Campylotropis (Leguminosae) of China, an Enumeration and Distribution

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Campylotropis consists of 37 species in the world of which 32 are distributed in China. This paper provides an enumeration of the Chinese species and infraspecific taxa with a new key to these taxa and recent bibliography for the taxa, and an analysis of their geographical distribution. Among the correct names six are lectotypified, and morphological variations in \textit{C. macrocarpa} and \textit{C. polyantha} are noted. Among 32 species 20 are endemic to China of which, except one known to be recorded in SW China, nine are endemic to Yunnan, three to Sichuan, one to Xizang and six to more than two Provinces including Yunnan, Sichuan, and Xizang. Yunnan has the richest flora of \textit{Campylotropis} in the world having 27 taxa including 12 endemic taxa consisting nine species, one subspecies and two varieties.

**Key words:** \textit{Campylotropis}, China, determination key, distribution, lectotype.

China is the center of distribution of \textit{Campylotropis} (Fu 1987, Iokawa and Ohashi 2002, Ohashi 2005). Since the first Chinese species of the genus was described by Bunge in 1833 as \textit{Lespedeza macrocarpa} Bunge, a number of species have been recorded by many taxonomists, especially by Schindler between 1912 and 1926, under \textit{Lespedeza} or \textit{Campylotropis} from China. Fu (1987) published the first revision of \textit{Campylotropis} of China as a whole and recognized 28 species. The result was published also in Flora Reipublicae Popularis Sinicae vol. 41 (Fu 1995).

Iokawa and Ohashi (2002, 2003, 2004) accomplished a revision of \textit{Campylotropis}. They recognized 37 species with 12 infraspecific taxa (six subspecies, three varieties and three forms) in the genus. Among the species 31 with 8 infraspecific taxa (three subspecies, three varieties and two forms) are recorded from China of which four species are represented by infraspecific taxa which do not contain the type taxa. They are \textit{C. bonii} var. \textit{stipellata}, \textit{C. cytosoides} f. \textit{parviflora}, \textit{C. pinetorum} subsp. \textit{velutina} and \textit{C. speciosa} subsp. \textit{ericarpa}. The treatment by Iokawa and Ohashi on Chinese taxa agrees mostly with that of Fu (1987, 1995), and 21 species are accepted as valid in both works. On the other hand, eight species, one subspecies, one variety and one form recognized by Iokawa and Ohashi (2002) are not treated by Fu (1987, 1995): \textit{Campylotropis alba} Iokawa & H. Ohashi, \textit{C. alopochroa} H. Ohashi, \textit{C. decorra} (Kurz) Schindl., \textit{C. grandifolia} Schindl., \textit{C. luhitensis} H. Ohashi, \textit{C. pauciflora} C. J. Chen, \textit{C. speciosa} (Royle ex Schindl.) Schindl. (only subsp. \textit{ericarpa} (Schindl.) Iokawa & H. Ohashi occurs in China), and \textit{C. teretiracemosa} C. J. Chen; \textit{C. pinetorum} subsp. \textit{albopubescens} (Iokawa & H. Ohashi) Iokawa & H. Ohashi; \textit{C. bonii} var. \textit{stipellata} Iokawa & H. Ohashi; and \textit{C.

Seven taxa are commonly adopted in their works but treated at different rank. Differences between the results of these two works on Chinese Campylotropis are compared in Table 1.

As a basic taxonomic analysis of the genus Campylotropis (Leguminosae: Papilionoideae tribe Desmodieae) for Flora

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of China, this paper prepares a new key to the Chinese taxa, an enumeration of the taxa with six newly lectotypified names, and an analysis of their distribution. This work is based mainly on our revision of the genus (Iokawa and Ohashi 2002, 2003) with additional notes from recent contributions of Chinese Campylotropis by P. H. Huang (2001) and X. F. Gao (2006). This paper provides photographs of the lectotypes newly designated here. Campylotropis polyantha is often intermixed with C. macrocarpa, hence the range of variation in C. polyantha is also shown in photographs. This study was made mostly by examination of specimens kept in the herbaria cited in our previous paper.
Key to the species and infraspecific taxa of *Campylotropis* in China

1. Leaves dimorphic; lower leaves petiolate with obovate leaflets and distinct rachis; upper leaves sometimes subsessile ...... 2

