

## Notes on the genus *Clematis* (Ranunculaceae) (VI)

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**Abstract** In this paper, the status of *Clematis eriopoda* Maxim. and sect. *Atragenopsis* Boiss. is discussed, and the species status of the former and the sectional status of the latter are recognized; two species (*C. wenzianensis* W. T. Wang, *C. malacoclada* W. T. Wang) and one variety (*C. hastata* Finet & Gagnep. var. *micrantha* W. T. Wang) are described as new; one species, *C. tubulosa* Turcz., which has been erroneously relegated into the synonymy under *C. heracleifolia* DC. by Fang and Wang for a long time, is reinstated; *C. heracleifolia* var. *ichangensis* Rehd. & Wils. is transferred to *C. tubulosa*, and a new combination, *C. tubulosa* var. *ichangensis* (Rehd. & Wils.) W. T. Wang, is made; the fruit description of *C. glabrifolia* K. Sun & M. S. Yan is given for the first time.

**Key words** *Clematis*, new taxa, taxonomic status, *Clematis eriopoda*, sect. *Atragenopsis*, reinstatement, *Clematis tubulosa*, new combination, *Clematis heracleifolia* var. *ichangensis*, fruit description, *Clematis glabrifolia*.

### *Clematis* L.

Sect. 1. *Cheiroopsis* DC.

Subsect. 1. **Hastatae** (W. T. Wang) W. T. Wang

**1. *Clematis hastata*** Finet & Gagnep. var. ***micrantha*** W. T. Wang, var. nov. Type: China. Shaanxi (陕西): Hanzhong (汉中), Nanliugou (南柳沟), alt. 700 m, fl. pink, 1959-03-17, *P. Y. Li 1072* (holotype, WUK).

小花戟状铁线莲 Fig. 2: C, D

A var. *hastata* differt floribus minoribus circ. 1.6 cm diam., sepalis minoribus 8–9 mm longis 2.5–3 mm latis extus velutinis.

This new variety differs from var. *hastata* in its smaller flowers ca. 1.6 cm in diam., with sepals 8–9 mm long, 2.5–3 mm broad, and outside densely velutinous. In var. *hastata*, an endemic in northern Sichuan Province, the flowers are larger, 2.5–4 cm in diam., with sepals 1–2.2 cm long, 0.4–1 cm broad, outside densely appressed-puberulous (Wang, 2002).

**2. *Clematis glabrifolia*** K. Sun & M. S. Yan in Bull. Bot. Res. Harbin 12: 327, pl. 3, figs. 1–6. 1992; Grey-Wilson, *Clematis* 79. 2000; W. T. Wang & Barth. in Fl. China 6: 345. 2001; W. T. Wang in Acta Phytotax. Sin. 40: 230, fig. 10: 4, 5. 2002. Type: China. Gansu (甘肃): Wen Xian (文县), Fanba (范坝), 1988-03-27, X. D. Wang & K. Sun 251 (holotype, NWNUI!; isotype, PE!).

光叶铁线莲

Ad descriptionem originalem addenda, acheniis adhuc ignotis: Achenia complanata, late ovata, 3–3.2 mm longa, 3.2–3.5 mm lata, sericeo-puberula, margine prominula, stylis persistentibus 2.8–3.6 cm longis albo-plumosis.

Achenes flattened, broadly ovate, 3–3.2 × 3.2–3.5 mm, sericeous-puberulous, margin slightly prominent; persistent styles 2.8–3.6 cm long, white-plumose.

Specimen examined.

**China. Gansu** (甘肃): Wen Xian (文县), Fanba (范坝), 1964-04-08, T. P. Wang 18907 (WUK).

In 1992, *C. glabrifolia* was described on the basis of a flowering gathering collected from Fanba, Wen Xian, Gansu Province, and till now the fruits of this species has been unknown. Recently, from the specimens borrowed from WUK I found out a fruiting specimen of this species, collected from the type locality of *C. glabrifolia* by the late Professor Wang Tso-Pin in 1964. On the basis of this specimen the description of the fruits is given as above.

Subsect. 2. **Cirrhosae** Prantl.

**3. Clematis eriopoda** Maxim. in Bull. Acad. Sci. St. Pétersb. 22: 223. 1876; Kuntze in Verh. Bot. Ver. Brand. 26: 165. 1885; Huth in Bull. Herb. Boiss. 5: 1064. 1897; Makino in Bot. Mag. Tokyo 8: 332. 1897; Matsumura, Ind. Pl. Japon. 2: 110. 1912; Makino & Tanaka, Man. Fl. Nippon 192. 1927; Ohwi, Fl. Japan 514. 1956, in Japanese; et Fl. Japan 442. 1965, in English; Ohwi & Kitagawa, New Fl. Japan 681. 1992, in Japanese. — *C. eriopoda* var. *normalis* Kuntze in l.c. Type: "Hab. in Japonia, unde specimen cultum attulit ex itinere primod. Siebold" (holotype, LE!).

Fig. 1

Woody vine. Hornotinous branch subterete or inconspicuously 6-angulate, shallowly 6-sulcate, sparsely appressed-puberulous. Leaves opposite; leaf blade thickly papery, triangular or deltoid in outline, 2–4 × 1.4–2.4 cm, 3-sect, primary segments slenderly stalked, terminal primary segments also 3-sect, secondary segments ovate in outline subsessile or shortly stalked, 2–3-sect or 2–3-parted, ultimate lobes linear-lanceolate or linear, 1.5–5 mm broad, apex slightly obtuse, margin 1–2-dentate or entire, on both surfaces very sparsely puberulous; petioles 1.4–1.9 cm long. Cyme 1-flowered; peduncle ca. 6 cm long; bracts opposite, petiolate, petiole ca. 1 cm long, blade rhombic-ovate, ca. 2.2 cm long, base cuneate, margin serrate above the middle. Flower ca. 2 cm in diam.; pedicel ca. 9 mm long, velutinous. Sepals 4, erect, oblong-elliptic, ca. 20 × 8 mm, inside glabrous, outside densely appressed sericeous-pubescent, but on the very margin glabrous, apex slightly obtuse. Stamens numerous, ca. 12 mm long, glabrous; filaments narrowly linear; anthers narrowly oblong, ca. 2.5 mm long, apex obtuse. Carpels numerous; ovaries densely pubescent; styles ca. 11 mm long, densely villous.

