

雀儿豆属(豆科)的订正*

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NOTES ON THE GENUS *CHESNEYA* LINDL. EX ENDL. (FABACEAE)

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Abstract According to the main morphological characters, *Spongiocarpella* Yakovl. et Ulzikh. should be reduced to the genus *Chesneya* Lindl. ex Endl. The present author had examined all available specimens and then transferred all species (nine species and one sub-species) of *Spongiocarpella* into *Chesneya*. At the same time, four species and one sub-species are reduced, and a new grade is proposed.

Key words Fabaceae; *Spongiocarpella*; *Chesneya*; Taxonomical revision

摘要 在鉴定了大量标本的基础之上, 作者将海绵豆属 9 种 1 亚种转入雀儿豆属, 并对 4 个种和 1 个亚种作了合并, 同时作了一新改级组合。

关键词 豆科; 海绵豆属; 雀儿豆属; 分类修订

海绵豆属 *Spongiocarpella* Yakovl. et Ulzikh. 是 1987 年建立的, 其模式种为 *Spongiocarpella nubigena* (D. Don) Yakovl. [*Chesneya nubigena* (D. Don) Ali; *Astragalus nubigenus* D. Don]。Yakovlev 和 Sviazeva(1987)曾这样描述该属的主要特征: “A generibus ceteris subtribus Astragalinae leguminibus unilocularibus pericarpio spongioso, habitu pulviniformi et petiolis, persistentibus differt”。基于上述特点所确定的海绵豆属 *Spongiocarpella* 共包括 9 个种和 1 个亚种。

本文作者在近期整理标本时, 对我国的海绵豆属植物作了详细研究, 在鉴定了大量标本(含模式产地标本)和查阅资料的基础上, 认为海绵豆属 *Spongiocarpella* 实为雀儿豆属 *Chesneya* 的一部分, 其理由如下: (1) *Spongiocarpella* 成熟果皮为革质, 并非海绵质, 未成熟果皮偶见海绵状, 但也决非海绵质, 这一主要特点与 *Chesneya* 相同。Yakovlev 和 Sviazeva(1987)在所描述的 9 个种和 1 个亚种中, 5 个新组合是由 *Chesneya* 转移过来的; 另外 4 个新种和 1 个新亚种中, 3 个新种未见果实; 1 个新种及 1 个新亚种未提及果皮特征, 并无充分证据阐明该属果皮为海绵质。(2) 植株垫状, 托叶和叶柄宿存这一主要性状在 *Spongiocarpella* 和 *Chesneya* 中是相同的, 所不同的是 Yakovlev 和 Sviazeva(1987)将前者描述

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为垫状灌木,而一般学者将它们描述为垫状草本(尽管他们描述的是完全相同的植物标本)。根据其形态特点,本文作者认为采用垫状草本这一术语描述该属植物习性较为确切。

综上所述,*Spongiocarpella* 应归入 *Chesneya*, 现作如下处理:

雀儿豆属

Chesneya Lindl. ex Endl. in Gen. Pl. 1275. 1839; Boriss. in Kom., Fl. USSR 11: 280. 1945; Pohill et Raven, Adv. Legum. Syst. 362. 1981. — *Spongiocarpella* Yakovl. et Ulzikh. in Bot. Zhurn. 72(2): 249~251. 1987.

