

# 高原生物学集刊

ACTA BIOLOGICA PLATEAU SINICA

第十二集 No. 12

中国科学院西北高原生物研究所 编辑

1993—1994



科学出版社

(京)新登字092号

## 《高原生物学集刊》第二届编辑委员会

名誉主编：夏武平

主编：印象初

副主编：杜继曾 杨永昌

编委：(以姓氏笔画为序)

马世骏	王应祥	王香亭	王祖望
刘尚武	吕忠恕	李博	李家藻
陈心启	陈集贤	周俊	周立华
武云飞	胡旭初	娄朋逊	施鉴屏
徐琪	鲁子贤	樊乃昌	

## 高原生物学集刊

第十二集

ACTA BIOLOGICA PLATEAU SINICA

No. 12

中国科学院西北高原生物研究所 编辑

\* 科学出版社出版

北京东黄城根北街16号

邮政编码：100717

北京市东华印刷厂印刷

京发行所发行 各地新华书店经售

\* 版 开本：787×1092 1/16

印刷 印张：18 1/4 插页：2

字数：431 000

^4-7/Q·542

元

# 高原生物学集刊 第12集

(1993—1994)

## 目 录

- 青藏高原茶藨属新分类群 ..... 潘锦堂 (1)  
青海省早熟禾属三种禾草的拉丁文描述之补充 ..... 耿伯介 宋桂卿 (9)  
禾本科植物叶片表皮结构细胞的演变趋势及其机理的研究 .....  
..... 蔡联炳 王世金 郭延平 (13)  
中国大陆细柄草属植物的叶片结构与种间关系 ..... 蔡联炳 (29)  
小麦族 (*Triticeae*) 遗传育种资源的氨基酸分析 ..... 王世金 胡凤祖 (39)  
美国亚利桑那州的蝗虫 ..... 印象初 施鉴屏 (125)  
青海可可西里地区的鱼类区系和地理区划 ..... 武云飞 吴翠珍 于登攀 (127)  
青海湖裸鲤的胚后发育与年轮形成初探 ..... 王基琳 杨洪志 张武学 杨长锁 (143)  
西藏齿突蟾蝌蚪的生态学研究 ..... 黄大明 宋志明 (149)  
高寒草甸四种雀形目雏鸟生长的比较研究 ..... 邓合黎 张晓爱 (155)  
艾虎种群动态及其影响因素的研究 ..... 周文扬 魏万红 Dean E. Biggins (161)  
青藏高原艾虎日活动范围和巢区的研究 ..... 周文扬 魏万红 Dean E. Biggins (173)  
青藏高原艾虎活动节律的研究 ..... 周文扬 魏万红 Dean E. Biggins (181)  
高原鼢鼠 (*Myospalax baileyi*) 的无机元素 .....  
..... 李明德 马锦秋 吴跃英 檀金钟 王志强 王学高 戴克华 (189)  
达乌尔鼠兔 (*Ochotona daurica* Pallas) 储草行为 ..... 张道川 (195)  
藏羊心脏形态学测量及其对高原低氧的适应 ..... 俞红贤 赵国安 (201)  
绿绒蒿属植物生物碱成分研究 (一) ——五脉绿绒蒿生物碱成分的研究 .....  
..... 王恒山 丁经业 杨海荣 周立华 (207)  
氢化物无色散原子荧光光谱法测定生物样品中的微量硒 ..... 索有瑞 伊甫申 (211)  
高寒草甸生态系统土壤微生物对磷素转化作用的研究 .....  
..... 耿博闻 赵宝莲 杨 涛 (219)  
小麦族的种及其种、属间杂种幼穗的离体培养 ..... 赵绪兰 李 肖 陈集贤 (227)  
裁) 培二粒小麦 × 普通小麦) 后代高蛋白的遗传及其与主要农艺性状的通径分析 ...  
..... 高国强 张怀刚 冯海生 (233)  
春小麦蛋白质含量与主要形态特征的相关分析 ..... 肖 瑜 黄相国 (243)  
春小麦高产理想型的研究 ..... 肖 瑜 黄相国 (257)  
春小麦烘烤品质与农艺性状及其它品质性状间的关系 .....  
..... 张怀刚 O. M. Lukow 和 E. Czarnecki (267)  
过渡型小麦品种丰产 3 号在青海高原的生育表现 ..... 曹广才 冯钦华 林佩芬 (275)  
青海湖裸鲤鳞片表面和切面的电镜扫描观察 .....  
..... 张武学 杨长锁 李军祥 庞卫东 王基琳 杨洪志 (285)

# **Acta Biologica Plateau Sinica No.12**

(1993—1994)