? S Europe. Known only from the holotype.

In 1876, on the basis of a single flowering specimen, *Siebold s.n.*, collected from a plant cultivated in Japan, Maximowicz described *Clematis eriopoda* Maxim. He correctly placed this new species under sect. *Cheirosia*, and correctly pointed out that it is more or less related to *C. balearica* Rich. (*C. cirrhosa* L. var. *balearica* (Rich.) Willk.—Wang, 2002) in habit and floral structure. In his monograph of *Clematis*, Kuntze (1885) placed *C. eriopoda* under sect. 2. *Scandentes perulatae*, and incorrectly pointed out that *C. eriopoda* is related to *C. tibetana* Kuntze (a member of sect. *Meclatis* (Spach) Baillon) and *C. pseudoorientalis* Kuntze (a synonym of *C. isphanica* Boiss., a member of sect. *Clematis* subsect. *Angustifoliae* Tamura—Wang, 2003). In the morphological description given by him, Kuntze erroneously described the stamen filaments as pilose, and he erroneously transferred *C. orientalis* L. var. *wilfordii* Maxim. (a synonym of *C. serratifolia* Rehd., a member of sect. *Meclatis*) to *C. eriopoda* as its variety. From what just mentioned, it can be seen that Kuntze entirely overlooked the statements about the systematic position and the relationship of *C. eriopoda* given by Maximowicz. In Prantl's classification of *Clematis* (1888), *C. eriopoda* was not included, but it has been recorded in several checklists of the Japanese plants or of the Japanese *Clematis* (e.g. Huth, 1897; Makino, 1897; Matsumura, 1912) and included in the floristic works of Japan published by Ohwi (1956, 1965) and Ohwi & Kitagawa (1992), who indicated that this species is obscure to them. This species was not mentioned in the two accounts of the Japanese

*Clematis* written by Kitamura & Murata (1980) and by Tamura (1982) respectively, and in the two revisions of the genus *Clematis* published recently by Johnson (1997) and by Grey-Wilson (2000) respectively.



**Fig. 1.** Photograph of the holotype of *Clematis eriopoda* Maxim. (Siebold s.n., LE). Photographed by L. Q. LI.

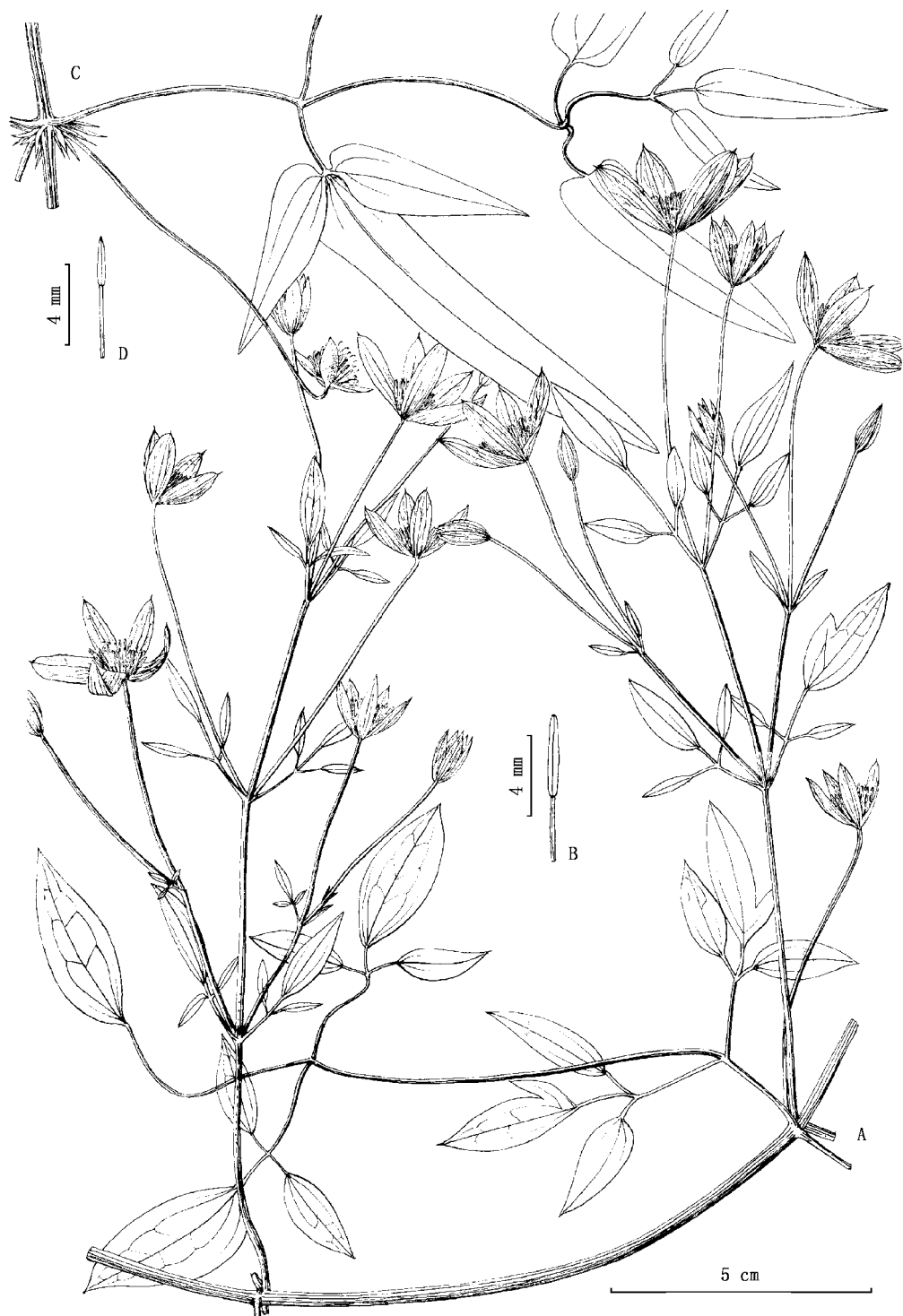


Fig. 2. A, B, *Clematis wexianensis* W. T. Wang. A, flowering branch; B, stamen. Drawn from T. P. Wang 19097. C, D, *C. hastata* Finet & Gagnep. var. *micrantha* W. T. Wang. C, flowering branch; D, stamen. Drawn from P. Y. Li 1072.

