

Hiroyoshi OHASHI*: **Studies in the genus *Campylotropis***
(Leguminosae) (1)**

大橋広好*: ハナハギ属の分類 (1)**

In the preparation of a treatment of the genus *Campylotropis* for The Anglo-Japanese Joint Project "Enumeration of the Flowering Plants of Nepal" as well as for monographic study of the genus and its allies, it has been necessary to describe several previously unrecognized species and to make certain nomenclatural changes. The genus consists of about 65 species (Airy Shaw 1973) and is distributed in the area from the Himalayas through S.E. Asia to China and Korea. The genus has often been treated as a subgenus (Maximowicz 1873, Baker 1876) or a section (Taubert 1891, Nakai 1927) of the genus *Lespedeza*, and when *Campylotropis* is recognized as a distinct genus, the generic relationships with the genera *Lespedeza* and *Kummerowia* seem to be still controversial (Ohashi 1971).

The following herbaria have generously lent their specimens for the present study; BM (London), K (Kew), CAL (Calcutta), BK (Bangkok), BKF (Bangkok), KYO (Kyoto) and TNS (Tokyo). I wish to express my sincere appreciation for the curators of these herbaria. Thanks are also due to Mr. L.H.J. Williams of BM for his kind help.

1) A new species from Burma.

While studying unidentified materials of *Campylotropis* from Burma, a new species was discovered among collections by F. Kingdon-Ward in 1956. The new species seems to be distinct from all of the hitherto known species of the genus, but geographically it may be related to *C. pinetorum* (Kurz) Schindler. These two species are, however, distinguished from each other as follows:

Pods 8-14 mm long, distinctly exserted from the calyx; androecia dialdelphous; inflorescences usually 10-15 cm long. Leaflets 3-4 times as

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long as broad, acuminate at the apex and glabrescent above

..... *C. burmanica*, sp. nov.

Pods about 6 mm long, shorter than the calyx; monadelphous; inflorescences 4-10 cm long. Leaflets 2-3 times as long as broad, acute or obtuse at the apex and with velutinous hairs above *C. pinetorum*

Campylotropis burmanica Ohashi, sp. nov. (Figs. 1 & 2)

Frutex ramosus; rami distincte angulati, pilis ca. 0.5 mm longis adpressis vestiti. Folia trifoliolata, stipulata, petiolata. Stipulae persistentes, anguste triangulares acuminatae, 8(-10) mm longae et ca. 1 mm latae, striatae, ciliatae, extus pilosae, intus glabrae; stipellae nullae. Petioli dense pubescentes, usque 3.5 cm longi. Foliola coriacea, anguste ovata vel anguste elliptica, apice acuminata et mucronata, supra glabrata, subtus subdense subadpresse pubescentia (pilis 0.5-1 mm longis), costa subtus elevata densissime adpresse pubescenti, margine integra et leviter revoluta, nervis secundariis superne leviter, subtus non elevatis; foliola terminalia ad 5.5 cm longa et ad 1.4 cm lata; lateralialia similia sed paullo minora. Inflorescentiae terminales et axillares racemosae, plerumque 10-15 cm longae; rhachi pilis rectis vel ascendentibus vel adpressis dense vestita. Bracteae et bracteolae caducae. Pedicelli 2-4 mm longi. Calyx 4-5 mm longus, dense adpresse pubescens (pilis brunnis ca. 0.5 mm longis), ultra medium usque 4-fidus, tubo 1.5-2 mm longo, laciniis posticis anguste triangularibus 2-3 mm longis, apice in laciniulis 0.5 mm longis bifidis, lateralibus 2-2.5 mm longis et 0.5 mm latis, anticis quam ceteris longioribus, 2.5-3 mm longis. Corolla 10-11 mm longa; vexillum ellipticum, exauriculatum, apice acutum, 9.5-10.5 mm longum 4.5-5.5 mm latum, glabrum; alae incurvae, unguiculatae, 9-9.5 mm longae ca. 3 mm latae, laminis anguste oblongis, apice obtusis, basi distincte auriculatis, ungue ca. 2.5 mm longo; carina incurva, unguiculata, 10-10.5 mm longa 2.5-3 mm lata, ungue ca. 2 mm longo, apice subacuta, basi leviter auriculata. Stamina diadelfa, filamentis vexillari libero, filamentis ceteris alte connatis, 9-10.5 mm longis. Pistillum ca. 10 mm longum, ovarium ca. 3 mm longum, densissime adpresse pilosum, brevissime stipitatum; styli ca. 7 mm longi, a medio sursum glabri. Legumen oblique ovatum, (8-)10-12(-14) mm longum 4-5 mm latum, dense pilosum, vix reticulatum, basi brevissime (ca. 0.5 mm) stipitatum, apice mucrone 1-2 mm longo terminatum, quam calyce distinctissime longus. Semina transverse elliptica, ca. 2.5 mm longa 4-4.5 mm lata.