1 云雾雀儿豆

Chesneya nubigena (D. Don) Ali in Scientist (Karachi) 3: 4. 1959; Ohashi in Fl. E. Himal. 2: 62. 1971; id. in J. Jap. Bot. 50: 306, 1975; P. C. Li in C. Y. Wu, Fl. Xizang. 2: 791, 1985; id. in Fl. Reip. Popul. Sin. 42(1): 75~76. 1993. — *Spongiocarpella nubigena* (D. Don) Yakovl. in Bot. Zhurn. 72(2): 252. 1987, syn. nov. — *S. intermedia* Yakovl. l. c. 254, 1987, syn. nov. — *S. yunnanensis* Yakovl. l. c. 256~257. 1987, syn. nov. — *S. paucifoliolata* Yakovl. l. c. 254~255. 1987, syn. nov. — *S. nubigena* subsp. *kumaoensis* Yakovl. in Bot. Zhurn. 72(2): 252. 1987, syn. nov. — *Astragalus nubigenus* D. Don in Prodr. Fl. Nepal. 245. 1825 — *A. crassicaulis* Grah. in Wall. Cat. no. 5932, 1831~1832, nom. nud. — *Caragana crassicaulis* Benth. ex Baker in Hook. f. Fl. Brit. Ind. 2: 117. 1876. — *Calophaca crassicaulis* (Benth. ex Baker) Kom. in Acta Hort. Petrop. 29: 359, 1909.

本种下有二亚种 subsp. *nubigena* 和 subsp. *purpurea*, 其区别为:

花黄色;植株较高,小叶较大,宿存叶柄较少 云雾雀儿豆 subsp. *nubigena*

花紫色;植株矮小,小叶较小,宿存叶柄较多.....

..... 紫花雀儿豆 subsp. *purpurea* (P. C. Li) X. Y. Zhu

1.1 云雾雀儿豆 原亚种

subsp. *nubigena*

原亚种在我国主要分布在云南西北部、西藏南部至西部的普兰。该种形态变异甚大,随着海拔升高,植株由高变矮,叶轴由长变短,残存托叶和叶柄由少变多等呈现连续梯度变异。Yakovlev 和 Sviazeva 在 1987 年发表新种 *Spongiocarpella intermedia* Yakovl., *S. yunnanensis* Yakovl., *S. paucifoliolata* Yakovl. 和 *S. nubigena* subsp. *kumaoensis* Yakovl., 它们的模式标本分别为 S. Tibet, Bimbi La, Tsari, 4350 m, VI 3, 1936, Ludlow et Sherrieff, n 1766 (BM); Mt. Peima, Mekong-Yangtze divide between Atuntze and Pungtzera, 1923, J. Rock, N 9298 (holotype, LE; isotype, US); NW Yunnan, on cliffs and rock alpine pastures on the Mekong-Salwin divide, lat. 27°30' N, Long. 98°56' E, alt. 3900~4200 m, V, 1921, G. Forrest, n 19721 (US); Western Nepal, rocks in Nampa Gadh, alt. 3600~3900 m, 26 VI, 1886, Duthie, n 5456 (LE). 他们是这样描述 *S. intermedia* 的:“*A. S. nubigena* et *S. purpurea*, quibus affinis est, vexillo basi laminae appendiculato, alarum ac carinae lamina ca. 5 mm (nec 3~4 mm) lata, foliolis minus numerosis [13~17 (21) nec 21~33], a posteriore praeterea corolla flava (nec rubra) necnon laciniis stipularum