Recently, I examined the photograph of the holotype (Fig. 1) and the original description of *C. eriopoda*, and agreed with Maximowicz in that *C. eriopoda* is really a close ally of *C. balearica* Rich. (*C. cirrhosa* L. var. *balearica* (Rich.) Willk.), an endemic of southwestern Europe (Wang, 2002). *Clematis eriopoda* differs from *C. balearica* mainly in its cyme with two free, petiolate, ovate bracts. In view of the close relationship between the two plants, it may be assumed that *C. eriopoda* should be a native of southern Europe rather than Japan, and that this rare, curious species may be rediscovered in southern Europe.

Sect. 2. **Clematis** subsect. **Rectae** Prantl.

**4. Clematis wenzianensis** W. T. Wang, sp. nov. Type: China. Gansu (甘肃): Wen Xian (文县), Baimayu (白马峪), alt. 1000 m, roadside, fl. white, 1964-04-30, *T. P. Wang 19097* (holotype, WUK).

文县铁线莲 Fig. 2: A, B

Ob structuram floralem species nova haec ad sect. *Clematidum* subsect. *Rectas* Prantl pertinens et fortasse affinis *C. obscurae* Maxim., quae plantis totis siccitate nigrescentibus, ramis hornotinis vadoso 6–10-sulcatis, cymis 1–3(–5)-floris haud paniculiformibus distinguitur.

Liana lignosa. Rami hornotini subteretes, vadoso 14-sulcati, sparsissime puberuli, ad nodos dense pubescentes. Folia opposita, bipinnata; pinnae 2-jugatae, remotae, graciliter stipitatae; foliola papyracea, anguste ovata, anguste elliptica, vel ovata, 1.2–3 cm longa, 0.4–1.6 cm lata, apice acuta, basi late cuneata, margine integra, plerumque indivisa, interdum inaequaliter 2-partita, supra sparse puberula vel subglabra, subtus ad costas sparse pilosa, nervis basalibus 3 fere planis vel prominulis; petioli circ. 1.8 cm longi, sparse pubescentes. Cymae axillares, 7–9-florae, paniculiformes; pedunculi 5–6.5 cm longi, subglabri vel prope apicem puberuli; bractee graciliter petiolatae, ternatae, foliolis terminalibus majoribus late lanceolatis 2–2.8 cm longis, eis lateralibus anguste ellipticis vel anguste ovatis 0.8–1.5 cm longis. Flos 2.8–3.2 cm diam.; pedicellus 3.5–6.5 cm longus, glaber. Sepala 4–6, patentia, alba, tenuiter papyracea, obovato-oblonga vel oblonga, 15–20 mm longa, 4–5.2 mm lata, apice apiculata, intus glabra, extus ad marginem tantum velutina, alibi glabra. Stamina numerosa, 5–8 mm longa, glabra, filamentis linearibus 1–4 mm longis, antheris linearibus vel late linearibus 4–4.6 mm longis apice obtusis. Carpella 7–10, circ. 6 mm longa, ovariis puberulis, stylis circ. 5 mm longis dense villosis.

Woody vine. Hornotinous branches subterete, shallowly 14-sulcate, very sparsely puberulous, on nodes densely pubescent. Leaves opposite, bipinnate; pinnae 2 pairs, remote, with slender stalks; leaflets papery, narrowly ovate, narrowly elliptic, or ovate, 1.2–3 × 0.4–1.6 cm, apex acute, base broadly cuneate, margin usually undivided, sometimes unequally 2-parted, adaxially sparsely puberulous or subglabrous, abaxially on midrib sparsely pilose, basal veins 3, nearly flat or slightly prominent; petioles circ. 1.8 cm long, sparsely pubescent. Cymes axillary, 7–9-flowered, panicle-like; peduncles 5–6.5 cm long, subglabrous or near apex puberulous; bracts slenderly petiolate, ternate, terminal leaflets larger, broadly lanceolate, 2–2.8 cm long, lateral leaflets narrowly elliptic or narrowly ovate, 0.8–1.5 cm long. Flower 2.8–3.2 cm in diam.; pedicel 3.5–6.5 cm long, glabrous. Sepals 4–6, spreading, white, thinly papery, obovate-oblong or oblong, 15–20 × 4–5.2 mm, apex apiculate, inside glabrous, outside on margin velutinous, elsewhere glabrous. Stamens numerous, 5–8 mm long, glabrous; filaments linear, 1–4 mm long; anthers linear or broadly linear, 4–4.6 mm long, apex obtuse. Carpels 7–10, ca. 6 mm long; ovaries puberulous; styles ca. 5 mm long, densely villous. Fl. Apr.–May.

China (S Gansu). On hill slope; alt. 1000 m.

From the floral structure, this new species should belong to sect. *Clematis* subsect. *Rectae* Prantl, and may be related to *C. obscura* Maxim., but differs in the plant not turning black

when dry, the 14-sulcate hornotinous branches, and the axillary 7–9-flowered panicle-like cymes. In *C. obscura*, the entire plant turns black when dry, the hornotinous branches are 6–10-sulcate, and the axillary cymes are 1–3(–5)-flowered and not panicle-like (Wang, 2003).

Sect. 3. **Aspidanthera** Spach subsect. **Dioicae** (Prantl) W. T. Wang

**5. Clematis malacoclada** W. T. Wang, sp. nov. Type: Mexico. Puerto de El Aire, 10 km al Sureste de Joya Fria, municipio de Victorio, alt. 2000 m, bosque de pino, ladera de cerro, arbusto trepador, flores blancas, 1989-06-08, *E. Ventura & E. Lopez 6769* (holotype, MO).