## **CONTENTS**

- New taxa of the genus *Ribes* L. from Qing-Zang Plateau.....  
.....Pan Jintang (7)
- Three species of gen. *Poa* Linnaeus from Qinghai Province supplemented on Latin descriptions.....Bo-jie Geng and Gui-qing Song (9)
- Studies on the evolutionary trends and mechanism of the constituent cells of the leaf epidermis in Poaceae.....  
.....Cai Lianbing, Wang Shijin and Guo Yanping (25)
- Structure of the leaf blade and interspecific relationships of the continental *Capillipedium* in China.....Cai Lianbing (37)
- Amino acid analysis of heredity-breeding resources in tribe Triticeae  
.....Wang Shijin and Hu Fengzu (49)
- The grasshoppers from Arizona of U. S. A. ....  
.....Yin Xiangchu and Shi Jianping (51)
- A study on fish-fauna and piscogeographical division in the Hohxil region of Qinghai Province.....  
.....Wu Yunfei, Wu Cuizhen and Yu Dengpan(141)
- Preliminary study on growth and formation of annual-ring in young *Gymnocypris przewalskii przewalskii*.....  
....Wang Jilin, Yang Hongzhi, Zhang Wuxue and Yang Changsuo(147)
- Ecological studies on *Scutiger boulengeri* tadpoles.....  
.....Huang Daming and Song Zhiming(153)
- A comparative study on nestling growth of 4 species of passerines in alpine meadow.....Deng Heli and Zhang Xiaoxai(160)
- Study on population dynamic of polecats and its effective factors.....  
.....Zhou Wenyang,Wei WanHong and Dean E. Biggins(171)
- Daily active range and home range of polecat in Qing-Zang Plateau  
.....Zhou Wenyang,Wei WanHong and Dean E. Biggins(179)
- Activity rhythm of polecat in Qing-Zang Plateau.....  
.....Zhou Wenyang,Wei WanHong and Dean E. Biggins(187)
- The mineral elements of zoker (*Myospalax baileyi*) .....  
.....Li Mingde,Ma Jinqiu, Wu Yueying,  
Tan Jinzhong, Wang Zhiqiang,Wang Xuegao and Dai Kehua(194)

Hoarding behaviour of Daurian pika ( <i>Ochotona daurica</i> Pallas).....	Zhang Daochuan (200)
Morphologic measurement of Tibetan-sheep heart and its adaptation to plateau hypoxia.....	Yu Hongxian and Zhao Guoan (206)
Studies on the alkaloids of genus <i>Meconopsis</i> I. The alkaloids of <i>Mecognopsis quintuplinervia</i> Regel.....	Wang Hengshan, Ding Jingye, Yang Hairong and Zhou Lihua (209)
Determination of trace selenium in biological samples by hydride generation non-dispersive atomic fluorescence spectrometry.....	Suo Yourui and Yi Fushen (218)
Study on the phosphorus transformation in the soil of Haibei Alpine Meadow Ecosystem.....	Geng Bowen, Zhao Baolian and Yang Tao (225)
In vitro culture of young inflorescences of species and interspecific and intergeneric hybrids in Triticeae .....	Zhao Xulan, Li Yi and Chen Jixian (231)
The inheritance of high protein content and its path analysis with major agronomic characters in ( <i>Triticum dicoccum</i> Schuebl × <i>Triticum aestivum</i> L.).....	Gao Guoqiang, Zhang Huaigang and Feng Haisheng (241)
Correlation analysis between kernel protein content and external morphological factors in spring wheat.....	Xiao Yu and Huang Xiangguo (255)
Ideotype of high yields in spring wheat.....	Xiao Yu and Huang Xiangguo (265)
Relationship of baking quality to agronomic characters and other quality properties in spring wheat.....	Zhang Huaigang, O. M. Lukow and E. Czarnecki (274)
The expression of growth and development for the Fengchan No. 3 of transness ecotype of wheat cultivars in Qinghai Plateau.....	Cao Guangcai, Feng Qinhua and Lin Peisen (283)
Electron microscopic scanning observations on scale surface and section of <i>Gymnocypris przewalskii przewalskii</i> .....	Zhang Wuxue, Yang Changsuo, Li Junxiang, Pang Weidong, Wang Jilin and Yang Hongzhi (285)

# 青藏高原茶藨属新分类群

潘 锦 堂

(中国科学院西北高原生物研究所, 西宁, 810001)

## 摘要

本文描述了青藏高原茶藨属三新种: 青藏茶藨 *Ribes qingzangense* J. T. Pan, 吉隆茶藨 *R. gyirongense* J. T. Pan 和门源茶藨 *R. menuyuanense* J. T. Pan。此外, 还提出了一新组合——坛状茶藨 *R. qingzangense* J. T. Pan. var. *urceolatum* (Jancoz.) J. T. Pan.

**关键词:** 茶藨属; 新分类群; 青藏高原

**青藏茶藨 新种 图1: 1—6**

*Ribes qingzangense* J. T. Pan, sp. nov.

Species valde affinis *R. himalense* Royle ex Decne., sed laminis foliorum dorso tomentosis, calyx extus vulgo pauce albo-setoso differt.