pilosis bene differt”。然而,我们看到采自模式产地察隅的标本(青藏队 73-430)生长在山坡灌丛中,海拔 4200 m,花为黄色,旗瓣基部二侧具三角状突起(即附属物),小叶 13~21 枚,这些特征与云雾雀儿豆 *Chesneya nubigena* 相同,我们认为该种显然不能成立,应予归并。他们对 *S. yunnanensis* 描述如下“A speciebus ceteris generis *Spongiocarpella* floribus 2.8~3.5 cm longis, alarum laminis 1.2~1.6 cm (nec 0.8~1.2 cm) longis differt”。我们看到采自模式产地白马山的标本(T. T. Yu 9105),此标本为幼果标本,但从花瓣的残片上看,花长度和龙骨瓣长度变异较大,其它特征与云雾雀儿豆相同,我们认为该种亦应并入云雾雀儿豆。另外,他们在描述 *S. paucifoliolata* 时写到:“A *S. intermedia* et *S. yunnanensi*, quibus similis est, foliolis 11~13 (nec 13~23), a priore praeterea stipularum laciniis subglabris et corolla atro-rubra (nec flava), a posteriore vero corolla rubra (nec flava) differt。”我们看到采自模式产地云南西北部的标本(T. T. Yu 11631; T. T. Yu 12089),花黄红色或黄浅红色,托叶线状,有毛或近无毛,小叶数目 11~23 变异较大。除花色不同外,其它特征与云雾雀儿豆相同,黄花植物出现花黄红色或黄浅红色植物的变异属个别基因位点突变的结果。我们在观察膜荚黄芪 *Astragalus membranaceus* (Link ex Fisch.) Bge. 和蒙古黄芪 *A. membranaceus* var. *mongholicus* (Bge.) Hsiao 的变异时,发现旗瓣由黄色到紫色的变异高达 50%~60%,因此我们认为该种应归入云雾雀儿豆。他们在描述 *S. nubigena* subsp. *kunmaoensis* 时是这样写的:“Foliola basi asymmetrica, interdum marginibus imbricata; stipulae apice uni-raro basi bilaciniatae”。这些特征在云雾雀儿豆的变异范围之内,笔者看到该亚种模式标本照片,我们认为该种属云属雀儿豆。云雾雀儿豆与紫花雀儿豆 *C. purpurea* 相近,前者花黄色与后者不同。作者在鉴定标本时发现云雾雀儿豆主要生长在海拔 3500~4700 m 之间,偶见在 5300 m 有分布(青藏队 76-8230);而紫花雀儿豆主要分布 4250~5300 m 之间,偶见在 3950 m 有分布;它们随着海拔的升高呈替代分布。云雾雀儿豆与紫花雀儿豆在海拔 4250~4700 m 之间镶嵌分布,但后者分布海拔高,植株矮化,叶轴缩短,残存的托叶和叶柄增多等而与前者不同,属生态型变异,我们认为宜作亚种处理,即紫花雀儿豆 *Chesneya nubigena* subsp. *purpurea* (P. C. Li) X. Y. Zhu。

Yunnan(云南):Lijiang(丽江),summit of Snow Mt., in north-eastern part, 1939-08-03, Y. Z. Zhao(赵裕章) 21269; Zhongdian(中甸), summit of Snow Mt., alt. 3650 m, 1937-19-07, T. T. Yu(俞德俊) 13626; ib., Siantantung, on rock slope in alpine, alt. 3600 m, 1937-07-12, T. T. Yu 12089; Dêqên(德钦), Paimashan Munela, on rock hill, alt. 4100 m, 1937-07-24, T. T. Yu 9105. **Xizang**(西藏):Burang(普兰),Northern slope of Lamalaji, on rocks of mountainous field, alt. 5300 m, 1976-07-18, Qinghai-Xizang Exped. (青藏队) 76-8230;Yadong(亚东),1953-07-21, P. C. Tsoong(钟补求) 5794; ib., near summit of Pali Mt., on mountainous slope, alt. 4600 m, 1974-09-20, Qinghai-Xizang Exped. 74-2727; ib., Donggelashankou, in shrub on slope of alpine, alt. 4300 m, 1975-06-06, Qinghai-Xizang Additional Exped. (青藏队补点) 750220; ib., in southeastern slope of Pagri, 1953-07-21, P. C. Tsoong 7309; Cona(错那), Qingshankou, in meadow, alt. 4400~4600 m, 1975-07-18, C. Y. Wu et al. (吴征镒等) 75-970A; Nyalam(聂拉木), Guling, alt. 4200 m, 1975-06-07, Qinghai-Xizang Vegetation Exped. (青藏植被

组) 6453; ib., Xiaoguling, in meadow and shrub on mountainous slope, alt. 4150 m, 1975-06-19, Qinghai-Xizang Exped. 5743; ib. 7 km S of the County, on mountainous slope, alt. 4100 m, Sino-Japan Exped. (中日考察队) T458; ib., on south slope, alt. 4200 m, 1974-06-01, Climbing Mt. Exped. (登山科考队) 260; ib., near the county, in meadow of mountainous slope, alt. 3750 m, 1966-06-14, Y. T. Zhang et K. Y. Lang (张永田, 郎楷永) 4226; ib., in shrub of mountainous slope, alt. 3800~4100 m, 1966-06-12, Y. T. Zhang et K. Y. Lang; Zayü (察隅), Zhelashankou, in shrub on slope, alt. 4200 m, 1973-06-27, Qinghai-Xizang Exped. 73-430.