Fig. 3

Affinis *C. thalictroidi* Steud., quae foliis majoribus usque ad 10(–14) cm longis 7(–12) cm latis subtus pilis 0.8–1 mm longis tectis, inflorescentiarum nodis superioribus umbellatis 4–7-floris differt.

Liana lignosa, dioica. Rami hornotini 2.2–2.8 mm crassi, 6-angulati, vadose 6-sulcati, pilis subpatentibus 0.6–0.8 mm longis et adpressis 0.1–0.3 mm longis intermixtis dense pubescentes et puberuli vel velutini. Folia opposita, (4–)5-foliolatum pinnata; foliola tenuiter papyracea, anguste ovata vel elliptico-ovata, 4–6.5 cm longa, 1.5–2.5 cm lata, apice acuminata vel longe acuminata, basi rotundata, margine utrinsecus 1–3-dentata vel uno latere integra, supra adpresse pubescentia, subtus dense adpresseque sericeo-puberula, pilis 0.1–0.6 mm longis, nervis basalibus leviter prominulis; petioli 3–5.5 cm longi, cum foliorum rhachidibus dense puberuli. Inflorescentiae staminatae axillares et terminales, multiflorae, paniculiformes, nodis haud umbellatis; pedunculi 3–4 cm longi, dense puberuli; bracteae subulatae, 4–5 mm longae, dense puberulae. Flos staminatus juvenilis 3 mm diam.; pedicellus 2–3 mm longus, dense puberulus; sepala 4, oblongo-elliptica, intus ad nervos basales tres adpresse puberula, extus dense adpresseque puberula, ad marginem velutina; stamina circ. 32, sepalis leviter breviora, glabra, filamentis linearibus, antheris oblongis apice obtusis. Inflorescentia pistillata terminalis multiflora, paniculiformis, nodis haud umbellatis; bracteae foliaceae. Flos pistillatus circ. 1.4 cm diam.; pedicellus 8–12 mm longus, dense puberulus; sepala 4, alba, anguste obovato-oblonga, circ. 7 mm longa, 2–2.2 mm lata, apice leviter acuta vel obtusa, intus sparse puberula, extus dense adpresseque puberula, ad marginem velutina; staminodia 30–40, 5.5–7 mm long, glabra, antheris sterilibus oblongis circ. 0.8 mm longis; carpella 14–24, circ. 6 mm longa, ovariis dense pubescentibus, stylis circ. 5.5 mm longis dense villosis.

Woody vine, dioecious. Hornotinous branches 2.2–2.8 mm thick, 6-angulate, densely pubescent and puberulous, or velutinous, with spreading hairs 0.6–0.8 mm long and appressed ones 0.1–0.3 mm long. Leaves opposite, pinnate, (4–)5-foliolate; leaflets thinly papery, narrowly ovate or elliptic-ovate, 4–6.5 × 1.5–2.5 cm, apex acuminate or long acuminate, base rounded, margin 1–3-dentate per side or at one side entire, adaxially appressed-pubescent, abaxially densely appressed-sericeous-puberulous, basal veins slightly prominent; petioles 3–5.5 cm long, with leaf rachis densely puberulous. Staminate inflorescences axillary and terminal, many-flowered, panicle-like, nodes not umbellate; peduncles 3–4 cm long, densely puberulous; bracts subulate, 4–5 mm long, densely puberulous. Staminate flower (still very young) 3 mm in diam.; pedicel 2–3 mm long, densely puberulous; sepals 4, oblong-elliptic, inside on 3 basal veins appressed-puberulous, outside densely appressed-puberulous, on margin velutinous; stamens ca. 32, slightly shorter than sepals, glabrous, filaments linear, anthers oblong, apex obtuse. Pistillate inflorescence terminal, many-flowered, panicle-like, nodes not umbellate; bracts leaf-like. Pistillate flower ca. 1.4 cm in diam.; pedicel 8–12 mm long, densely puberulous; sepals 4, white, narrowly obovate-oblong, ca. 7 × 2–2.2 mm, apex slightly acute or obtuse, inside sparsely puberulous, outside densely appressed-puberulous, on margin velutinous; staminodes 30–40, 5.5–7 mm long, glabrous, sterile anthers oblong, ca. 0.8 mm long; carpels 14–24, ca. 6 mm long, ovaries pubescent, styles ca. 5.5 mm long, densely villous. Fl. Jun.

