

Hypericum sect. *Ascyreia* (Clusiaceae): new species and subspecies from China

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Abstract Two new species, both related to *H. hookerianum* Wight & Arn., are described from northern Yunnan, *H. fosteri* N. Robson and *H. wardianum* N. Robson. The former is apparently endemic, having been found in only one locality, whereas the latter also occurs in north-eastern Myanmar. Both differ in particular from *H. hookerianum* in that the capsule is elongate, not ovate-subglobose and the sepals are not ribbed. In addition, *H. bellum* ssp. *latisepalum* is raised to specific rank as *H. latisepalum* (N. Robson) N. Robson and the variable *H. lagarocladum* is divided into two subspecies, one broad-leaved with a spreading habit (ssp. *lagarocladum*) and the other narrow-leaved and more erect (ssp. *angustifolium* N. Robson).

Key words *Hypericum* L., Clusiaceae, section *Ascyreia*, new taxa, Yunnan, China.

In connection with the revision of Clusiaceae – Hypericoideae for *Flora of China*, it is necessary to publish four nomenclature innovations in *Hypericum* L. sect. *Ascyreia*. Of these, two are new species from Yunnan and two result from changes of opinion since publication of the author's monographic treatment of that section (Robson, 1985).

1. *Hypericum fosteri* N. Robson, sp. nov. Fig. 1

楚雄金丝桃

H. hookeriano affine, sed sepalis inter venas haud prominescentibus, in alabastro patulis in statu fructificanti recurvatis, capsula anguste ovoideo-cylindrica, differt.

Frutex ad circ. 1.5 m altus ramis erectis vel patulis. Caules primo 4-lineati mox teretes internodiis 2–4 cm longis foliis brevioribus. Folia petiolata petiolo 1–2 mm longo; lamina anguste ovata vel lanceolata, 3.5–5 × 1.3–2.2 cm, apice obtusa vel rotundata basi rotundata, subtus pallida, glandulis laminaribus breve striiformibus vel punctiformibus, glandulis ventralibus densis, nervis lateralibus principalibus 4(–5)-jugis, ut videtur sine venatione reticulata. Inflorescentia 1–2-floris a nodo apicali orta, bracteis linearibus deciduis, pedicellis 5–7 mm longis. Flores circ. 4–4.5 cm in diametro, plus minusve profunde cyathiformes. Sepala patula, in statu fructifero recurvata, subaequalia, oblonga vel elliptico-oblonga, 10–11 × 4.5–5 mm, apice late obtusa vel apiculato-obtusa, margine integra, glandulis laminaribus linearibus, ad apicem striiformibus, haud impressis. Petala aurea, 2–2.5 × 1.5–2 cm, sepalis 2–2.5plo longiora, late obovata, margine integra eglandularia, apiculo rotundato. Fasciculi staminorum quoque circ. 75 staminibus instructi, staminibus longissimis circ. 8 mm longis, petalis 0.35–0.4plo longioribus. Ovarium anguste ovoideum, circ. 8 × 5 mm, stylis circ. 4–5 mm longis, ovario 0.5–0.65plo longioribus, liberis patulo-retrocurvis. Capsula anguste ovoideo-cylindrica, 1.8–2.3 cm × 10–12 mm. Semina porphyrea, 0.8–1 mm longa, vix carinata, testa lineari-reticulata. Fl. Mai–Jul. Fr. Aug.

Shrub, to ca. 1.5 m tall, branches erect to spreading. Stems 4-lined when young, soon terete; internodes 2–4 cm, shorter than leaves. Leaves with petiole 1–2 mm; blade narrowly