1.2 紫花雀儿豆 亚种 新改级

subsp. **purpurea** (P. C. Li) X. Y. Zhu, grad. nov. — *Chesneya purpurea* P. C. Li in Acta Phytotax. Sin. 19(2): 236. 1981; id. in Fl. Reip. Popul. Sin. 42(1): 76. 1993; id. in C. Y. Wu, Fl. Xizang. 2: 792. 1985. — *Spongiocarpella purpurea* (P. C. Li) Yakovl. in Bot. Zhurn. 72(2): 253~254. 1987, syn. nov.

该亚种花紫红色, 植株矮小, 小叶小及宿存叶柄多与原亚种不同。

本亚种在我国分布在西藏南部, 通常生于 4100~5200 m 的山坡灌丛、草地和高山草甸, 在 4100~4700 m 之间与云雾雀儿豆 Subsp. *nubigena* 镶嵌生长, 在 4700 m 以上逐渐为本亚种所替代。

Xizang (西藏): Nyalam (聂拉木), Guling, alt. 4400 m, 1975-06-07, Qinghai-Xizang Vegetation Exped. (青藏植被组) 6454 (type! PE); ib. on northern slope of Xixi-bangmafeng, in meadow of mountainous slope, alt. 5200 m, 1966-06-15, Y. T. Zhang et K. Y. Lang (张永田, 郎楷永) 4075; ib., on northern slope, alt. 4300 m, 1974-06-01, Climbing Mt. Exped. (登山科考队) 261; ib., near the county, in alpine, alt. 3850 m, 1981-09-07, Z. C. Ni *et al.* (倪志成等) 2080; Yadong (亚东), Donggelashankou, in meadow, alt. 4300 m, 1975-06-06; Qinghai-Xizang Additional Exped (青藏补点) 750230; ib., in meadow, alt. 4490 m, 1961-05-24, Qinghai-Xizang Exped. (青藏队) 1464; Tingri (定日), on slope, alt. 5300 m, Sino-Japan Exped. (中日考察队) T563. ib., in shrub on slope, alt. 5200 m, 1966-05-10, Y. T. Zhang et K. Y. Lang 3729; Dinggye (定结), Jilincun, in shrub of Xiaoyangma Mt., alt. 5200 m, 1975-06-02, Qinghai-Xizang Exped. (青藏队) 5434; ib., on northern slope of Xiaoyangma Mt., alt. 4600~4800 m, 1975-06-02, Qinghai-Xizang Vegetation Exped. (青藏队植被组) 3639; Gyirong (吉隆), Malashanxikou, on slope, alt. 4900 m, 1975-07-08, Qinghai-Xizang Vegetation Exped. 5048.

2 川滇雀儿豆

Chesneya polystichoides (Hand. -Mazz.) Ali in Scientist (Karachi) 3: 10. 1959. — *Spongiocarpella polystichoides* (Hand. -Mazz.) Yakovl. in Bot. Zhurn. 72(2): 258. 1978, syn. nov. — *S. paucifoliolata* Yakovl. l.c. 254~255. 1987, syn. nov. — *S. yunnanensis* Yakovl. l.c. 256~257. 1978, syn. nov. — *Calophaca polystichoides* Hand. -Mazz. in Symb. Sin. 7: 552. 1993.

