

华西南大戟科植物小志

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NOTULAE DE EUPHORBIACEIS AUSTR-OCCIDENTALI-SINICIS

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关键词 巴豆属; 山靛属; 大戟属; 新分类群; 分类学杂记

Key words *Croton*, *Mercurialis*, *Euphorbia*, New taxa, Taxonomic notes

巴豆属 *Croton* L.

大齿滇巴豆 (变种)

Croton yunnanensis W. W. Smith var. *megadontus* W. T. Wang, var. nov.

A var. *yunnanensis* differt folis margine irregulariter dentatis, dentibus usque ad 3.5—4 mm longis.

Sichuan (四川): Yanyuan (盐源) Guabie (瓜别), alt. 1800m, 28 Jul. 1983, Exped. Qingzang (青藏队) 83-12530 (holotypus, PE; isotypus, KUN); Kangding (康定), Wasi (瓦斯), alt. 1900 m, 31 Maj. 1974, Qin Zi-sheng (秦自生) 6134.

本变种叶的边缘有不规律的牙齿, 牙齿较大, 长达3.5—4毫米; 在原变种, 叶的边缘有多少规则的小牙齿或小钝齿。

山靛属 *Mercurialis* L.

毛果山靛 (变种)

Mercurialis leiocarpa Sieb. et Zuce. var. *trichocarpa* W. T. Wang, var. nov. — *M. acanthocarpa* auct non Lévl. et Van., C. Y. Wu et al. Ind. Fl. Yunnan. 1: 449(1984).

A var. *leiocarpa* differt ovario capsulaque hispida.

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Yunnan (云南): Yangbi (漾濞), Nianniuging (仙女箐), in sylvis prope rivulos, 24 Apr. 1940, Ching Ren-chang (秦仁昌) 22355 (holotypus, PE; isotypus, KUN); Tengchung (腾冲), Houqiao (猴桥), alt. 1850 m, in sylvis, 19 Maj. 1964, Wu Su-kung (武素功) 6732 (KUN).

本变种的子房和蒴果均被硬毛; 在原变种, 子房和蒴果均无毛。

大戟属 *Euphorbia* L.

大戟组 Sect. *Tithymalus* (Scop.) Boiss.

柴胡状大戟

Euphorbia mairei Lévl. in Repert. Sp. Nov. 12:286 (1913); Cat. Pl. Yunnan 96 (1916).—*E. bupleuroides* Diels in Not. Bot. Gard. Edinb. 5:219 (1912), nec Desf. (1798), nec Willd. ex Ledeb. (1849—1851); Hand-Mazz. Symb. Sin 7:228 (1931); Lauener in Not Bot. Gard. Edinb. 40(3):478 (1983); C.Y. Wu et al. Ind. Fl. Yunnan. 1:438 (1984).

var. *mairei*

Cyathii lobi albo-ciliati; glandulae glabrae.

云南: 大理, 王启无63171; 漾濞, 王汉臣1876; 丽江, 冯国楣22305; 中甸, 青藏队81-989; 东川, 1912年5月, E.E. Maire, 无号 (*E. mairei* Lévl. 的模式holotypus, 见照片)。

分布: 云南北部及东南部、四川西南部。

本种的茎上部及伞辐被短柔毛, 杯状花序的腺体全缘而接近硕苞大戟 *E. wallichii* Hook. f. 和藏西大戟 *E. stracheyi* Boiss.。H. Handel-Mazzetti 于1931年将 *E. mairei* Lévl. 归并到 *E. bupleuroides* Diels, 这两个名字的确代表了同一个种, 但是从《Index Kewensis》作者了解到“bupleuroides”这一加词在 *Euphorbia* 属中早在18和19世纪已被一些学者用过, 所以1912年出现的 *E. bupleuroides* Diels 遂成了晚出异物同名, 按照国际植物命名法规应予废弃, 而应采用 *E. mairei* Lévl. 作为柴胡状大戟的正确学名。

黄缘毛柴胡状大戟 (变种) 图1. 1—2

b. var. *luteociliata* W. T. Wang, var. nov.

Cyathii lobi longe luteo-ciliati; glandulae sparse puberulae.