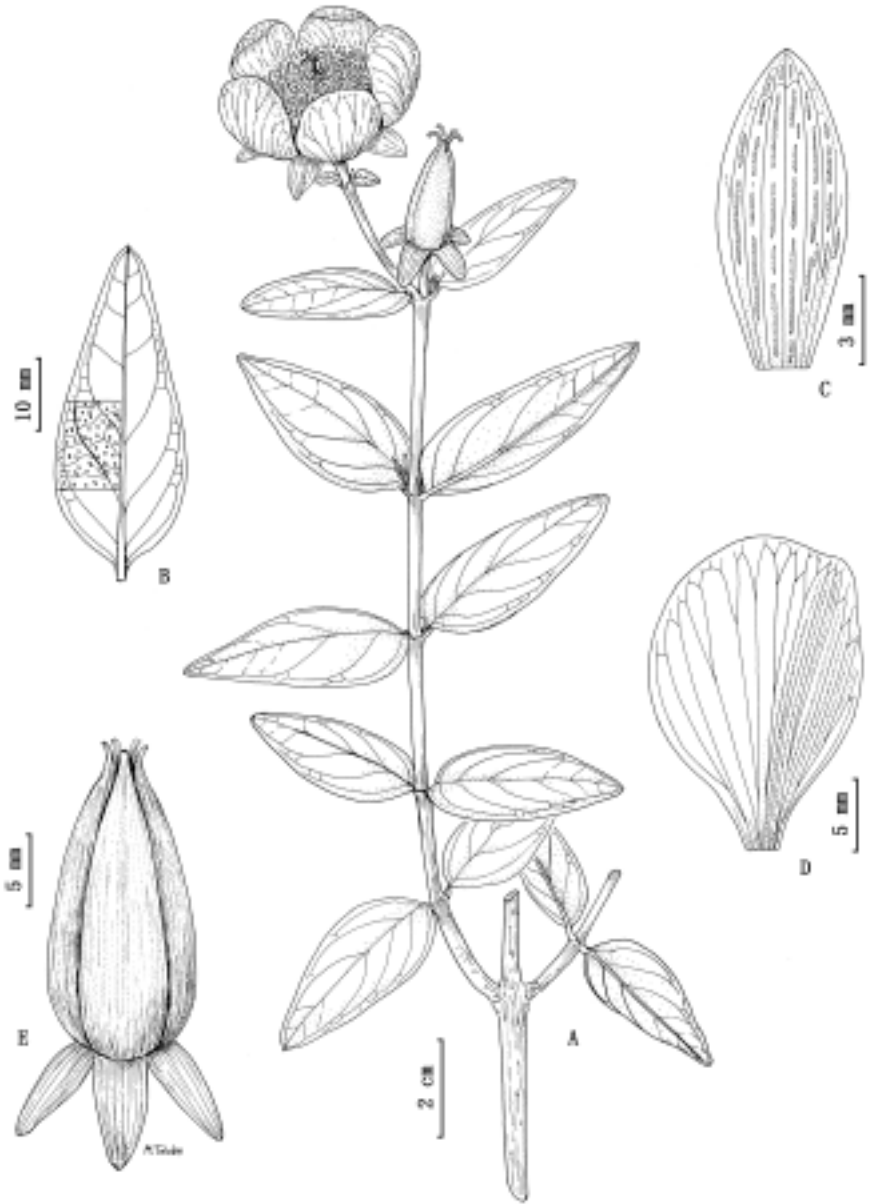


Fig. 1. *Hypericum fosteri* N. Robson. A, habit with flower and immature fruit; B, leaf; C, sepal; D, petal; E, mature fruit.

ovate to lanceolate, $3.5-5 \times 1.3-2.2$ cm, abaxially paler; laminar glands short streaks to dots; abaxial glands dense; base rounded, apex obtuse to rounded; main lateral veins 4(-5)-paired, without visible tertiary reticulation. Inflorescence 1-2-flowered, from apical node; bracts linear, deciduous. Pedicels 5-7 mm. Flowers ca. 4-4.5 cm in diam., \pm deeply cupped; buds not noted. Sepals spreading, recurved in fruit, oblong to elliptic-oblong,

subequal, 10-11 × 4.5-5 mm; laminar glands lines becoming streaks near apex, not becoming impressed (sepals not ribbed), margin entire, apex broadly obtuse or apiculate-obtuse. Petals golden yellow, broadly obovate, 2-2.5 × 1.5-2 cm, 2-2.5 × as long as sepals; margin entire, eglandular; apiculus rounded. Stamen fascicles each with ca. 75 stamens, longest ca. 8 mm, 0.35-0.4 × as long as petals. Ovary narrowly ovoid, ca. 8 × 5 mm; styles ca. 4-5 mm, 0.5-0.65 × as long as ovary, free, spreading-outcurved. Capsule narrowly ovoid-cylindric, 1.8-2.3 cm × 10-12 mm. Seeds reddish-brown, 0.8-1 mm, scarcely carinate; testa linear-reticulate. Fl. May-Jul. Fr. Aug.

