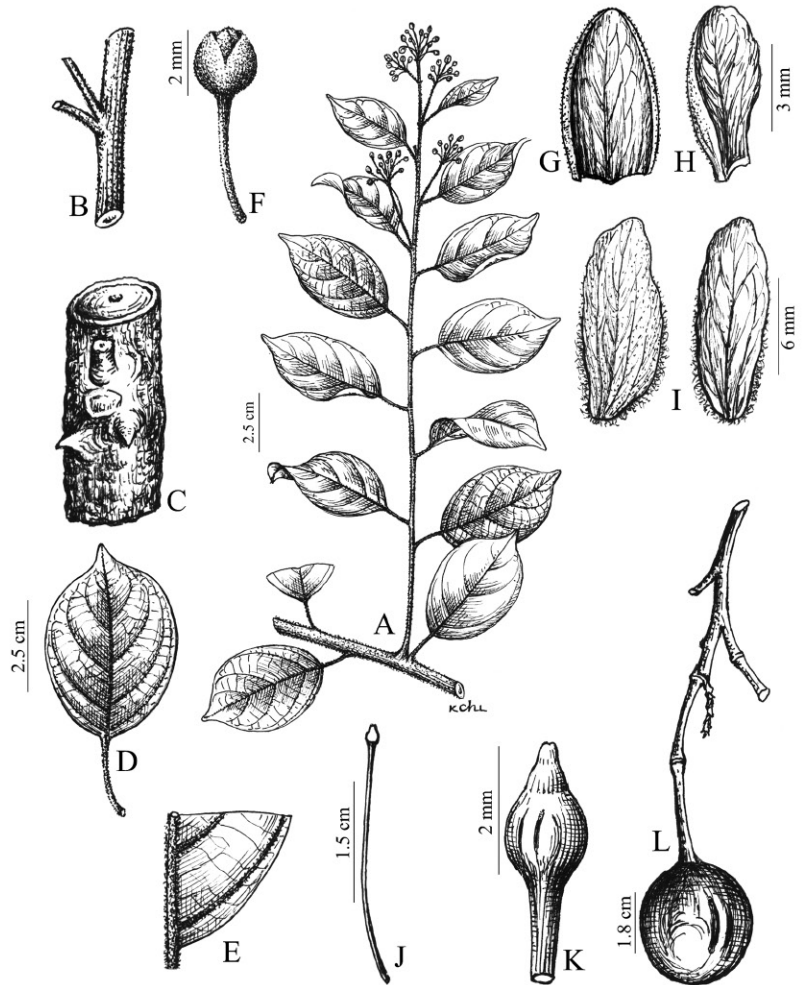


Fig. 2. *Capparis gialaiensis* (from the holotype). — **A:** Flowering twig. — **B:** Young twig with hairs. — **C:** Branch with spines. — **D:** Leaf. — **E:** Basal part of the leaf with hairs on the mid-vein and secondary veins. — **F:** Bud flower. — **G:** Outer sepals. — **H:** Inner sepals of inner. — **I:** Petals. — **J:** Pistil with gynophore and ovary. — **K:** Ovary. — **L:** Branch with fruit.

downwards. Petiole 1.2–1.5 cm long, hairy; leaf blade elliptic to ovate, 5–5.5 × 3–3.5 cm, abaxially hairy on midvein and secondary veins, adaxially glabrous, young ones yellowish green, dark green when older; midvein abaxially raised, adaxially flat; secondary veins 3–5 on each side of midvein; base round or acute; apex acuminate, ca. 0.5 cm long. Inflorescence corymbs, axillary or terminal, 9–11 flowered; peduncles 2–2.5 cm long, hairy; pedicels 1.5–1.6 cm long, hairy. Flower buds globose, ca. 2 mm. Sepals 6–6.5 × 3–3.5 mm long, outside pubescent, inside glabrous; sepals of outer whorl ovate; sepals of inner whorl spatulate. Petals white, oblong, 12–13 × 4–5 mm, hairy on surface and margin. Stamens 21–22; filaments 3.7–4 cm long, glabrous, white; anthers ca. 1 mm long. Gynophore

3–3.5 cm long, glabrous. Ovary ellipsoid, ca. 2 × 1 mm, yellowish green, glabrous. Fruits globose, 3.5–3.8 cm in diam, purple to dark violet when mature, surface glabrous. Seed 1–4 per fruit, 1.5–1.7 × 1.2–1.3 cm, black. Flowering in May–July, fruiting in May–November.