Sichuan (四川): Jiulong (九龙), Sanyanlong (三岩龙), alt. 2900 m, in quercetis alpinis, 18 Aug. 1960, Ying Zun-sheng (应俊生) 4016 (holotypus, PE); Muli (木里), Mons Biluogeshan, alt. 3000 m, 29 Jun. 1960, Ying Zun-sheng (应俊生) 4223.

本变种的杯状花序裂片边缘有黄色长柔毛, 腺体疏被短毛, 在原变种, 杯状花序裂片被白色较短柔毛, 腺体无毛。

疣果大戟

E. micractina Boiss. in DC. Prodr. 15(2): 127; (1862); Hook. f. Fl. Brit. Ind. 5:261(1887); Hand.-Mazz. Symb. Sin. 7:231 (1931), P. P. ?—*E. shetoënsis* Pax et Hoffm. in Repert. Sp. Nov. Beih. 22: 433 (1922).

var. **micractina**

Ovarium capsulaque tuberculata.

西藏: 索县, 王金亭3423; 嘉黎, 陶德定10442; 昌都, 青藏队76-6031; 江达, 青藏队76-12458。四川: 德格, 崔友文 4374; 乡城, 青藏队 81-5035; 稻城, 四川植被队1727; 乾宁, 青藏队 74-3512; 红原, 四川植被队 9131; 宝兴, 张秀实等5396; 汶川巴郎山, 汪发绩21200。

分布: 西藏、四川; 克什米尔一带。

甘青大戟 (变种)

b. var. **tangutica** (Proch.) W. T. Wang, var. et st. nov.—*E. tangutica* Proch. in Bull. Acad. Sci. URSS 21: 208, fig. 4 (1927)—*E. micractina* auct. non Boiss.; S. B. Ho in Fl. Tsinling. 1(3):159(1981).

Ovarium capsulaque echinata.

四川: 金川, 绰斯甲, 姜恕8869; 理县, 姜恕, 金存礼837, 914, 1136; 马尔康, 李馨71360。甘肃: 无准确地点, 黄河队56-689, 56-1010。青海: 互助, 郭本兆9324; 门源, 青甘队60-2632。

分布: 四川西北部、青海、甘肃、陕西南部。

E. shetoënsis Pax et Hoffm., 的模式标本只一号, Limpricht 1739, 采自四川康定折多山一带, H. Handel-Mazzetti 于1931年(见上引文献)把此名归并到 *E. micractina* Boiss. 同时, 他还把 *E. tangutica* Proch. 也并入后者。J. Prochanov 于1927年根据N. Przewalskii采自青海湖之东及大通一带, G. Potanin 采自甘肃夏河及洮河一带, M. Beresovski 采自四川松潘以及 V. Kashkarov 和 V. Ladygin 采自长江上游地区的多号标本描述了 *E. tangutica* Proch., 其蒴果的突起呈棘状(原始描述为 verrucis breviter cylindrico-conicis), 而与 *E. micractina* Boiss. 蒴果的瘤状突起不同, 因此, 作者把这个类型作为变种处理。Prochanov在 *E. tangutica* Proch. 之下还

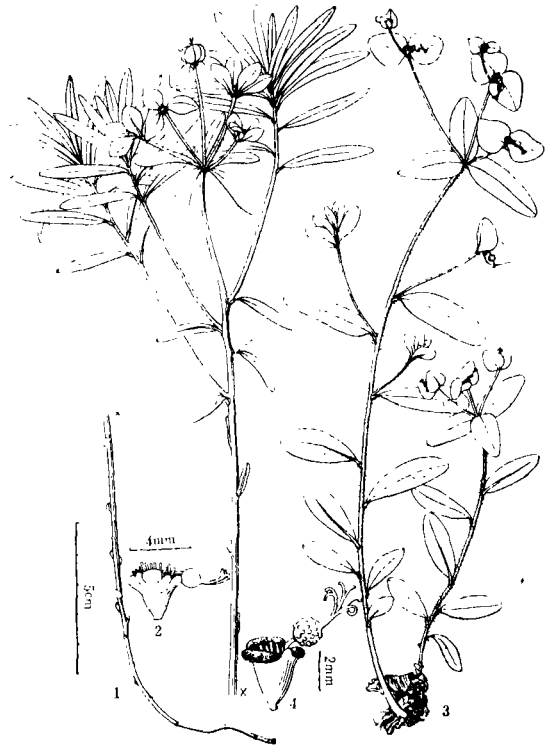


图1 1—2. 黄绿毛柴胡状大戟 *Euphorbia mairei* Lévl. var. *luteociliata* W. T. Wang 1. 植株全形; 2. 杯状花序。3—4. 长毛大戟 *E. villifera* W. T. Wang 3. 植株全形; 4. 杯状花序。(刘春荣绘)