China. Yunnan: Mt. Zixishan, above town of Chuxiong, midway between Kunming and Dali, in understorey on cut-over bank with *Camellia forrestii* (Diels) Cohen Stuart and *Michelia yunnanensis* Franch. ex Finet & Gagnep., alt. 2400 m, 1994, Foster 941026 (seed).

Cultivated. England. Kent, Sevenoaks, Plaxtol, Ivy Hatch, White House Farm, ex seed Foster 941026, July 2000, Foster s.n. (holotype, BM).

H. fosteri is morphologically intermediate between the north Thailand endemic *H. siamense* N. Robson and *H. hookerianum* Wight & Arn., which is distributed in the Himalaya from central Nepal to northern Myanmar and is disjunct in Meghalaya, Manipur, west and central Myanmar, northern Thailand and southern India. It is nearer *H. siamense* in its spreading, obtuse, unribbed sepals and narrowly ovoid-cylindric capsule and approaches *H. hookerianum* in its narrowly ovate to lanceolate leaves and rather deeply cyathiform flowers. It is known only from Maurice Foster's seed collection and the plants grown from it. Judging from its restricted natural distribution and that of its close relative *H. wardianum* (see below), as well as the distance from its nearest relatives, *H. fosteri* would appear to be a relict endemic of northern Yunnan.

2. *Hypericum wardianum* N. Robson, sp. nov. Fig. 2

漾濞金丝桃

H. fosteri N. Robson affine, sed foliis angustioribus basi cuneatis sine glandulis ventralibus sed glandulis laminaribus elongatoribus, floribus minoribus, sepalis in alabastro erectis in statu frutificanti patulis inter venas haud prominescentibus margine interdum eroso-denticulatis, capsula anguste ellipsoidea vel cylindrico-ellipsoidea, differt.

Frutex ad circ. 1.5 m altus ramis erectis vel patulis. Caules primo 2-4-lineati mox teretes internodiis 2-5 cm foliis brevioribus. Folia petiolata petiolo 1.5-2.5 mm longo; lamina lanceolata, 3.5-7 × (1-)1.4-2.2 cm, apice rotundata vel apiculato-obtusa basi subtus pallidiora, glandulis laminaribus longe striiformibus vel punctiformibus, sine glandulis ventralibus, nervis lateralibus principalibus 3-jugis, interdum venatione reticulata laxa instructa. Inflorescentia 1-4-floris a nodo apicali orta, bracteis linearibus deciduis, pedicellis 5-10 mm longis. Flores 3-3.5 cm in diametro, plus minusve profunde cyathiformes; alabastra subglobosa apice late obtusa vel rotundata. Sepala in alabastro erecta in statu frutificanti erecta vel subpatula, subaequalia, oblonga vel elliptica vel oblanceolato-spathulata, 6-9 × 2-4 mm, apice apiculato-obtusa vel rotundata, margine integra vel subtiliter eroso-denticulata, glandulis laminaribus linearibus vel distaliter punctiformibus. Petala aurea, late obovata, 1.5-2 × 1-1.5 cm, sepalis 2-2.5plo longiora, margine integra eglandularia, apiculo rotundato. Fasciculi staminorum quoque circ. 70 staminibus instructi, staminibus longissimis circ. 8-9 mm longis, petalis circ. dimidio minoribus. Ovarium anguste ellipsoideum, circ. 7 × 4 mm, stylis 4-5 mm longis, ovario 0.8plo longioribus, liberis patulo-retrocurvis. Capsula anguste cylindrico-ellipsoidea, (1.2-)1.5-1.6 cm × 7-10 mm. Semina porphyrea, 0.7-0.9 mm longa, haud vel vix carinata,