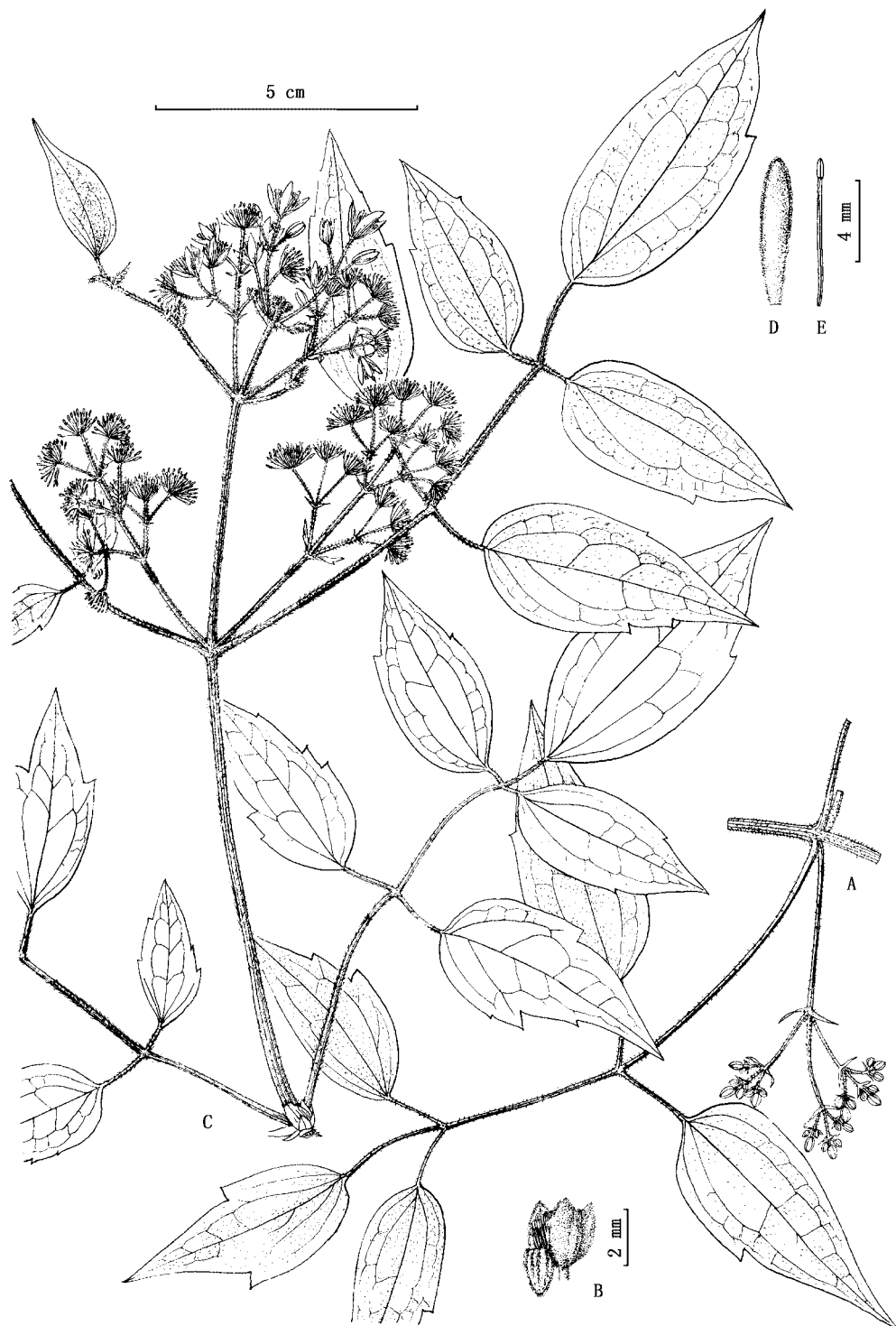


Fig. 3. *Clematis malacoclada* W. T. Wang. A, staminate flowering branch; B, young staminate flower; C, pistillate flowering branch; D, sepal outside of pistillate flower; E, staminode. Drawn from Ventura & Lopez 6769.

Mexico. In pine forest on hill slope; alt. 2000 m.

This new species is related to *C. thalictroides* Steud., but differs in its smaller leaflets with short hairs on abaxial surface, and in its not umbellate inflorescence nodes. In *C. thalictroides*, the leaflets are larger, up to 10(–14) cm long, 7(–12) cm broad, abaxially covered with hairs 0.8–1 mm long, and the upper nodes of inflorescence are umbellately 4–7-flowered (Wang, 2004).

#### Sect. 4. **Tubulosae** Decne.

Recently, after examining the herbarium material and the original descriptions of *Clematis heracleifolia* DC., *C. tubulosa* Turcz., and *C. heracleifolia* DC. var. *ichangensis* Rehd. & Wils., I realized that Handel-Mazzetti (1939) had incorrectly referred some specimens of *C. heracleifolia* var. *ichangensis* and perhaps *C. tubulosa* to *C. heracleifolia*, and that I (Anonymous, 1972) had misidentified the specimens of *C. tubulosa* also as *C. heracleifolia*, and that Fang (1980) and Wang & Bartholomew (2001) all erroneously relegated *C. tubulosa* and *C. heracleifolia* var. *ichangensis* into the synonymy under *C. heracleifolia*. In fact, *C. heracleifolia* is easily distinguished from *C. tubulosa* by having more or less slender, longer (1.2–3.4 cm) and densely puberulous pedicels, sepals not differentiated into upper and lower two parts, and tricolpate pollen (Xie, 2005). In *C. tubulosa*, the pedicels are robust, shorter (0.3–2 cm long), and densely velutinous, the sepals are differentiated into upper elliptic limb-like parts and lower linear claw-like parts, and the pollen is pantoporate (Zhang, 1987\*). From the remarkable differences between the two species just mentioned, *C. tubulosa* should be reinstated. *Clematis heracleifolia* var. *ichangensis* described from western Hubei and southern Shaanxi seems really closely related to *C. tubulosa*, in having fasciculate flowers and robust, short, and densely velutinous pedicels, but differs only in its narrowly obovate-oblong sepals. (Unfortunately, the pollen morphology of *C. heracleifolia* var. *ichangensis* has not yet been reported.) As such, this variety is transferred to *C. tubulosa* from *C. heracleifolia*, and a new combination is made as follows.

**6. *Clematis tubulosa*** Turcz. in Bull. Soc. Nat. Mosc. 10 (7): 148. 1837; Maxim. in Bull. Acad. Sci. St. Pétersb. 22: 214. 1876; Kitagawa in J. Jap. Bot. 13: 356. 1937; et Lineam. Pl. Mansh. 219. 1939; Liou et al., Clav. Pl. Chinae Bor.-Or. 78, pl. 13, fig. 4. 1959; M. Johnson, Klematis 277. 1997; Grey-Wilson, Clematis 192. 2000.—*C. heracleifolia* DC. ssp. *normalis* Kuntze var. *tubulosa* (Turcz.) Kuntze in Verh. Bot. Ver. Brand. 26: 183. 1885. Type: “China boreali”, Kirilow s.n. (holotype, LE!).

*C. davidiana* Decne. ex Verlot in Rev. Hort. 90. 1867, cum icon.; Decne. in Nouv. Arch. Mus. Hist. Nat. Paris, ser. 2, 4: 204, pl. 10. 1881.—*C. tubulosa* Turcz. var. *davidiana* (Decne. ex Verlot) Franch., Pl. David. 1: 13. 1882.—*C. heracleifolia* ssp. *davidiana* (Decne. ex Verlot) Kuntze in l.c.; Anonymous in Fl. Pl. Herb. Chinae Bor.-Or. 3: 175, pl. 76, figs. 5, 6. 1975, ut var.—*C. heracleifolia* var. *davidiana* (Decne. ex Verlot) Forb. & Hemsl. in J. Linn. Soc. Bot. 23: 4. 1886. Type: China. Beijing (北京): Without precise locality, 1863, *David 417* (syntype, P!).