1. Leaves not dimorphic ....................... 3

2. Upper leaflets deltoid

............................................. *C. diversifolia*

2. Upper leaflets elliptic, orbicular or transversely elliptic .......... *C. harmsii*

3. Leaflets consistently stipellate .......... 4

3. Leaflets exstipellate, rarely including a few stipellate leaves .......... 5

4. Glandular hairs present on pedicel and calyx ..................... *C. polyantha*

4. Glandular hairs absent

............................................. *C. yunnanensis*

5. Glandular hairs present on pedicel and calyx .............................................................. 6

5. Glandular hairs absent ..................... 19

6. Calyx lobes more than twice as long as tube, more than 3 mm long .......... 7

6. Calyx lobes usually as long as tube or, if longer, less than twice as long as tube

.............................................................. 8

7. Bracts narrowly ovate, usually shorter than 3 mm long; leaflet upper surface glabrous ............... *C. delavayi*

7. Bracts linear, usually more than 3.5 mm long; leaflet upper surface densely puberulous ............. *C. pinetorum*

8. Leaflet upper surface usually densely or subdensely puberulous with patent, very short hairs, rarely glabrescent; branches velutinous ................................................. 9

8. Leaflet upper surface glabrous or subdensely pubescent; branches not velutinous ........................................... 11

9. Hairs white; leaflets broadly elliptic to ovate, often more than 8 cm long

........................................... *C. latifolia*

9. Hairs tawny to pale brown; leaflets narrowly ovate to elliptic, usually less than 7 cm long .................................................................. 10

10. Racemes extended, often more than 10 cm long; bracts narrowly ovate, 2–2.5 mm long; bracteoles ca. 1 mm long ................................................................. *C. fulva*

10. Racemes usually less than 9 cm long; bracts narrowly ovate, 3–5 mm long; bracteoles ca. 2 mm long .... *C. sulcata*

11. Flowers small; standard usually less than 9 mm long .................................................. 12

11. Flowers larger; standard usually more than 10 mm long ........................................ 14

12. Pods more than 10 mm long; leaflet lower surface densely white pubescent ................................................................. *C. luhitensis*

12. Pods less than 8 mm long ................ 13

13. Leaflet lower surface with sparse appressed short hairs; pod apex obtuse

.......................................................... *C. cytisoides*

13. Leaflet lower surface with dense white silky hairs; pod apex rounded

.......................................................... *C. thomsonii*

14. Leaflets usually less than 1 cm long, obdeltoid ..... *C. wilsonii*

14. Leaflets usually more than 2 cm long, not obdeltoid ........................................ 15

15. Bracts usually caducous before flowering ........................................ *C. macrocarpa*

15. Bracts mostly persistent until fruiting ........................................................................ 16

16. Inflorescences usually paniculate; bracts mostly more than 2 mm long; petioles not dorsally angled ........................................ 17

16. Inflorescences not paniculate; bracts mostly less than 2 mm long ................ 18

17. Leaflets deltoid to ovate; lateral nerves thick, prominent beneath .... *C. hirtella*

17. Leaflets obovate to oblong; lateral nerves not prominent .... *C. alopochroa*

18. Petioles sulcate, neither dorsally angled nor winged ........................................ *C. decora*

18. Petioles dorsally angled, often slightly convex above, bisulcate and narrowly winged along both sides ...... *C. henryi*