根据 Potanin 采自康定的标本建立一变种 *var. elatior* Proch., 其特征为植株较高大(达30厘米), 叶较长, 伞幅也较长, 对这个类型尚须在看到标本后作进一步的研究。

长毛大戟 新种 图1. 3—4

Euphorbia villifera W. T. Wang, sp. nov.

Affinis *E. micractinae* Boiss., quae caulibus foliisque glabris differt.

Herba perennis. Caules 10—20 cm alti, simplices vel ramosi, densiuscule albo-villosuli. Folia alternata, brevissime petiolata; laminae papyraceae, oblongae vel lanceolato-oblongae, 2—3 cm longae, 0.7—1 cm latae, apice obtusae vel acutiusculae, basi late cuneatae, margine integrae, utrinque albo-pilosae, costa dorso prominula, nervis lateralibus obscuris; petioli 1—1.6 mm longi, piloselli. Umbella circ. 4 cm diam., bis ramosa; bracteae umbellares 3, verticillatae, lanceolato-oblongae vel anguste ovatae, 2—2.7 cm longae, pilosae; radii 3, 1.4—3.2 cm longi, glabri vel superne piloselli; bractae umbellularum cyathiorumque oppositae, deltoideo-ovatae, 0.5—1.4 cm longae, 0.5—1.2 cm latae, apice obtusae, glabrae. Cyathia sessilia, campanulata, 2—2.5 mm longa, 2.5 mm diam., extus glabra, intus sub glandulis puberula, lobis suboblongis, bracteis inter flores stamineos linearibus circ. 1.2 mm longis albo-lanatis; glandulae 4, oblongae, circ. 2 mm longae, glabrae. Flores staminei glabri. Flores pistillati tenuiter pedicellati, glabri; ovarium globosum minute tuberculatum; styli 3 circ. 2 mm longi, basi connati, apice 2-fidi, lobis tenuibus 0.6 mm longis.

Gansu (甘肃): Zhouqiu (舟曲), alt. 2000 m, ad margines pinetorum, fl. flavo-virides, 20 Maj. 1959, Jiang Shu et Jin Cun-li (姜恕, 金存礼) 361 (holotypus, PE).

本种接近疣果大戟 *E. micractina* Boiss., 后者的茎和叶均无毛, 可以区别。

黑水大戟 新种 图4. 4—5

Euphorbia heishuiensis W. T. Wang, sp. nov.

Affinis *E. micractinae* Boiss., quae foliis oblongis ellipticisve, bracteis umbellularibus oblongis ovatisve, bracteis umbellularum late rhomboideo-ovatis facile recedit.

Herba. Caules circ. 30 cm alti, breviter ramosi, glabri. Folia alternata, subsessilia, papyracea, linearia vel anguste linearia, 4—5.5 cm longa, 2.5—4.5 mm lata, apice truncata interdum inconspicue emarginata, basin versus attenuata, margine integra, basi puberula excepta glabra, costa dorso prominente, nervis lateralibus obscuris. Umbella circ. 10 cm diam., quater ramosa; bracteae umbellares 3, verticillatae, foliis caulinis similes, 5—5.8 cm longae, glabrae; radii 3, 2.6—4 cm longi, glabri; bractae umbellularum oppositae, foliis caulinis similes, 2.5—3.5 cm longae, glabrae; bractae cyathiorum oppositae, anguste lineares, 6—8 mm longae, 0.5 mm latae, glabrae. Cyathia campanulata, 1—1.5 mm longa, 1.5—1.8 mm diam., extus glabra, intus sub glandulis pilosella, lobis ovatis circ. 0.3 mm longis ciliolatis; glandulae 4, oblongae, circ. 0.6 mm longae, glabrae. Flores

staminci circ. 7, glabri. Flores pistillati pedicellati, glabri; ovarium subglobosum minute tuberculatum, styli 3, liberi, circ. 1.2 mm longi, apice 2-lobulati.