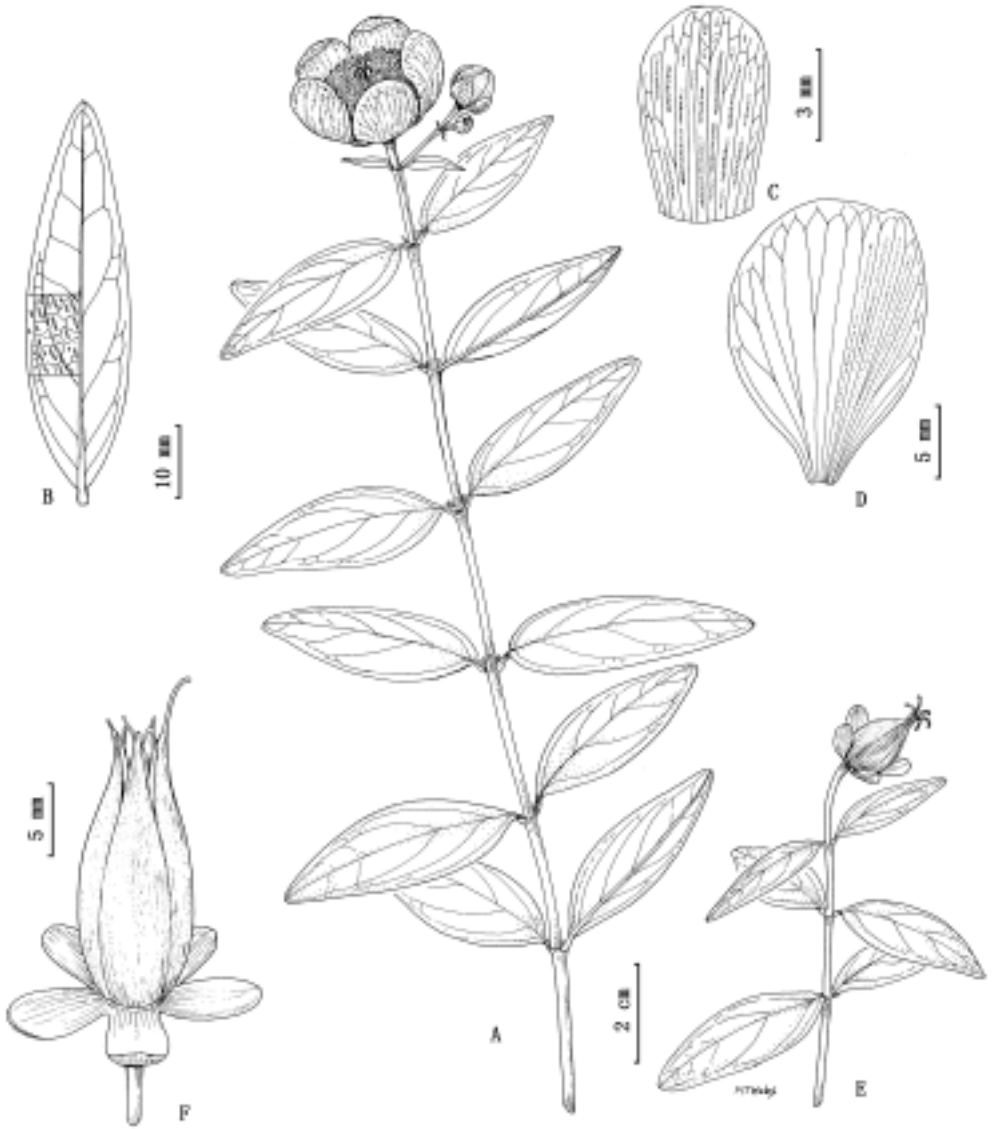


Fig. 2 *Hypericum wardianum* N. Robson. A, habit with flower; B, leaf; C, sepal; D, petal; E, branch with immature fruit; F, mature fruit.

testa lineari-reticulata. Fl. Mai.-?Jul. Fr. Aug.-Oct.