19. Petioles dorsally angled, often narrowly
winged along both sides; young branches distinctly angled ................................ 20
19. Petioles neither dorsally angled nor winged ................................................ 21
20. Young branches quadrangular; corolla purple ............................................. C. grandifolia
20. Young branches triquetrous; corolla yellow or purple .................... C. trigonoclada
21. Calyx lobes 3 times as long as tube; flowers subsessile, clustered at top of peduncle as an umbel; leaflet upper surface white pubescent .................. C. alba
21. Calyx lobes usually nearly equal to tube or, if longer, less than two times as long as tube; inflorescences not umbelliform ............................................................. 22
22. Leaflet upper surface densely puberulous ................................................... 23
22. Leaflet upper surface glabrous, sparsely pubescent or sericeous .................... 24
23. Calyx, inflorescences, young branches and leaflet lower surface densely appressed sericeous; leaflets elliptic to oblong ............................... C. argentea
23. Calyx, inflorescences, young branches and leaflet lower surface densely white-villous; leaflets obdeltoid to broadly obovate ............................. C. brevifolia
24. Pedicels usually less than 5 mm long ............................................................. 25
24. Pedicels usually more than 5 mm long .......................................................... 28
25. Flowers clustered at upper part of racemes ................................................... 26
25. Flowers distributed equally in racemes ........................................................... 27
26. Flowers larger; standard ca. 10 mm long; pedicels more than 1.5 mm long; racemes not terete .......... C. howellii
26. Flowers small; standard ca. 7 mm long; pedicels less than 1.5 mm long; racemes terete, very densely flowered, spike-like .............................................. C. teretiracemosa
27. Pods ovate to elliptic, pubescent; inflorescences racemose ............... C. speciosa
27. Pods narrowly ovate to narrowly elliptic, lateral surface glabrous; inflorescences paniculate ..................... C. wenshaaica
28. Flowers 10 or more in a raceme ...... 29
28. Flowers less than 8 in a raceme ...... 31
29. Leaflets obdeltoid to obcordate; lateral nerves dense, straight, parallel ............................................................. C. bonii
29. Leaflets elliptic to obovate; lateral nerves arcuate with netted venation ............................................................. 30
30. Pedicels slender, 6–14 mm long; leaflets chartaceous ..................... C. capillipes
30. Pedicels thick, 5–6 mm long; leaflets subcoriaceous .................... C. sargentiana
31. Pedicels more than 15 mm long; vexillary stamen connate to tube at base for about one-sixth of its length ............................................................. C. pauciflora
31. Pedicels less than 8 mm long; vexillary stamen connate to tube at base for about one-third of its length ............................................................. C. tenuiramea

Enumeration of the species in alphabetical order of specific epithets

In the following enumeration the original publication and other bibliography for the taxa are not cited. Refer to our revision (Iokawa and Ohashi 2002, 2003) to avoid duplication of bibliographic citation between this and our previous papers. The original publications of the names are, however, cited when the lectotype is designated in this paper.

The infraspecific taxa are shown with the key within their mother species.

   Distribution: SW China (probably a place in Guizhou, Sichuan or Yunnan).

Distribution: China (Xizang).

Fu treated Campylotropis alopochroa as an imperfectly known species under C. hirtella and Gao (2006) treated the former as a synonym of the latter. Campylotropis alopochroa is distinguished from C. hirtella by the smaller flowers (ca. 12 mm long against 13–15 mm long of the latter) and shape of leaflets, i.e., obovate to elliptic with inconspicuous lateral nerves in the former, while deltoid with prominent lateral nerves on the lower surface in the latter.


Distribution: China (Yunnan).

Schindler (1912) described this species based on A. Henry 10384. He did not designate holotype but cited isotypes kept in A, B, and K. Duplicates are also found in CAL, E, MO and PE. We select here the isotype in K as the lectotype of Campylotropis argentea Schindl. (Fig. 1).


Distribution: China (Guangxi).

Campylotropis bonii was recorded by Fu (1995) for the first time from China, but the Chinese plants differ from var. bonii in having stipels. Var. bonii is confined to Vietnam and Thailand.


Distribution: China (Sichuan and Xizang).

Ricker (1946) designated the holotype of Campylotropis brevifolia Ricker: Sichuan. Datung to Delifu, Yalong Jiang, 1250–1500 m. Handel-Mazzetti 5604 (A; iso E). It was cited by Iokawa and Ohashi (2002) erroneously as a syntype and the specimen was shown in Fig. 15a in Iokawa and Ohashi (2002).


Lespedeza capillipes Franch., Pl. Delavay. 165 (1890) [Type: China. Yunnan. in monte Hee-chan-men. Delavay 2733 (lecto P designated here; isolecot K; photo in A)].

Franchet (1890) cited two specimens in the original description of Lespedeza capillipes Franch. They are syntypes, Delavay 530 (P) and Delavay 2733 (P). We select the latter as the lectotype of the name. This was collected in monte Hee-chan-men in Yunnan. An isolecototype in K is shown in Fig. 2.