Sichuan(四川): Heishui(黑水), Weigu(维古), Mons Yangpengzishan, alt. 2000 m, secus vias, 23 Maj. 1959, Exped. Pl. Econ. Heishui. (黑水经济植物调查队) 1162 (holotypus, PE; isotypi, KUN, CDBI).

本种接近疣果大戟 *E. micractina* Boiss., 但后者的叶为长圆形或椭圆形, 伞形花序苞片长圆形或卵形, 小伞形花序苞片宽菱状卵形, 易与本种相区分。

岷县大戟 新种 图2. 3—4

Euphorbia minxianensis W. T. Wang, sp. nov.

Affinis *E. esulae* L., quae caulibus glabris altioribus robustioribusque, bracteis umbellularum oblatis oblato-rhomboideisve apice mucronulatis distinguitur.

Herba perennis. Caules 14—18 cm alti, supra basin 1.8 mm crassi, inferne minute puberuli, superne glabri, ramosi. Folia alternata, sessilia, coriacea, lincaria, 1—2 cm longa, 1.2—2 mm lata, apice acutiuscula, margine integra, siccitate saepe revoluta, glabra, costa dorso prominula, nervis lateralibus obscuris. Umbella circ. 4 cm diam., bis ramosa, bracteae umbellares 5, verticillatae, foliis caulinis similes, 0.8—1.1 cm longae, ventre supra basin ad costam pilosellae; radii circ. 4, 1.1—2.1 cm longi, glabri, bracteae umbellularum oppositae, deltoideo-ovatae, 5.5—6.5 mm longae, 4—6 mm latae, apice obtusae vel obtusiusculae, basi subtruncatae, glabrae, bracteae cyathiorum oppositae, late rhomboideae vel rhomboideo-oblatae, 4—4.5 mm longae, 5.5—7 mm latae, apice acutiusculae vel truncato-rotundatae. Cyathia cyathiformia, 1.8—2 mm longa, 3 mm diam., extus glabra, intus sub glandulis puberula, lobis deltoideis circ. 0.6 mm longis ciliolatis, bracteolis inter flores stamincos filiformibus circ. 1 mm longis puberulis; glandulae 4, raro 5, plerumque lunulatae, 1.2—1.8 mm longae, breviter 2-corniculatae. Flores staminci glabri. Flores pistillati pedicellati, glabri; ovarium ovoideum, lacvia; styli 3, infra medium connati, apice incrassati, 2-lobulati.

Gansu (甘肃): Minxian (岷县), Shunchuanzhen (顺川镇) alt. 2720 m, in declivitatibus, 24 Maj. 1959, Jiang Shu et Jin Cun-li (姜恕, 金存礼) 472 (holotypus, PE).

本种与乳浆大戟 *E. esula* L. 近缘, 后者的茎无毛, 较高, 较粗壮, 小伞形花序的苞片扁圆形或扁圆状菱形, 顶端有小尖头, 可与本种区别。

康定大戟 新种 图2.1—2

Euphorbia kangdingensis W. T. Wang, sp. nov.

Affinis *E. szechuanicae* Pax et Hoffm., quae bracteis umbellularum cyathiorumque deltoideis rhomboideo-ovatisve, glandulis breviter bicorniculatis, cornibus 0.3—0.8 mm longis differt.