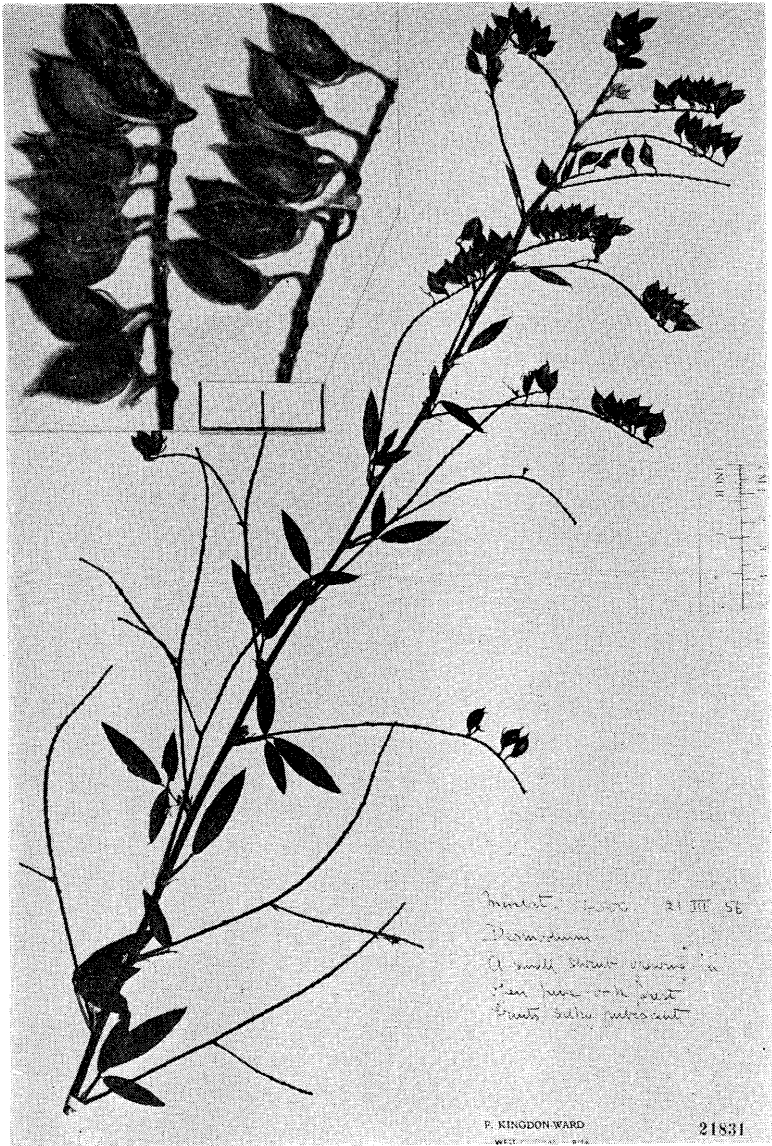


Fig. 1. The holotype specimen of *Campylotropis burmanica* Ohashi.