Key to the subspecies:

1. Calyx lobes distinctly shorter than tube, 1–1.5 mm long; racemes 2–8 cm long; upper surface of leaflets glabrous ............................................. subsp. prainii

1. Calyx lobes almost as long as tube, more than 1.5 mm long; racemes short, 1.5–3 cm long; upper surface of leaflets sparsely appressed short hairy ............................................. subsp. capillipes


Distribution: China (SW Sichuan and N
Fig. 1. Lectotype of *Campylotropis argentea* Schindl. A. Henry 10384 (K).
Fig. 2. Isolectotype of *Lespedeza capillipes* Franch. Delavay 2733 (K).
Yunnan).


Distribution: China (W. Guangxi and S. Yunnan), Myanmar and Thailand.

Gao (2006) regarded *C. prainii* as a synonym of *C. capillipes*, but it differs from the latter clearly in leaflets, calyx and racemes as shown in Iokawa and Ohashi (2002).


Distribution: China (S. Yunnan), Laos, Myanmar, Thailand and Vietnam.

*Campylotropis cytisoides* f. *cytisoides* is endemic to Indonesia (Java, Bali, Lombok and Timor) and disjunctively separated from the distribution area of f. *parviflora* (cf. Fig. 24a, distribution map, in Iokawa and Ohashi 2002).


Distribution: China (S. Yunnan), Laos, Myanmar and Thailand.

This species was recorded from China by Iokawa and Ohashi (2002) based on the specimen shown in Fig. 3.


Distribution: China (Guizhou, Sichuan and Yunnan).


Distribution: China (Yunnan).


Distribution: China (Yunnan).


Distribution: China (Yunnan).

Schindler (1912) described this species with citation of two specimens from K and A. They are syntypes, A. Henry 9888 (A) and A. Henry 9890 (K). One of the syntypes kept in A was shown in Fig. 25b in Iokawa and Ohashi (2002) and was cited as Henry 9888 (A). However, a label of another syntype, Henry 9890, is also mounted on the same sheet side by side. Two kinds of labels are mounted together on the sheet of the specimen in A. We designate here Henry 9890 (K) as the lectotype of *Campylotropis grandifolia* Schindl. (Fig. 4).

Fu (1987, 1995) cited this species under *Campylotropis henryi* as an imperfectly known species. These two species share quadrangular young branches and a narrowly winged petiole, but *C. grandifolia* differs from the latter in lacking glandular hairs on inflorescences, pedicels, calyx, etc.

Fig. 3. *Campylotropis decorata* from China.
Fig. 4. Lectotype of *Campylotropis grandifolia* Schindl. A. Henry 9890 (K).

Distribution: China (Yunnan) and Thailand.

Schindler (1912) described this species based on A. Henry 9803D collected in Yunnan: Szemao west, altitude 4500 ft. above the sea. He did not designate a holotype but cited syntypes kept in B, K and A. A duplicate is held in E. We designate here one of the syntypes in K as the lectotype (Fig. 5).


Distribution: China (Guizhou and Yunnan).

When he described Lespedeza henryi Schindl., Schindler (1911) cited a single specimen kept in B. The specimen was cited by Iokawa and Ohashi (2002) as holotype with isotypes in A, CAL, E, K and MO. Since the holotype was lost in World War II, we designate here the isotype in K as lectotype (Fig. 6) based on Art. 9.9 and 9.10 (McNeill et al. 2006).


Distribution: China (Guizhou, Sichuan, Xizang and Yunnan) and India (Assam).


Distribution: China (Yunnan).


Distribution: China (Yunnan).


Distribution: China (Xizang) and Myanmar.

This species was recorded from China first by Iokawa and Ohashi as cited above. It resembles Campylotropis argentea and C. brevifolia in having dense white hairs on young branches, lower surfaces of leaflets and calyces, but differs from them in having a glabrous upper surface of leaflets and glandular hairs on the inflorescence.


Distribution (as species): China (Anhui, Beijing, Fujian, Gansu, Guangdong, Guizhou, Hebei, Henan, Hubei, Hunan, Jiangsu, Jiangxi, Liaoning, Neimenggu, Shaanxi, Shandong, Sichuan, Taiwan, SE. Xizang, Yunnan and Zhejiang) and Korea.