*C. heracleifolia* auct. non DC.: Anonymous in Iconogr. Corm. Sin. 1: 735, fig. 1469. 1972, p.p.; M. Y. Fang in Fl. Reip. Pop. Sin. 28: 99, fig. 3. 1980, p.p.; Anonymous in Fl. Jiangsu. 2: 167. 1982; He, Fl. Beijing, rev. ed., 1: 248. 1984, p.p.; J. W. Wang in Fl. Hebei 1: 471. 1986, p.p.; Yang & Moore in Syst. Geogr. Pl. 68: 294. 1999, p.p.; W. T. Wang in High. Pl. China 3: 531, fig. 851. 2000, p.p.; W. T. Wang & Barth. in Fl. China 6: 370. 2001; J. C. Zhao et al., High. Pl. Cat. Hebei Prov. China 50. 2005, p.p. quoad fig. 44.

\* Zhang Y-L (张镛铤). 1987. Pollen morphology of some sections of *Clematis* in China and its taxonomic significance. Master's Degree Dissertation. Beijing: Beijing Normal University.



**6a. var. tubulosa**

## 卷萼铁线莲

Pedicels robust, 0.3–2 cm long, densely velutinous. Sepals during flowering strikingly reflexed, above elliptic or oblong-elliptic, limb-like, 8–15 × 4–7(–11) mm, below linear, 10–12 × 2–3.5 mm.

China (Beijing, N Hebei, NE Jiangsu, Liaoning, E Shandong, NW Tianjin) and N Korea. Additional specimens examined.

**China. Beijing** (北京): Baihua Shan (百花山), C. W. Wang (王启无) 60292 (PE); Nankou (南口), K. M. Liou (刘继孟) 875 (PE); Shangfang Shan (上方山), Y. Liu (刘瑛) 10463 (PE); Wofosi (卧佛寺), PE Exped. (植物所标本馆队) 743 (PE); Wuling Shan (雾灵山), W. T. Wang & J. Zhang (王文采, 张敬) 2391 (PE). **Hebei** (河北): Fuping (阜平), K. M. Liou (刘继孟) 3268 (PE); Laiyuan (涞源), K. M. Liou (刘继孟) 2791 (PE); Qinglong (青龙), Chengde Exped. (承德队) 71-558 (PE); Xiaowutai Shan (小五台山), J. W. Feng (冯家文) 153 (PE); Yi Xian (易县), X. L. Huang et al. (黄秀兰等) 3323 (PE). **Jiangsu** (江苏): Ganyu (赣榆), T. Y. Chou et al. (周太炎等) 21242 (HHBG, NAS). **Liaoning** (辽宁): Dalian (大连), Z. Wang et al. (王战等) 889 (LE, PE); Fengcheng (凤城), Yabe s.n. (NAS, PE); Shenyang (沈阳), C. S. Wang (王崇书) 3765 (PE). **Shandong** (山东): Muping (牟平), Kunyu Shan (昆嵛山), T. N. Liou & K. M. Liou (刘慎谔, 刘继孟) 1391 (PE). **Tianjin** (天津): Ji Xian (蓟县), S. Y. He (贺士元) 17300 (BNU).

**Korea.** Prov. Kangwon, Mt. Taeam-san, Yun-ho Chung & Young-moo Kang s.n. (US).

**6b. var. ichangensis** (Rehd. & Wils.) W. T. Wang, comb. nov.—*C. heracleifolia* DC. var. *ichangensis* Rehd. & Wils. in Sarg., Pl. Wils. 1: 321. 1913; Kitagawa in J. Jap. Bot. 13: 354. 1937; Hand.-Mazz. in Acta Hort. Gotob. 13: 191. 1939. Type: China. Hubei (湖北): Yichang (宜昌), 1907-08, E. H. Wilson 763 (holotype, GH!; isotype, K!); Without precise locality, A. Henry 4359 (paratypes, G!, GH!). Shaanxi (陕西): Taibai Shan (太白山), 1910, Purdom 1010 (paratypes, GH!, K!).

*C. heracleifolia* auct. non DC.: Hand.-Mazz. in l.c. p.p. quoad H. Smith 5952; Anonymous in Iconogr. Corm. Sin. 1: 735. 1972, p.p.; Anonymous in Fl. Tsinling. 1 (2): 287, fig. 246. 1974; Anonymous in Fl. Hupeh. 1: 362, fig. 506. 1976; M. Y. Fang in Fl. Reip. Pop. Sin. 28: 94. 1980, p.p.; Ding et al., Fl. Henan. 1: 447. 1981, p.p.; J. W. Wang in Fl. Hebei 1: 471. 1986, p.p.; X. W. Wang in Fl. Anhui 2: 331. 1986; Z. H. Lin in Fl. Zhejiang 2: 283. 1992; Y. J. Ling et al. in Fl. Shanxi. 1: 627. 1992, p.p.; W. T. Wang in Keys Vasc. Pl. Wuling Mount. 168. 1995; Y. J. Zheng in Fl. Shandong 2: 22. 1997, p.p.; Yang & Moore in Syst. Geogr. Pl. 68: 294. 1999, p.p.; K. M. Liu in Fl. Hunan. 2: 679. 2000; W. T. Wang & Barth. in Fl. China 6: 370. 2001, p.p.; Z. H. Peng et al., Encycl. Pl. Three Gorg. Yangtze River, China 196. 2005.

## 狭卷萼铁线莲

Pedicels robust, 0.1–2(–3) cm long, densely velutinous. Sepals during flowering slightly reflexed, narrowly obovate-oblong, 11–21 × 3–6 mm.

China (W & S Anhui, E Guizhou, SW Hebei, Henan, Hubei, W Hunan, S Shaanxi, Shandong, Shanxi, NW Zhejiang).

Additional specimens examined.