Capparis gialaiensis grew on the basaltic soils of the small hillocks in the open, secondary forest areas of Son Lang Commune in association with *Betula alnoides*, *Dicranopteris splendida*, *Mimosa pudica*, *Saccharum spontaneum*, *Stixis ovata* subsp. *fasciculata*, *Melastoma* sp. and several ferns, at 810–910 m a.s.l. We observed only 15–20 individuals. It appears that the population could be easily affected by human activities.

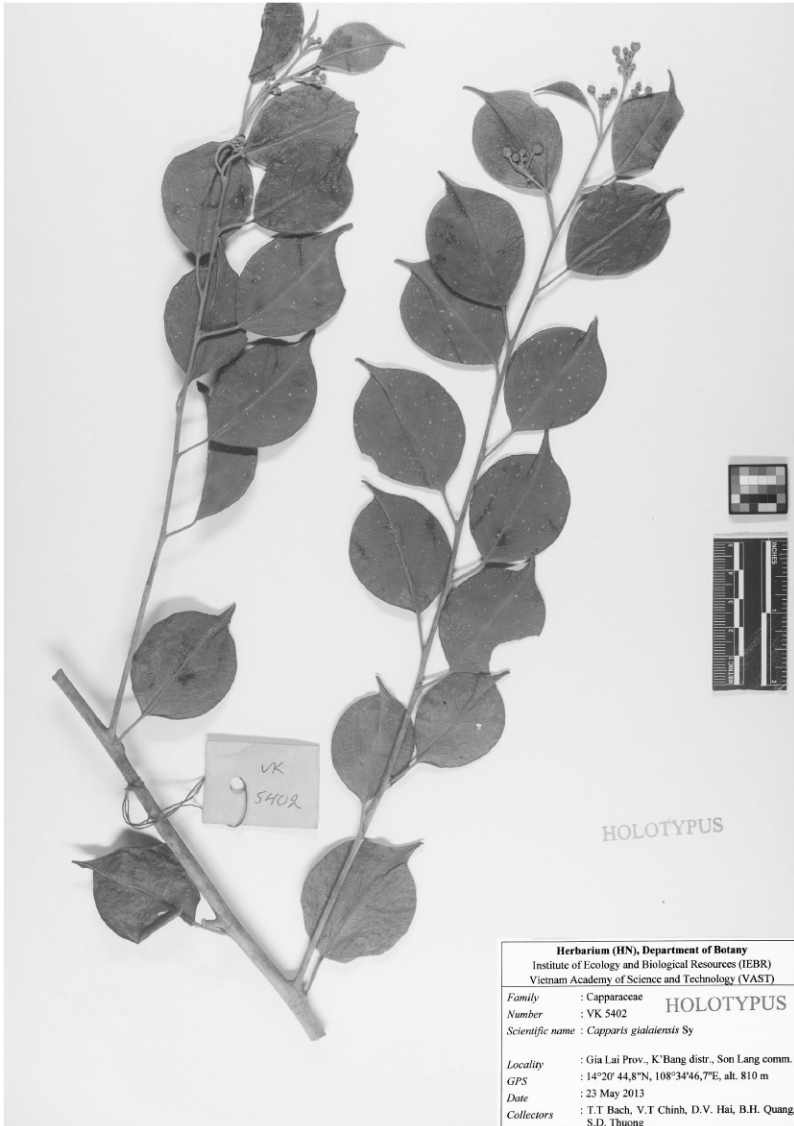


Fig. 3. Holotype of *Capparis gialaiensis*.