本种主要分布在四川西南部,云南西北部。生于海拔 3400~4200 m 的山坡灌丛、石质山坡或山坡石缝中。

Yunnan (云南): Dégén (德钦), Baima Mt., on slope, 1935-09, C. W. Wang (王启无) 69647; ib., Cangnougenshuiling, on rocks, alt. 4000~4200 m, 1940-08-01, Feg. 6196; ib., on slope, 1935-09, C. W. Wang 70084; ib., Kaakerpu, on slope of rocks, alt. 3400 m, 1937-06-06, T. T. Yu (俞德俊) 8504; Lijiang (丽江), Snow Mt., 1940-07-17, R. C. Ching (秦仁昌) 30897; Heqingsong (鹤庆松), Maershan, in meadow, 1929-08-25, R. C. Ching 24104. **Xizang** (西藏): Chawalong (察瓦龙), alt. 4000 m, 1935-09, C. W. Wang 66113.

3 大花雀儿豆

Chesneya macrantha Cheng f. ex H. C. Fu in Fl. Intramong. 3: 180. 1977. — *Spongiocarpella grubovii* (Ulzj.) Yakovl. in Bot. Zhurn. 72(2): 258~259. 1987, syn. nov. — *Oxytropis grubovii* Ulzj. in Bot. Zhurn. 56(8): 1149~1150. 1971. — *Chesneya macrantha* Cheng f. ex P. C. Li in Acta Phytotax. Sin. 19(2): 237. 1981.

本种主要分布在新疆东部和内蒙古,生于干旱山坡。Yakovlev 和 Sviazeva 在 1987 年发表新种 *Spongiocarpella potanii*, 其模式标本为: Tianschan orientalis, ad pedem australem inter lapides circum Hami, 29 V, 1887, G. Potanin (LE)。他们是这样描述的: “A. S. grubovii, cui affinis est, floribus minoribus 2~2.5 cm (nec 2.5~3.0 cm) longis, calyce 0.8~1.0 cm (nec 1.2 cm) longo, foliolis 5~7 (nec 7~11) differt”。从上述特征来看,该种与大花雀儿豆 *C. macrantha* 的区别在于花小,萼小和小叶数目少,由于 Yakoelev 和 Sviazeva (1987) 描述的标本采自 5 月份,植物正处在生长发育阶段,尚未成熟,因此,我们认为 *S. potanii* 是大花雀儿豆 *C. macrantha* 的幼株。

Nei Monggol (内蒙古): Wulanchabu (乌兰察布盟), 1959-07-10, P. C. Wang (王朝品) 32 (type! PE); Baganmao (巴干毛), 1931-05-29, T. N. Liou (刘慎谔). **Xinjiang** (新疆): Altun Mt. (阿尔金山), 1958-08-02, Z. Y. Guo (郭中央) 0226.

4 刺柄雀儿豆

Chesneya spinosa P. C. Li in Acta Phytotax. Sin. 19(2): 236. 1981; id. in C. Y. Wu, Fl. Xizang. 2: 236, 1985. — *Spongiocarpella spinosa* (P. C. Li) Yakovl. Bot. Zhurn. 72(2): 259. 1987, syn. nov.

本种主要分布在西藏南部,生于海拔 3900~4900 m 的石质山坡上。

Xizang (西藏): Xigaze~Saga (日喀则~萨噶), alt. 4200 m, 1975-05-30, Qinghai-Xizang Exped. (青藏科考队) 5423 (type! PE); Nangxian (朗县), Duqiongqu, on slope near river, alt. 3930 m, 1961-05-14, Qinghai-Xizang Exped. 1427; Shajia (莎迦), on rocks, alt. 4200 m, 1961-08-05, Qinghai-Xizang Exped. 1976; Lhunze (隆子), on slope, alt. 4000 m, 1974-08-04, Qinghai-Xizang Exped. 904; Comai (措美), in bottom of hill, 1974-07-26, Qinghai-Xizang Vegetation Exped. 1973; Longjia (隆迦), on slope, alt. 4300 m, 1960-07-13, G. X. Fu (傅国勋) 828; Jiangzi (江孜), on rocks, alt. 3900 m, 1961-05-16, J. W. Zhang (张经纬) 2407.