Key to the infraspecific taxa:
1. Lateral surface of pods pubescent; calyx lobes almost as long as the tube, 2.2–3
Fig. 5. Lectotype of *Campylotropis harmsii* Schindl. A. Henry 9803D (K).
Fig. 6. Lectotype of *Campylotropis henryi* Schindl. A. Henry 13212 (K).
mm long .......................... var. hupehensis
1. Lateral surface of pods glabrous; calyx lobes shorter than the tube, 0.8–1.2 mm long (var. macrocarpa) .......................... 2
2. Flowers white .............................. f. alba
2. Flowers purple to pinkish white .............................. f. macrocarpa


L. ciliata Benth. in J. Bot. Kew Misc. 4: 48 (1852), in nota.
L. distincta L. H. Bailey, Gent. Herb. 31 (1920).
Distribution: as in species.

Distribution: China (Henan).

Distribution (var. hupehensis): China (Gansu, Guangdong, Guizhou, Hebei, Henan, Hubei, Shaanxi, Shanxi, Sichuan and Taiwan).

Campylotropis macrocarpa (Bunge) Rehder is the most widely distributed species of the genus in China and extends to Korea in East. However, the species has not been found in Yunnan in spite of the region having the richest flora of Campylotropis in China. Iokawa and Ohashi (2002, on page 270) noted that specimens referred to C. macrocarpa collected in Yunnan were, so far as they examined, referable to C. polyantha. For example, C. Y. Wu et al. (1984) cited Schoch 369 (A) as a voucher specimen of C. macrocarpa in Yunnan (Fig. 7), but the specimen is referable to C. polyantha because of the presence of stipels that is a clear difference between the two species.

Gao (2006) stated that Campylotropis macrocarpa f. lanceolata P. Y. Fu is found in Yunnan, though f. macrocarpa is not. We considered that C. macrocarpa f. lanceolata is merely a form with narrowly ovate leaflets which is included within a variation range of C. macrocarpa f. macrocarpa. The stipels of f. lanceolata in the sense of Gao (2006) are not described.
Fig. 7. *Campylotropis polyantha* (Bunge) Rehder from Yunnan, Schoch 369 (A), an example that was misidentified as *C. macrocarpa*.
Specimens of *Campylotropis macrocarpa* at least from Yunnan should be reexamined. Recently, *C. macrocarpa* is naturalized in Japan by import of seeds from China for road construction (Ohashi et al. 2003).

   Distribution: China (Yunnan).

   Distribution: China (Guangxi, Guizhou and Yunnan).

**Key to the subspecies:**
1. Leaflets ovate to elliptic, apex acute; branches, inflorescence rachis, calyces and both surfaces of leaflets densely white pubescent ........... subsp. *albopubescens*
2. Leaflets oblong to narrowly ovate, apex rounded or obtuse; branches, inflorescence rachis, calyces and lower surface of leaflets tawny velutinous ............................................. subsp. *velutina*

   Distribution: China (Yunnan).

   Distribution: China (Guangxi, Guizhou and Yunnan).

*Campylotropis pinetorum* subsp. *pinetorum* is not recorded from China, but occurs in Laos, Myanmar, Thailand and Vietnam.

   Distribution: China (Guizhou, Sichuan, Yunnan and Xizang).

**Key to the infraspecific taxa:**
1. Bracts 3–5 mm long, persistent until fruiting; pedicels 7–9 mm long ............................................. var. *neglecta* 2
2. Lateral surface of pods glabrous ............................................. f. *leiocarpa*
2. Lateral surface of pods pubescent ............................................. f. *polyantha*

Fig. 8. Morphological variation in *Campylotropis polyantha* (Franch.) Schindl. var. *polyantha* f. *polyantha*. a: Soulie 3969 (P), isotype of *C. souliei* Schindl., a form with narrow leaflets. b: S. K. Wu 2552 (PE), isotype of *C. tomentosipetiolata* P. Y. Fu., a form with tomentose wide elliptic leaflets. c: C. C. Lu 63206 (PE), isotype of *C. polyantha* f. *macrophylla* P. Y. Fu., a form with large leaflets. d: C. W. Wang 83763 (KUN), paratype of *C. polyantha* var. *tomentosa* P. Y. Fu., a form with tomentose obovate leaflets.