**China. Anhui** (安徽): Huang Shan (黄山), M. Chen (陈谋) 1312 (IBSC, NAS, PE); Jinzhai (金寨), Pl. Res. Exped. (植物资源队) Da0079 (PE). **Guizhou** (贵州): Shibing (施秉), Wulingshan Exped. (武陵山队) 2570 (PE). **Hebei** (河北): Xingtai (邢台), H. F. Chow (周汉藩) 43474 (PE). **Henan** (河南): Jigong Shan (鸡公山), Steward 980 (US); Lushi (卢氏), K. M. Liou (刘继孟) 4813 (PE); Song Xian (嵩县), Henan Exped. (河南队) 59-34893 (PE). **Hunan** (湖南): Yuanling (沅陵), G. C. Zhang (张桂才) 564 (PE). **Shaanxi** (陕西): Hua Shan (华山), K. S. Hao (郝景盛) 3979 (PE); Shanyang (山阳), T. P. Wang (王作宾) 16367 (IBSC, PE). **Shandong** (山东): Tai Shan (泰山), T. Y. Chou et al. 7514 (NAS, PE); Yantai (烟台), 1890-02, Faber 253 (K, LE). **Shanxi** (山西): Jincheng (晋城), S. Y. Bao (包士英) 339 (PE); Yuncheng (运城), H. Smith 5952 (PE, UPS); Wutai Shan (五台山), K. C. Kuan & Y. L. Chen (关克俭, 陈艺林) 2515 (PE). **Zhejiang** (浙江): Xitianmu Shan (西天目山), X. Y. He (贺贤育) 25728 (NAS, PE).

Sect. 5. **Atragenopsis** Boiss., Fl. Or. Suppl. 2. 1888; W. T. Wang in Acta Phytotax. Sin. 43: 485. 2005. Type: *C. robertsiana* Aitch. & Hemsl.

Woody vines. Seedling leaves unknown (Essig, 1991). Leaves opposite, biternate. Flowers large, solitary, terminal on hornotinous branches, slightly pendulous. Sepals 4, yellowish, spreading (?), membranous, oblong-ovate, outside along margin densely appressed-puberulous, elsewhere glabrous. Stamens numerous, hairy, the outer ones larger, with widened oblanceolate filaments and divergent anthers, the inner ones inward gradually diminished, with broadly linear or linear filaments and not divergent oblong anthers. Carpels numerous; persistent styles elongate, plumose.

Species one, endemic to N Pakistan.

In the protologue of the species *Clematis robertsiana*, the two authors, Aitchison & Hemsley (Aitchison, 1880), correctly pointed out that “it is an exceedingly interesting species, forming a connecting-link between *Atragene* and *Clematis* proper”. In his monograph of *Clematis*, Kuntze (1885) put *C. robertsiana* near *C. japonica* Thunb. (a member of sect. *Viorna* (Reichb.) Prantl subsect. *Bebaenantha* (Edgew.) W. T. Wang) under his sect. 2. *Scandentes perulatae*. In the same year of 1888, Prantl in his classification of the *Clematis* placed *C. robertsiana* in sect. *Viorna* subsect. *Atragene* (L.) Prantl, while Boissier described a new monotypic section, sect. *Atragenopsis*, on the basis of *C. robertsiana*. In various classifications of *Clematis* proposed by Tamura (1967, 1987, 1995), and in that proposed by Snoeijer (1992), *C. robertsiana* and sect. *Atragenopsis* were not included. In the two revisions of the genus *Clematis* published by Johnson (1997) and by Grey-Wilson (2000), separately, just as what Prantl had done in 1888, *C. robertsiana* was placed in the *C. alpina* group, which was placed either in sect. *Atragene* (L.) DC. or in subgen. *Atragene* (L.) Torr. & Gray respectively, and sect. *Atragenopsis* was not mentioned.

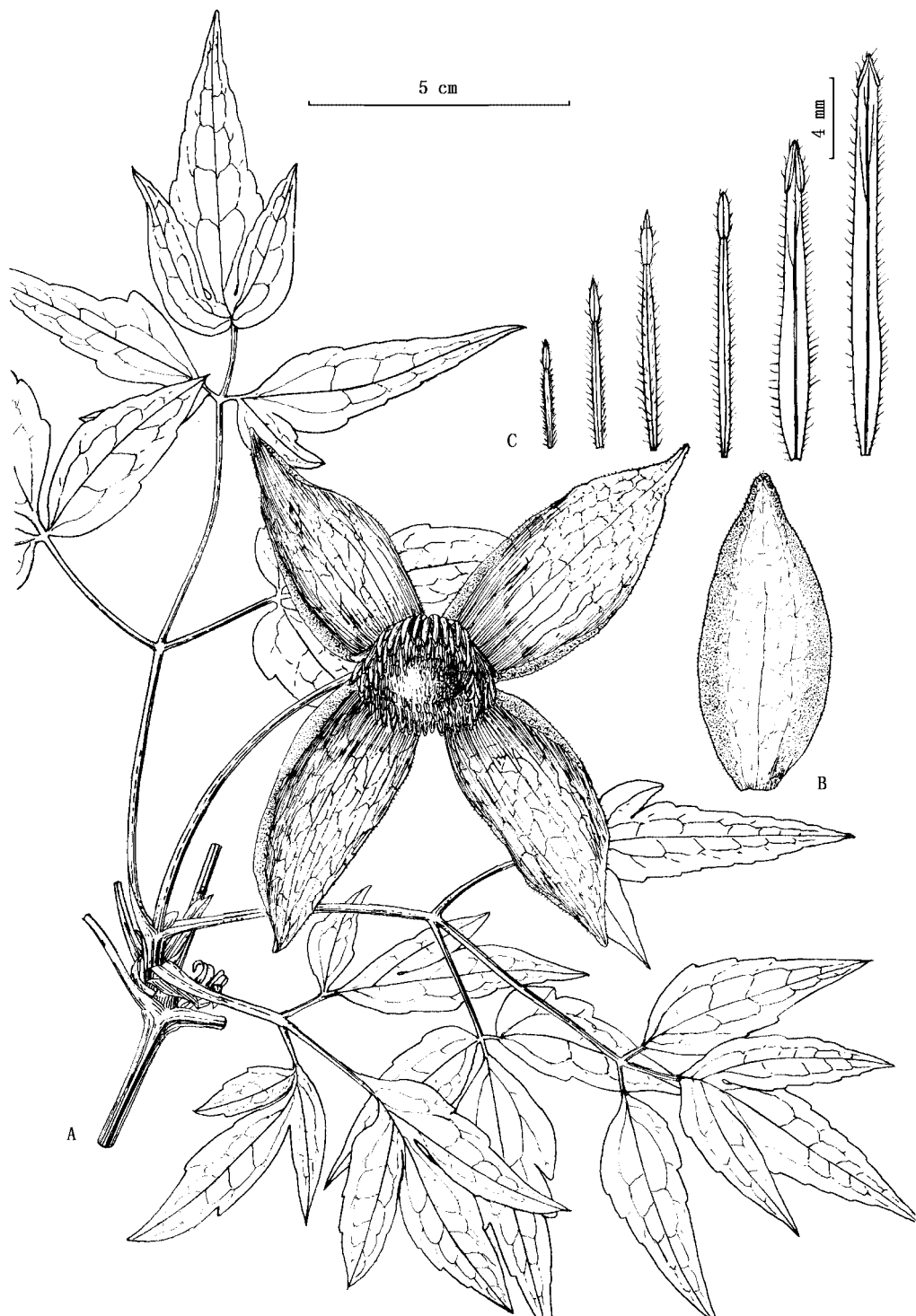
In possessing similar habit and floral structure, *C. robertsiana* shows a striking resemblance to the species of sect. *Atragene*, differing from them mainly in its fertile stamens. This significant distinguishing character seems to lend support to the establishment of sect. *Atragenopsis*, and this monotypic section was accepted by Wang & Li (2005).