Shrub, to ca. 1.5 m tall, branches erect to spreading. Stems 2-4-lined when young, soon terete; internodes 2-5 cm, shorter than leaves. Leaves with petiole 1.5-2.5 mm; blade lanceolate, $3.5-7 \times (1-)1.4-2.2$ cm, abaxially paler; laminar glands long streaks to dots; abaxial glands absent; base broadly to narrowly cuneate, apex rounded to apiculate-obtuse; main lateral veins 3-paired, without or with lax reticulate venation. Inflorescence 1-4-flowered, from apical node; bracts linear, deciduous. Pedicels 5-10 mm. Flowers

3-3.5 cm in diam., \pm deeply cupped; buds subglobose, apex broadly obtuse to rounded. Sepals erect in bud, erect to spreading in fruit, oblong to elliptic or oblanceolate-spathulate, subequal, 6-9 \times 2-4 mm; laminar glands lines to distally dots, not becoming impressed ("sepals not ribbed"), margin entire or finely eroded-denticulate; apex apiculate-obtuse to rounded. Petals golden yellow, broadly obovate, 1.5-2 \times 1-1.5 cm, 2-2.5 \times as long as sepals; margin entire, eglandular; apiculus rounded. Stamen fascicles each with ca. 70 stamens, longest ca. 8-9 mm, 0.5 \times as long as petals. Ovary narrowly ellipsoid, ca. 7 \times 4 mm; styles 4-5 mm, ca. 0.8 \times as long as ovary, free, spreading-outcurved. Capsule narrowly cylindrical-ellipsoid to \pm broadly ellipsoid, (12-)15-16 \times 7-10 mm. Seeds reddish brown, 0.7-0.9 mm, not or scarcely carinate; testa linear-reticulate. Fl. May-?Jul. Fr. Aug.-Oct.

China. Yunnan: Yangbi, Ziyang, above Yangbi, dry hillside in clearings, alt. 2560 m, 1981-05-10 (bud), Sino-Brit. Exped. Cangshan 0469 (BM; also E, n.v.), W. side of Diancangshan mountain range, vicinity of Dajiuping, broad-leaved evergreen fagaceous forest, alt. 3000 m, 1984-06-30 (fl), 1984 Sino-Amer. Bot. Exped. 631 (BM).

Myanmar. Kachin: The Triangle (North), Tama Bum, cliff faces of steep rocky north gully, alt. 2850 m, 1953-10-18 (fr), Kingdon Ward 21484 (holotype, BM).

Cultivated. England: Sussex, Ardingly, Wakehurst Place, ex seed Kingdon Ward 21484, 30 June 1970 (fl), Schilling s.n. (BM); Surrey, Limpsfield, 48 Granville Road, ex cutting ex Wakehurst Place, 2000-08-13 (fr), Robson s.n. (BM).

Since its introduction in 1953, *H. wardianum* has been grown in several English gardens as *H. hookerianum* or *H. aff. hookerianum*. Like *H. fosteri*, however, it differs from that species in having unribbed sepals and elongate capsules. It differs from *H. fosteri* in having narrower leaves with a cuneate (not rounded) base, no abaxial glands and longer laminar glands; smaller flowers with sepals erect in bud and spreading (not reflexed) in fruit; and ellipsoid or cylindrical-ellipsoid capsule. In some of these characters it approaches *H. hookerianum*, but it is not directly intermediate in morphology between these species. In cultivation the petals are often bright red outside at the base, which may be a result of unfavourable conditions of growth.

3. *Hypericum lagarocladum* N. Robson in Bull. Brit. Mus. (Nat. Hist.) Bot. 12: 247. 1985.

纤枝金丝桃

In the discussion of the variation and affinities of *H. lagarocladum* (Robson, 1985), this species was compared with *H. acmosepalum* N. Robson. Subsequent study, however, has shown that it and the derivative *H. wilsonii* N. Robson form a group related to the *H. beanii* group (*H. beanii* N. Robson, *H. addingtonii* N. Robson, *H. kouytchense* Lévl., *H. pseudohenryi* N. Robson, *H. forrestii* (Chittenden) N. Robson and *H. bellum*). These groups can be distinguished by their capsules—5-sulcate in the *H. lagarocladum* group but not sulcate in the *H. beanii* group.