Distribution: China (Yunnan).

*Campylotropis polyantha* (Franch.) Schindl. shows variation in morphology and several forms have been distinguished as taxa (Fig. 8). We recognized two forms as distinct: var. *neglecta* and var. *polyantha* f. *leiocarpa*.


Distribution: China (Sichuan).

Fu (1987, 1995) treated this species as identical with *C. polyantha*, but the latter has distinct glandular hairs on inflorescences.


Distribution: China (Xizang), Bhutan, India (Assam) and E. Nepal.

Subsp. *speciosa* is distributed in Western and central Nepal and India (Uttar Pradesh and Himachal Pradesh).


Distribution: China (Yunnan) and Thailand.


Distribution: China (Yunnan).


Distribution: China (Sichuan).


Distribution: China (Yunnan), India (Assam), Myanmar and Vietnam.

This species was reported by Gao (2006) from China (Yunnan) for the first time under *Campylotropis kingdonii*.


Distribution: China (Guangxi, Guizhou, Sichuan and Yunnan).

Key to the varieties:

1. Flowers purple; young branches, leaflet lower surface and inflorescence rachis pubescent .................................. var. *bonatiana*
2. Flowers yellow; plants glabrescent .............................................. var. *trigonoclada*


Distribution: China (Guangxi, Guizhou, Sichuan and Yunnan).


*C. bonatiana* (Pamp.) Schindl.: P. Y. Fu,

**Distribution:** China (Yunnan).

The specific epithet was published as “wenshaica”, but is a misprint of “wenshanica”.


**Distribution:** China (Sichuan).

Schindler (1912) described *Campylotropis wilsonii* Schindl. based on three specimens, Wilson 3387, Wilson 3387a, and Potanin kept in BM, A, LE. We designate here Wilson 3387 (A) as the lectotype (Fig. 9).


**Distribution:** China (Sichuan and Yunnan).

**Key to the subspecies:**

1. Inflorescence rachis and pedicels sparsely appressed short hairy; pedicels 5–14 mm long ................................... subsp. *filipes*

1. Inflorescence rachis and pedicels ascending or patent short hairy; pedicels 2.5–5 (–7) mm long ............ subsp. *yunnanensis*

32-1. *C. yunnanensis* subsp. *yunnanensis*:


**Distribution:** China (Yunnan).


**Distribution:** China (Sichuan).

**Distribution of Campylotropis in China**

*Campylotropis* is distributed mainly in China and extends west to India through Indo-China, south to Java and east to Korea (Ohashi 2005). Of 37 species in the genus 31 are recorded by Iokawa and Ohashi (2002) as occurring in China. Recently, Gao (2006) added *C. kingdonii* to China which was regarded by Iokawa and Ohashi (2002) as a synonym of *C. thomsonii*. We recognize 32 species of the genus in this paper as native to China. Distribution of the species in China is shown in Fig. 12 in which the number of species is indicated in each province.

Among the 32 species recorded, 20 are endemic to China. Among the endemic species except *Campylotropis alba* which was recorded only in SW China and its exact locality is unknown, nine are confined to Yunnan; three to Sichuan; one to Xizang; six to more than two Provinces including Yunnan, Sichuan or Xizang.

The remaining 12 are distributed in China and neighboring countries: *Campylotropis bonii*, *C. capillipes*, *C. cytisoides*, *C. decora*, *C. harmsii*, *C. hirtella*, *C. luhitensis*, *C. macrocarpa*, *C. pinetorum*, *C. speciosa*, *C. sulcata*, and *C. thomsonii*. Among them, however, infraspecific taxa included in the following species are endemic to China: *C. capillipes* subsp. *capillipes* (but subsp.
Fig. 9. Lectotype of *Campylotropis wilsonii* Schindl. Wilson 3387 (A).
prainii is in China, Myanmar and Thailand), C. macrocarpa var. hupehensis and var. macrocarpa f. alba (but var. macrocarpa f. macrocarpa is in China and Korea), C. pinetorum subsp. albobescens and subsp. velutina (but subsp. pinetorum is in Laos, Myanmar, Thailand and Vietnam).