var. *kangdingensis*

Herba perennis. Caules 40—100 cm alti, ramosi, glabri. Folia alternata, sessilia

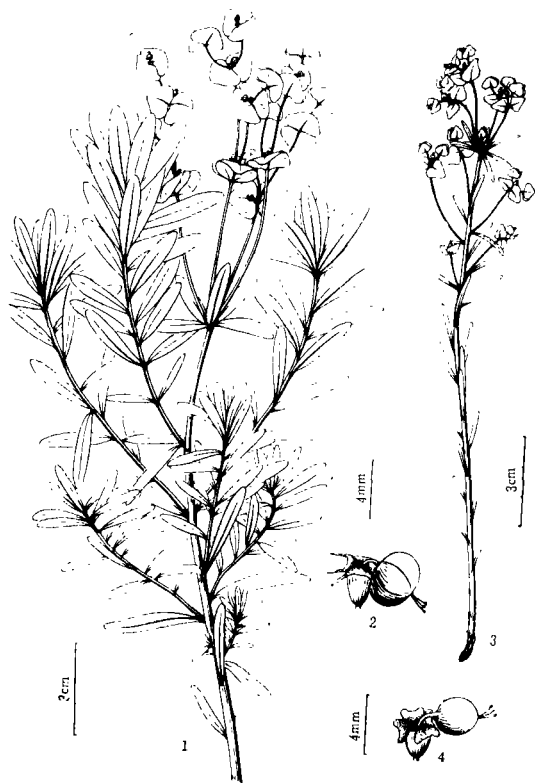


图2 1—2.康定大戟 *Euphorbia kangdingensis* W. T. Wang var. *kangdingensis* 1.植株全形; 2.杯状花序。3—4.岷县大戟 *E. minxianensis* W.T. Wang 3.植株全形; 4.杯状花序。(吴彰桦绘)

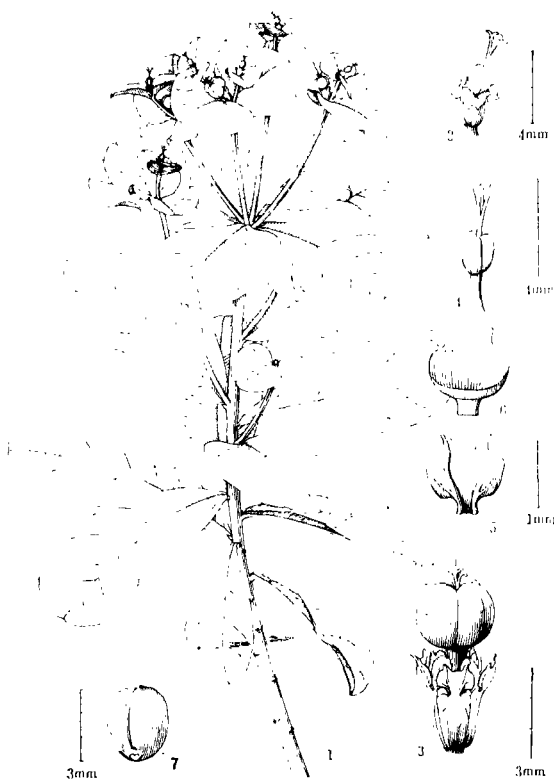


图3 盐津大戟 *Euphorbia yanjinensis* W.T. Wang 1.植株全形, 2.杯状花序(花期); 3.杯状花序(果期); 4.雌花; 5.腺体背面观(果期), 6.腺体腹面观; 7.种子。(曾晓濂绘)

vel subsessilia, herbacea, linearia, late linearia vel oblonga, 3.5—6 cm longa, 0.5—1.6 cm lata, apice obtusa, obtusiuscula vel truncata, basi cuneata, margine integra, glabra, costa dorso prominula, nervis lateralibus utrinsecus 5—10 dorso leviter conspicuis. Umbrella 7—15 cm diam, bis vel ter ramosa, glabra; bractee umbellares (3-) 5 (-8), verticillata, forma variabiles, anguste ovatae, lineares vel lineari-oblanco-latae, 1.4—3 cm longae; radii 4—6 (-8), 3—8 cm longi; bractee umbellularum oppositae, reniformi-oblongae vel oblato-deltaeidae, 0.7—1.1 cm longae, 1.5—2.3 cm latae; bractee cyathiorum oppositae, cis umbellularum similes, sed minores. Cyathia campanulata, circ. 3 mm longa, 2.5 mm diam, glabra, lobis humile trapetozoidis 0.5 mm longis ciliolatis, bractecolis inter flores stamineos filiformibus 1—2 mm longis glabris; glandulae 4, lunulatae, 1.5—2 mm longae, longe 2-corniculatae, cornibus tenuibus 1—2 mm longis. Flores staminei glabri. Flores pistillati tenuiter pedicellati, glabri; ovarium subglobosum, lacve; styli 3, a basi

ad medium connati, apice 2-fidi, Capsulae subglobosae, circ. 3.5 mm diam., glabrae, laeves, 3-sulcatae. Semina nigra, ellipsoidea, circ. 2 mm longa, laevia.