As was also explained in the above-mentioned discussion, the variation in *H. lagarocladum* is clinal. In the eastern part of its range (Hunan, Guizhou), it is more erect with narrower leaves, sepals and capsules, showing a tendency towards *H. wilsonii*. In the north-west (Sichuan), the habit is spreading and the leaves, sepals and capsules broader. In between, in north-east Yunnan, there are intermediate forms that tend to link the two extremes and prevented me originally from dividing the species. A reconsideration of the variation, however, has led me to the conclusion that it is possible to divide the species into two subspecies, ssp. *lagarocladum* in Sichuan and Yunnan and ssp. *angustifolium* in Guizhou and Hunan. Unfortunately the type of the species (from near Kunming, see below) is somewhat intermediate in morphology. The subspecies can be distinguished as follows:

Leaves broadly elliptic to broadly oblong-ovate, rounded to subretuse; sepals lanceolate to oblong-lanceolate or narrowly ovate; capsule ovoid to ovoid-conic; plant to ca. 0.7(-1) m tall; branches spreading.....ssp. **lagarocladum**

Leaves narrowly elliptic, obtuse to acute; sepals narrowly elliptic to lanceolate; capsule narrowly ovoid-conic; plant to 1.5 m tall; branches arching.....ssp. **angustifolium**

Hypericum lagarocladum ssp. **lagarocladum**

纤枝金丝桃(原亚种)

Plant up to 0.7 (more rarely to 1 m) tall, with branches widely arching to spreading, forming a wide hummock at first, later stems more narrowly arching; internodes shorter to longer than leaves. Stem internodes 1.8-4 cm. Leaves with petiole 1-1.5 mm; lamina 2.5-6 × 0.8-4.5 cm, narrowly elliptic or ovate-elliptic to broadly oblong-ovate or broadly triangular-ovate, obtuse to rounded or subretuse; ventral glands absent. Inflorescence 1-15-flowered. Sepals 6-9 × 4-5 mm, ovate-lanceolate to oblong-lanceolate, acute to obtuse. Capsule 14-17 × 10-12 mm, ovoid to ovoid-conic.

China. Sichuan: Tianquan, He 44213 (SZ); Emei, Chien 6098 (E); Kiating (Loshan), Min R., Faber 426 (K); chiefly near Tatsienlu (Kangding), Pratt 292 (BM, E, K); Yiba Shan, Yaan-Hanyuan road, Lancaster 807 (BM). **Yunnan:** Kunming to Xiaguan, 260 km, Sino-Brit. Exped. Cangshan K149 (BM, E); Tong-tchouan (Dongchuan), Maire 1076/1913 (E); Tsu-Yung, McLaren's Colls. 159F (E); Songming, B. Y. Qiu 51716 (IBSC); prope Yunnanfu (Kunming), Schoch 3 (K); Kunming, B. Y. Qiu 51937 (holotype, KUN!; isotype, SZ!).

Hypericum lagarocladum ssp. **angustifolium** N. Robson, ssp. nov.

狭叶金丝桃

A ssp. *lagaroclado* habitu altiori (ad 1.5 m), ramis arcuatis non vel vix patulis, foliis anguste ellipticis apice obtusis vel acutis, sepalis anguste ellipticis vel lanceolatis, capsula anguste ovoideo-conica, differt.

China. Guizhou: Shiheryung to Lungchang Putting, Teng S. W. 0306 (IBSC); Yinjiang, vicinity of Xiaopingsho, W. side of Fanjing Shan, Sino-Amer. Guizhou Bot. Exped. 1811 (holotype, BM!); Kaili, Cao Z. Y. 1440 (KUN); Qingzhen, Teng S. W. 90367 (IBSC). **Hunan:** Qianyang, Lee C.T. 199 and 541 (both IBSC).

4. Hypericum bellum H. L. Li in J. Arnold Arbor. 25: 308. 1944.

美丽金丝桃

In my monographic account (Robson, 1985) I described two subspecies, ssp. *bellum* and ssp. *latisepalum* N. Robson under the impression that the two subspecies were parts of a single geomorphological trend, ssp. *latisepalum* to the south of the main Himalayan range from Yunnan through Myanmar (Kachin) to Assam, where there were intermediates between it and ssp. *bellum*. The latter subspecies is otherwise confined to the north of the main range in Xizang and in NW Yunnan and SW Sichuan.