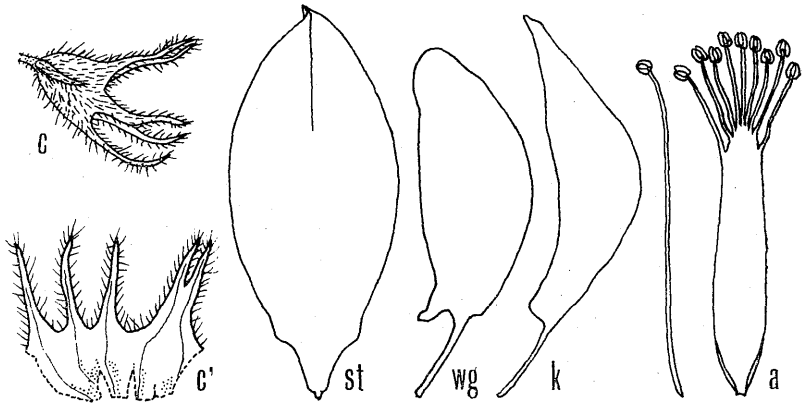


Fig. 2. The flower of *Campylotropis burmanica* Ohashi, c: calyx with a bracteole, c': calyx dissected, st: standard, wg: wing, k: keel-petal, and a: androecium showing an entirely free vexillary stamen; all $\times 5$.

Hab. West Central Burma. Mindat, alt. 1500 m, a small shrub growing in open pine-oak forest. (F. Kingdon-Ward 21831, March 21, 1956. Holotype in BM, isotype in TI).

2) The relationships between *Campylotropis pinetorum* and *C. velutina*.

Lespedeza pinetorum Kurz of Burma and Thailand is very similar to *L. velutina* Dunn of Yunnan in W. China. Schindler (1912) combined the latter species into the former one and transferred it to the genus *Campylotropis*, i.e. *C. pinetorum*, but Gagnepain (1920) maintained the two species as distinct based on the differences in shape of wings, keel-petals and leaves. Afterwards Schindler (1924 & 1928) also recognized both as separate species, i.e. *C. pinetorum* s.s. and *C. velutina* (Dunn) Schindler. However, the differences between the two species are apparently trivial, when compared one of the two with any other species of the genus. In external morphology the leaflets of *C. pinetorum* are acute at the apex, while those of *C. velutina* are obtuse, and the petiolules of terminal leaflets in the former species are usually shorter than the latter. Although, as described by Gagnepain, the shape of floral petals in both species is not exactly similar to each other, it is better to regard *C. velutina* as a geographical subspecies of *C. pinetorum*.

Campylotropis pinetorum (Kurz) Schindler

subsp. ***velutina*** (Dunn) Ohashi, comb. nov.

Lespedeza velutina Dunn in Hook., Icon. 4 ser. 7: t. 2700 (1901).

C. velutina (Dunn) Schindler in Fedde, Rep. 20: 286 (1924); in Fedde, Rep. Beih. 49: 261 (1928).

3) The status of *Campylotropis Griffithii*.

Campylotropis Griffithii Schindler, an endemic species to Bhutan in eastern Himalaya, seems to be conspecific with *C. macrostyla*, but the pods of the former are usually larger than those of the latter. *C. macrostyla* is one of the commonest species of the genus in the Himalayas from Kashmir to Nepal and shows a considerable range of variation in external morphology. Therefore, *C. Griffithii* may be better to treat as a variety of *C. macrostyla*.

Campylotropis macrostyla (D. Don) Schindler

var. ***Griffithii*** (Schindler) Ohashi, comb. nov.

C. Griffithii Schindler in Fedde, Rep. 11: 343 (1912).

Lespedeza Griffithii (Schindler) Ohashi in Journ. Jap. Bot. 43: 205 (1968); in Journ. Fac. Sci. Univ. Tokyo, sect. III, 11: 62 (1971); in Hara, Fl. E. Himal. 2: 66 (1971).

4) A Javanese *Campylotropis*.

Within the area of distribution of the genus *Campylotropis*, *C. cytisoides* Miq. occurs in the southernmost part. The specific epithet is based on that of *Lespedeza cytisoides* Benth. Recently earlier homonym of the latter was found and, consequently, a new name for the plant, i.e. *L. junghuhniana* Bakh. f., was published. Under *Campylotropis*, however, it needs the following new treatment for the species.

Campylotropis cytisoides Miq., Fl. Nederl. Ind. 1(1): 229 (1855), non *C. cytisoides* (Benth.) Miq.

Lespedeza junghuhniana Bakh. f. in Blumea 11: 134 (1961).