Sichuan (四川): Kangding (康定), inter frutices, 13 Jul. 1934, Liu Zhen-shu (刘振书) 721 (holotypus, PE); ibidem, Yala, 16 Jul. 1951, Hu Wen-guang et He Zhu (胡文光, 何铸) 10334; ibidem, secus rivulos, 30 Jun. 1951, Cui You-wen (崔友文) 4179; ibidem, shade, alt. 3060 m, in sylvis, 23 Maj. 1961, Jiang Shu (姜恕) 2952; ibidem, alt. 2550 m, in declivitatibus, 15 Jul. 1963, Guan Ke-chien, Wang Wen-tsai et al. (关克俭, 王文采等) 133; Jiulong, 12 Jun. 1930, Huang Kai, Luo Zheng-yuan et al. (黄楷, 罗正远等) 377.

本种接近四川大戟 *E. szechuanica* Pax et Hoffm., 后者的小伞形花序苞片及杯状花序苞片为正三角形或菱状卵形, 腺体的角状突起较短, 长0.3—0.8毫米, 而与本种不同。

毛茎康定大戟 (变种)

b. var. *puberula* W. T. Wang, var. nov.

Caules puberuli.

Sichuan (四川): Jinchuan (金川), alt. 2300—2500 m, in declivitatibus vel ad margines sylvarum, Jun.—Jul. 1957, Li Xin (李馨) 75470 (holotypus, PE), 75092, 75197; ibidem, alt. 2060—2200 m, Apr.—Maj. 1958, Li Xin (李馨) 77131, 77294; ibidem, 15 Maj. 1961, Jiang shu (姜恕) 8806; Maerkang (马尔康), Sunggang, alt. 2540—2750 m, Apr.—Jul. 1957, Li Xin (李馨) 70150, 70230, Zhang Ze-rung et Zhou Hung-fu (张泽荣, 周洪富) 23170, Chunghua (崇化), alt. 1900—1960 m, Oct. 1957, Li Xin (李馨) 76735, 76774.

本变种的茎被短柔毛而与原变种不同。

盐津大戟 新种 图 3

Euphorbia yanjinensis W. T. Wang, sp. nov.

Species cyathii bracteolis inter flores stamineos nullis, glandulis basi concavis obliquissime infundibuliformibus dorso 2-corniculatis valde insignis.

Herba perennis. Caules 24—30 cm alti, glabri, superne paucè breviterque ramosi. Folia caulina infera sub anthesi emarcida, supera sessilia vel subsessilia, papyracea, oblonga vel oblongo-obovata, 6.2—8 cm longa, 2.8—3.2 cm lata, apice rotundata, minute mucronulata, basi cuneata vel late cuneata, margine integra, glabra, costa dorso prominula viridi-alba, nervis lateralibus utrinsecus 4—6 inconspicuis. Umbella circ. 9.5 cm diam., bis ramosa, glabra, bractae umbellares 3, verticillatae, ovatae vel late ovatae, 3—5 cm longae, 2.8—3.6 cm latae, apice rotundatae, basi truncato-cordatae vel late cuneatae, radii 4, 4—6 mm longi; bractae umbellularum oppositae, late ovatae, 1.6—2.2 cm longae, 1.6—3.3 latae; bractae cyathiorum oppositae, deltoideo-ovatae vel deltoideo-oblongae, 0.7—0.9 cm longae, circ. 1.2 cm latae. Cyathia cyathiformia, circ. 3 mm longa, ore 3.5 mm

diam., extus intusque glabra, lobis orbiculari-ovatis vel semiorbicularibus circ. 0.8 mm longis ciliolatis, bracteolis inter flores stamineos nullis, glandulae 4, breviter lateque stipitatae, obliquissime infundibuli-formes, ventre humiles, circ. 0.25 mm altae, dorso oblatae, circ. 0.9 mm altae, 1.5 mm latae, apice crasse 2-corniculatae, cornibus 0.5 mm longis, glabrae. Flores staminei glabri. Flores pistillati glabri, ovarium globosum, sublacve; styli 3, 3 mm longi, a basi fere ad medium connati, apice 2-lobulati. Capsulae subglobosae, circ. 6 mm diam., dense puncticulatae, glabrae, pedicellis fructiferis robustis 4 mm longis glabris. Semina, lutca, ellipsoidea, circ. 4 mm longa, laevia, ecarunculata.