Key to *Capparis gialaiensis* and the morphologically allied species in Vietnam

- 1. Gynophore 0.6–0.8(–1.2) cm long *C. cantoniensis*
- 1. Gynophore at least 2 cm long 2
- 2. Pedicels 2.5–3.5 cm long; sepals glabrous; petals obovate *C. lanceolaris*
- 2. Pedicels up to 1.5 cm long; sepals hairy; petals oblong or ovate 3
- 3. Thorns 3–4 mm long; leaf blade oblong to slightly obovate; petals ovate, 4–6 mm long; filaments 0.7–2 cm long *C. longistipitata*
- 3. Thorns 0.5–1 mm long; leaf blade elliptic to ovate; petals oblong, 12–13 mm long; filaments 3.7–4 cm long *C. gialaiensis*

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Appendix. Morphological comparison of *Capparis gialaiensis* with allied *Capparis* species.

Characters	<i>C. gialaiensis</i>	<i>C. longistipitata</i>	<i>C. lanceolaris</i>	<i>C. cantoniensis</i>
Thorn	0.5–1 mm long, recurved	3–4 mm long, recurved or absent	upto 7 mm long, recurved	2–5 mm long, flat or recurved
Petiole	1.2–1.5 cm long, hairy	1 cm long, hairy	7–11 mm long	4–6(–10) mm long, hairy
Leaf blade	elliptic to ovate; abaxially hairy, mostly on the midvein and secondary veins; secondary veins 3–5 pairs	oblong to slightly obovate; abaxially hairy, only on the midvein; secondary veins 5–7 pairs	oblong; abaxially yellowish brown pubescent; secondary veins 6–10 pairs	oblong, oblong-lanceolate, sometimes ovate; midvein slightly pubescent; secondary veins 7–10(–12) pairs
Pedicele	1.5–1.6 cm long	0.8–1.5 cm long	2.5–3.5 cm long	0.7–1.2 mm long
Sepals	6–6.5 × 3–3.5 mm, outside pubescent, inside glabrous; outer sepals ovate; inner sepals spatulate	3–5.5 × 2.5–3 mm, ovate; outer sepals densely puberulous; inner sepals hairy only in the centre	(5–)6–7 × ca. 5 mm, ovate, glabrous	4–5 × ca. 3 mm; outer sepals navicular, outside pubescent, inside glabrous; inner sepals elliptic to obovate, margin with white cilia
Petals	oblong, 12–13 × 4–5 mm, hairy on both surfaces and margin	ovate, 4–6 × 2 mm, glabrous or pubescent	obovate, 8–11 × 4–6 mm, puberulous towards the base	obovate to oblong, 4–6 × 1.5–2.5 mm, pubescent
Stamens	21–22; filaments 3.7–4 cm long	18–30; filaments 0.7–2 cm long	20(–40); filaments 2–3 cm long	20–45; filaments, 0.8–1.5 cm
Gynophore	3–3.5 cm long	2–3 cm long	2–3(–4.5) cm long	0.6–0.8(–1.2) cm long
Ovary	ellipsoid, ca. 2 mm long	subovoid, ca. 1.5 mm long	ellipsoid, 1–2 mm long	nearly ellipsoid, ca. 1.5 mm long
Fruit	globose, 3.5–3.8 cm in diam.	globose, 3–3.5 cm in diam.	subglobose to globose, 1–1.2 × 1–1.2 cm	spheroid to ellipsoid, 1–1.5 cm in diam.
Seeds	1–4 per fruit, oblong, 1.5–1.7 × 1.2–1.3 cm	3 per fruit, ellipsoid, 1.2–1.5 × 0.7–0.8 cm	3 or more per fruit, globose to ellipsoid, 0.8–1.2 × 0.5–1.2 cm	1 to several per fruit, globose or nearly ellipsoid, 0.3–0.7 × 0.25 cm