Yunnan is the central province for distribution of Campylotropis. It has 12 endemic taxa, i.e., nine species, one subspecies and two varieties. They are Campylotropis argentea, C. diversifolia, C. fulva, C. grandifolia, C. howellii, C. latifolia, C. pauciflora, C. pinetorum subsp. albobescens, C. polyantha var. neglecta, C. tenuiramea, C. trigonoclada var. bonatiana and C. wenshaaica. The following 15 taxa are also found in Yunnan: C. capillipes subsp. capillipes, C. capillipes subsp. prainii, C. cytisoides f. parviflora, C. decora, C. delavayi, C. harmsii, C. henryi, C. hirtella, C. pinetorum subsp. velutina, C. polyantha f. leiocarpa, C. polyantha f. polyantha, C. sulcata, C. thomsonii, C. trigonoclada var. trigonoclada and C. yunnanensis subsp. yunnanensis. Campylotropis macrocarpa is excluded from Yunnan, because its identification seems to be dubious, although it is recorded by Huang (2001) and Gao (2006) in the province as noted in the enumeration above. In total 27 taxa of Campylotropis occur in Yunnan (Fig. 10).

Sichuan is the second province in distribution of Campylotropis, but the number of taxa is remarkably fewer than in Yunnan. It has four endemic taxa: C. sargentiana, C. teretiracemosa, C. wilsonii and C. yunnanensis subsp. filipes. The following ten taxa are also found in Sichuan: C. brevifolia,
C. capillipes subsp. capillipes, C. delavayi, C. hirtella, C. macrocarpa var. hupehensis, C. macrocarpa f. macrocarpa, C. polyantha f. letiocarpa, C. polyantha f. polyantha, C. trigonocladula var. trigonocladula and C. yunnanensis subsp. yunnanensis. In total 14 taxa are known in Sichuan.

Xizang in the southeastern part has seven taxa including one endemic species, Campylotropis alophrocha; Guizhou has seven and Guangxi has five taxa.

The remaining provinces are remarkably poor in species number than the provinces listed above as shown in Fig. 10.

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References
五百川 裕，大橋広好：中国産マメ科ハナハギ属
の種類と分布

中国のハナハギ属 Campylotropis について Flora
of China の原稿にまとめるために、主として
Iokawa and Ohashi (2002, 2004) を基礎として、新
たに検索表を作り、種類と学名を再検討し、新た
に Campylotropis argentea, C. capillipes, C.
grandifolia, C. harmasii, C. henry, および C. wilsonii
のレクトタイプを選定し、中国における分布を整
理した。

中国西南部はハナハギ属の分布の中心で、特に
雲南省からは多くの種類が記載されている（Fu
1987, Iokawa and Ohashi 2002, Ohashi 2005）。中国
のハナハギ属は傅 浦云 Fu Peiyun (1987, 1995)
が全体を研究し、28（1 個種を含む）種6 変種6
品種に整理した。一方、Iokawa and Ohashi (2002,
2004) は属全体のモノグラフをまとめ、37種6 個
種3 異種3 品種に分類した。その中で中国の種類
として31（2 個種1 変種1 品種を含む）種3 個
種3 異種2 品種を認めた。中国の種類についての両
方の分類を一覧として表1 にまとめた。さらに最
近、高 信芬 Gao Xinfen (2006) は雲南省のハナ
ハギ属をまとめ、ミャンマーから記載された C.
kingdonii H. Ohashi を新たに雲南省から記録した。
しかし、Iokawa and Ohashi (2002) はこの種を C.
thomsonii (Baker) Schindl. と同一種と考えている。
そこで、本論文では Iokawa and Ohashi (2002,
2004) による31種類に C. thomsonii を加えて、中
国の種類は32種3 個種3 異種2 品種とした。

中国におけるハナハギ属の分布を、省ごとの種
数でまとめ、図10に示した。32種のうち20種が中
国に固有で、固有種の分布についてみると、雲南
省9 種、四川省3 種、西藏自治区1 種、6 種は雲
南省9 種、四川省3 種、西藏自治区1 種、6 種は雲
南省9 種、四川省3 種、西藏自治区1 種、6 種は雲
南省9 種、四川省3 種、西藏自治区1 種、6 種は雲

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