In the genus *Clematis*, the two closely related sections, *Atragenopsis* and *Atragene*, appear to form the fourth evolutionary stock, the *C. alpina* stock, which, by having showy flowers and outer hairy stamens with widened filaments or modified into petal-like staminodes, seems more advanced than the other three ones, the *C. montana* stock, the *C. vitalba* stock, and the *C. connata* stock (Wang, 2003).

**7. *Clematis robertsiana*** Aitch. & Hemsl. in J. Linn. Soc. Bot. 18: 29. 1880; Kuntze in Verh. Bot. Ver. Brand. 26: 159. 1885; Prantl in Bot. Jahrb. 9: 258. 1888; Boiss., Fl. Or. Suppl. 2. 1888; Tamura in Kitam., Fl. Afghan. 123. 1960; Stewart in Ann. Cat. Vasc. Pl. W. Pakist. & Kashm. 265. 1972; Qureshi & Chaudhri in Pakist. Syst. 4: 139. 1988; Riedl & Nasir in Ali & Nasir, Fl. Pakist. no. 193: 85. 1991; Johnson, *Clematis* 233. 1997; Grey-Wilson, *Clematis* 185. 2000. Type: Pakistan. Kurram Valley: hill north of Kaiwas, alt. 10000–11000 ft., 1879-07, Aitchison 733 (syntypes, BM!, G!, LE!, P!, S!).

Fig. 4

Woody vine. Old branches ca. 4 mm in diam., 4–6-angulate, shallowly 4–6-sulcate, glabrate, smooth; hornotinous branches arising from axillary buds of old branch, 1.5–16 cm long, puberulous, with 2–3 pairs of leaves; bud scales lanceolate-linear, 1.4–2.5 cm long, usually abaxially densely appressed-pubescent. Leaves long petiolate; leaf blade deltoid in outline, 7–13 × 7–11 cm, glabrous; leaflets herbaceous, mostly lanceolate, some terminal ones ovate, 2–6.5 × 0.5–5 cm, apex attenuate, base cuneate, margin 1–3-crenate, obtusely 1–3-dentate, or entire, undivided or 2–3-parted, midribs abaxially slightly prominent; petioles 2.5–5.2 cm long. Flower ca. 10 cm in diam.; pedicel 7–10.5 cm long, robust, glabrous. Sepals



**Fig. 4.** *Clematis robertsiana* Aitch. & Hemsl. A, flowering branch; B, sepal outside; C, stamens. Drawn from Maarsukh 14962.

4, oblong-ovate or suboblong, ca.  $6 \times 2$ –2.4 cm, apex slightly acute. Stamens numerous, 5–20 mm long; filaments 4–16 mm long, 0.8–2 mm broad; anthers oblong or narrowly oblong, 1–3.5 mm long, apex obtuse. Carpels ca. 20, ca. 14 mm long, densely villous. Achenes compressed, obovate, ca.  $4 \times 3$  mm, appressed-yellowish-sericeous; persistent styles ca. 2 cm long, plumose. Fl. June–July.

N Pakistan (Kurram Valley). Rocky scrub and cliffs; alt. 3300–3500 m (Grey-Wilson, 2000).

Additional specimens examined.

**Pakistan.** Kurram Valley, 1880, Aitchison 340 (LE); the same locality, Aina Mela, 1894–06, *Maarsukh* 14670, 14962 (GH).

Grey-Wilson (2000) reported that besides occurring in Kurram Valley, Pakistan, *C. robertsiana* also occurs in Nagarhar, Afghanistan, which is adjacent to Kurram. Unfortunately, I have not seen any specimen of this species collected from the latter locality.

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## 铁线莲属研究随记(VI)

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**摘要** 讨论了 *Clematis eriopoda* Maxim. 和 sect. *Atragenopsis* Boiss. 的地位, 认为这二分类群均应成立; 描述了2新种, 1新变种; 过去长期被归并的卷萼铁线莲 *C. tubulosa* 得到恢复; *Clematis heracleifolia* var. *ichangensis* 被转移改作卷萼铁线莲的变种; 首次给出光叶铁线莲 *Clematis glabrifolia* 的果实的形态描述。  
**关键词** 铁线莲属; 新分类群; 分类学地位; *Clematis eriopoda*; sect. *Atragenopsis*; 恢复; *Clematis tubulosa*; 新组合; *Clematis heracleifolia* var. *ichangensis*; 果实描述; 光叶铁线莲