L. cytisoides Benth. in Miq., Pl. Jungh. 230 (1852), non Bertol. (1850).

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マメ科ハナハギ属 *Campylotropis* Bunge はソラマメ亜科イワオウギ連 *Coronilleae* Adans. に属し、ハギ属に最も近縁で時にはハギ属中の亜属 (*Maximowicz* 1873, Baker 1876) または節 (Taubert 1891, 中井 1927) として分類されることもある。外部形態的には竜骨弁が著しく内曲し、先がくちばし状に尖ること、花序では一つの節に一花だけがつくことなどによってハギ属から区別され、また花粉形態では表面模様はハギ属に比べて網目がやや小さいという特徴がある (Ohashi 1971)。地理的にはハギ属の大部分の種が北アメリカから東アジア、ヒマラヤ、アフガニスタンまで主として暖温帯地域に拡がっており、メドハギがジャワ、オーストラリアまで隔離分布している。これに比べてハナハギ属の分布は主として中国西部、タイ北部、ビルマ、アッサム、ヒマラヤにわたる地域で、雲南には特に多数の特産種がある。分布の東限はハナハギ *C. macrocarpa* (Bunge) Rehd. が占め、満州と朝鮮にまで知られており、西限はカシミール地方で、ここには *C. macrostyla* や *C. stenocarpa* など数種がある。南へはジャワに1種 *C. cytisoides* だけが分布している。

ハナハギ属は1835年に Bunge によって設立され、今日含まれている種の大部分は Schindler や Ricker によって新しく記載されたり、ハギ属などから組換えられたものであるが、分類学的には未整理のままであるために種の同定は非常に困難で、学名上の混乱も多い。数年来ハナハギ属のモノグラフを準備しているうちに気付いた新種や新見解をここでは報告しておきたいと思う。

1) ビルマから新種 *C. burmanica* Ohashi (図 1 & 2) を記載した。ビルマは従来ハナハギ属に関して最も調べられていない地域である。

2) ビルマとタイに分布する *C. pinetorum* と雲南の *C. velutina* とは単体雄蕊をもつことで他の種からは容易に区別できるものであるが、外部形態的にはよく似てお

り、両者を比較した結果、後者を前者の地理的な亜種と見做した。

3) ブータン特産の *C. Griffithii* をヒマラヤ中・西部に広く分布する *C. macrostyla* の変種とした。

4) ジャワの *Lepedeza junghuhniana* はハナハギ属の種であり、新名 *C. cytisoides* Miq. が必要となる。

○*De Salicis Hukaoanae* Kimura systematico positu (Arika KIMURA)

木村有香：ユビソヤナギの分類学上の位置について

Salix sect. **Hukaoanae** Kimura sect. nov.

Arbores ramulis pruina glauca non obductis, cortice interiore ramorum citrino. Gemmae amentiferae foliiferis multo majores. Folia adulta lanceolata serrulata apice acuminata subtus glauca; recentissima e vernatione relaxata margine evidenter revoluta. Amenta praecocia sessilia crassa et densiflora. Bracteolae florum obovatae discolores utrinque villosae. Glandula una ventralis linearis. Ovaria distincte stipitata, stylis elongatis filiformibus. Stigmata parva commissuralia. Ovula in quaque placenta 2. Stamina 2, filamentis prorsus in unum validum connatis.—Huc pertinet *Salix Hukaoana* Kimura tantum.

Typus sectionis: *Salix Hukaoana* Kimura.

Nom. Jap. Yubisoyanagi-setu Kimura nom. nov.

Salix nostra cum sect. *Daphnella* Seringe ex Duby multa communia habet (e. g. corticis colorem interioris ramorum, magnitudinem gemmarum floriferarum, amentorum habitum et figuram femineorum florum), sed filamentis staminum prorsus in unum connatis, ovulis in quaque placenta semper 2, margine foliorum recentissimorum valde revoluti, satis est distincta et sectionem propriam efficere opinor.

ユビソヤナギ *Salix Hukaoana* Kimura (本誌第 48 卷第 11 号 321 頁) にはエゾヤナギ節 sect. *Daphnella* Seringe ex Duby の種といろいろ共通した形質が認められるが、2本の雄蕊の花糸が完全に癒着して1本になっていること、各胎座の胚珠の数が常に2個であること、枝端の若い葉の縁が強く反巻するなど、すこぶる独特であるので、新たにユビソヤナギ節 sect. *Hukaoanae* Kimura を設けてこれに収容したいと思う。

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