Further study has shown, however, that the Assam population belongs to ssp. *latisepalum*, and that the trends in the two taxa do not meet in Yunnan but rather diverge from there. The trend in ssp. *bellum* from plane leaves in Yunnan to undulate leaves in Xizang (for example) is thus seen as a specialisation trend, whereas before it had seemed like a reversion trend. In Yunnan the two taxa remain distinct although their distributions overlap, and there seems to be no reason for not treating them as species. Roy Lancaster, who is familiar with ssp. *latisepalum* in the field, has always regarded it as probably distinct from *H. bellum* (Lancaster, 1989), and I now agree with his opinion.

5. Hypericum latisepalum (N. Robson) N. Robson, stat. nov.

宽萼金丝桃

H. bellum ssp. *latisepalum* N. Robson in Bull. Brit. Mus. Nat. Hist. (Bot.) 12: 274 (1985). Type: China. Yunnan: Tali (Dali), top of YoYo Mt., viii. 1932?, McLaren's Colls. 214C (holotype, BM!; isotype, E!).

The following table shows the main characters in which *H. latisepalum* and *H. bellum* differ. The most significant ones are asterisked:

Table 1 Main characters in which *Hypericum latisepalum* and *H. bellum* differ

Character	<i>H. latisepalum</i>	<i>H. bellum</i>
Height	1-1.5 m	0.35-1.35 m
*Stem	4-lined, slightly ancipitous	2(4)-lined, terete
Petiole	1.5-3 mm	0.5-2 mm
Leaf apex	obtuse to rounded	rounded-apiculate to retuse
Leaf margin	plane	plane to usually undulate
Leaf ventral glands	absent	absent or usually \pm sparse
Inflorescence	1-8(-13)-flowered	1-5(-7)-flowered
*Flower diameter	4-6 cm	2.4-4 cm
*Sepal size	8-13 \times (5-)6-8 mm	3-9 \times 2.5-6 mm
*Sepal shape	broadly ovate to broadly elliptic	narrowly elliptic to narrowly oblong or obovate
*Stamens per fascicle	25-65	16-26
Stamen length: petal length	(0.5-)0.6-0.7	0.35-0.4(-0.6)
Ovary	subglobose to broadly ovoid	broadly to narrowly ovoid
*Style length	6-7 mm	3-5 mm
Capsule	broadly ovoid	broadly to usually narrowly ovoid
*Seed length	1.2-1.5 mm	0.7-0.9 mm

* Shows the most significant characters.

Acknowledgements I am very grateful to Maurice Foster for material of *Hypericum fosteri*, to Margaret Tebbs for the drawings of the new species, and to Mike Gilbert for helpful advice.

References

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中国金丝桃属金丝桃组(藤黄科)新分类群

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摘要 描述了中国云南北部的金丝桃属 *Hypericum* L. (藤黄科) 两个新种, 即楚雄金丝桃 *H. fosteri* N. Robson 和漾濞金丝桃 *H. wardianum* N. Robson。二者均与短柱金丝桃 *H. hookerianum* Wight & Arn 相近。楚雄金丝桃为一地方特有种, 目前仅在模式地点发现; 漾濞金丝桃在缅甸东北部还有分布。二者主要以蒴果伸长, 非卵状近球形, 萼片无中脉而有别于短柱金丝桃。此外, 将宽萼金丝桃 *H. latisepalum* (N. Robson) N. Robson 从亚种提升为种; 将变异较大的纤枝金丝桃 *H. lagarocladum* N. Robson 划分为两个亚种, 即叶较宽、具有开张习性的原亚种纤枝金丝桃 *H. lagarocladum* ssp. *lagarocladum* 和叶较窄、更为直立的新亚种狭叶金丝桃 *H. lagarocladum* ssp. *angustifolium* N. Robson。

关键词 金丝桃属; 藤黄科; 金丝桃组; 新分类群; 云南; 中国