Yunnan (云南): Yanjin (盐津), alt. 550m, prope rivulos, 30 Apr. 1974, sine nomine collectoris et numero (holotypus, KUN).

本种杯状花序的腺体构造很独特,其基部凹,腹面低,背面高,而呈极斜的漏斗形,同时背面顶端具2角状突起,这样的特征在大戟组 Sect. *Tithymalus* 中尚未发现过,也可能本种代表了一个新的组,所以,关于本种的系统位置还须作进一步的研究。在大戟属中,分布于非洲热带及阿拉伯的组 Sect. *Pseudacalypha* (约3种)的腺体呈近二唇状,基部凹陷,可能与本种的腺体相似,但在这个组,叶对生,聚伞花序腋生,雄花间小苞片羽毛状,种子金字塔状四面体形,以及腺体无角状突起¹⁾,而与本种显然区别。本种的杯状花序在雄花之间无小苞片,也是较独特的。

一品红组 Sect. *Poinsettia* (Grah.) Boiss

柳叶大戟 新种 图4. 1—3

Euphorbia epilobiifolia W. T. Wang, sp. nov.

Fortasse affinis *E. geniculatae* Orteg. e descr., quae ramis setosis, foliis ovatis oblongisve differt.

Herba. Caules circ. 45 cm alti, ramosi, glabri. Folia opposita, petiolata vel subsessilia; laminae herbaceae vel tenuiter papyraceae, oblongo-lanceolatae, oblongae vel lanceolatae, raro oblanceolatae, 3—8.5 cm longae, 0.9—2.6 cm latae, apice acutae, basi attenuatae, margine repandae vel repando-crenulatae, ventre glabrae, dorso adpresse pilosellae, costa dorso prominula, nervis lateralibus utrinsecus 10—14 planis, petioli 0.2—1.8 cm longi, glabri, stipulae glanduliformes. Cyathia ad apices caulis ramulorumque dense fasciculata, sessilia vel pedunculata, pedunculis usque ad 2 mm longis, subcyathiformia, 2.2 mm longa et diametro, glabra, lobis deltoideis circ. 1 mm longis margine lacerato-lobulatis, bracteolis inter flores stamineos anguste linearibus 2 mm longis puberulis; glandulae unicae, subcyathiformes, 1 mm diam. Flores staminei glabri. Flores pistillati tenuiter pedicellati, glabri, ovarium globosum, laeve, styli (2—) 3, liberi, 1.5 mm longi, apice 2—10-bulati. Capsulae depresso globosae, circ. 4.5 mm diam, glabrae, lacves, loculo uno maturitate saepe abortivo. Semina

1) E. Boissier, 1866; Euphorbieae, in DC. Prodr. 15(2): 98.



图4 1—3. 柳叶大戟 *Euphorbia epilobiifolia* W. T. Wang 1. 茎上部; 2. 杯状花序; 3. 种子。4—5. 黑水大戟 *E. heishuiensis* W. T. Wang 4. 植株全形; 5. 杯状花序。(吴彰桦绘)

atro-purpurea, tetraedrico-ovoidea, circ. 3 mm longa, longitudinaliter obtuseque 3-angulata, dorso tuberculata, ventre longitudinaliter 1-sulcata, cearunculata.

Sichuan (四川): Dukou (渡口), Dabaoding, alt. 1100—1300 m, secus rivos, fr. virides, 21 Jun. 1983, Exped. Qinghai-Xizang (青藏队)。83-1364 (holotypus, PE; isotypus, KUN).

本种可能与分布南美洲的 *E. geniculata* Ortega. 相近缘, 但后者的茎被刚毛, 叶卵形或长圆形, 而与本种不同。

一品红组 Sect. *Poinsettia* 有10余种, 分布于南美洲和北美洲南部的热带或亚热带地区, 本组的主要特征: 叶多对生或轮生, 有腺体状托叶, 杯状花序的裂片边缘流苏状或撕裂状, 腺体常1枚, 杯状或有裂缝, 种子有瘤状突起, 无种阜²⁾。在横断山区金沙江河谷柳叶大戟的发现说明横断山区植物区系与美洲植物区系之间曾有一定联系。

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2) E. Boissier, 1866; op. cit., 71—74.