Frutex 1.5—2m altus, densissime ramosus. Ramuli atrobrunnei, vistiosores glabri, hornotini parce adpresso-pilos. Folia longe petiolata, lamina ambitu cordata, 3—4.4 cm longa, 3.4—5.5 cm lata, 3-lobata vel obscure 5-lobata, lobis apice acutis, margine irregulariter serratis necnon ciliatis, ventre parce adpresso-pilosa necnon pilis glanduliferis intermixtis obsita, dorso tomentosa necnon parte inferiore ad nervos glanduloso-pilosa, petiolo 1.6—3.4 cm longo, adpresso-piloso necnon pilis glanduliferis intermixtis obsito. Racemus 1.4—3 cm longus, 6—9-florus, pedunculus cum pedicellis adpresso-pilosus; hypanthium in parte inferiore cum ovario connatum, superne liberum tubulosum 1.4—1.6 mm longum, intus glabrum, extus pauce albo-setosum; sepala viridiflava, quasi late obovata, c. 2 mm longa, 2—2.3 mm lata, apice subtruncata ciliataque, dorso vulgo pauce albo-setosa, multinervia; petala lilacina, spathulata, 1—1.2 mm longa, 0.4—0.5 mm lata, utrinque glabra, margine supra medium ciliata, 1—2-nervia; stamina

本文1993年6月3日收到。

1.4—1.6 mm longa, antheris luteis, filamentis subulatis, stylus cylindricus, 3—3.2 mm longus, apice leviter bifidus. Bacca immatura viridiflava glabra globosa, 3.5—4.8 mm in diametro.

Qinghai (青海): Qilian (祁连), alt. 2600m, 1962. 06. 26, Y. C. Yang et al. (杨永昌等) 1274; Baima (班玛), in ravines, alt. 2600m, 1983. 08. 08, W. Y. Wang (王为义) 27658; Huzhu (互助), under forest, alt. 2600m, 1991. 07. 04, T. N. Ho (何廷农) 1583. Xizang (西藏): Yadong (亚东), in bush-wood on slope, alt. 2900m, 1975. 05. 29, Qinghai-Xizang Exp. (青藏队) 750049 (holotype, NWNI).

灌木，高1.5—2米，极多分枝。小枝黑褐色，较老者无毛，当年生者疏生贴伏柔毛。叶具长柄；叶片轮廓心形，长3—4.4厘米，宽3.4—5.5厘米，3裂或不明显5裂，裂片先端急尖，边缘具不规则锯齿和睫毛，并混生腺毛，背面被绒毛，且下部沿脉具腺毛；叶柄长1.6—3.4厘米，具贴伏柔毛，并混生腺毛。总状花序长1.4—3厘米，具6—9花；花序梗和花梗均被贴伏柔毛；托杯下部与子房合生，上部离生，管状，长1.4—1.6毫米，内面无毛，外面具少数白刚毛；萼片绿黄色，似阔卵形，长约2毫米，宽2—2.3毫米，先端近截形，并具睫毛，腹面无毛，背面通常具少数白刚毛，具多脉；花瓣淡紫色，匙形，长1—1.2毫米，宽0.4—0.5毫米，两面无毛，边缘中上部具睫毛，具1—2脉；雄蕊长1.4—1.6毫米，花药黄色，花丝钻形；花柱圆柱形，长3—3.2毫米，先端稍2裂。未成熟浆果绿黄色，球形，直径3.5—4.8毫米，无毛。

本种确与 *R. himalense* Royle ex Decne. 近缘，但其叶片背面被绒毛，萼外面通常具少数白刚毛，可资区别。

### 坛状茶藨 新组合 图1: 7—12

*Ribes qingzangense* J. T. Pan var. *urceolatum* (Jancz.) J. T. Pan, comb. nov. —— *R. himalense* Decne. r. *urceolatum* Jancz. in Mém. Soc. Phys. Hist. Nat. Genève 35: 297. 1907, ‘*himalayense*’.

Qinghai (青海): Nangqen (囊谦)，in ravines on slopes, alt. 3800—4000 m, 1982. 06. 15, W. Y. Wang (王为义) 14. Xizang (西藏): Bomi (波密)，in bushwoods among forests, alt. 3400m, 1973. 06. 19, Xizang Exp. (西藏考查队) 600.

本变种与原变种之区别在于其叶片背面仅沿脉疏生腺毛和柔毛，花梗被腺毛和柔毛。

### 吉隆茶藨 新种 图2: 1—5

*Ribes gyirongense* J. T. Pan, sp. nov.

Species affinis *R. himalensi* Royle ex Decne. et *R. qingzangensi* J. T. Pan, sed ab ambobus lobis foliorum apice acuminatis, ventre parce glanduloso-strigosis, haud pubescentitus, sepalis glabris, petalis subobtriangularibus, apice emarginatis necnon haud ciliatis differt.

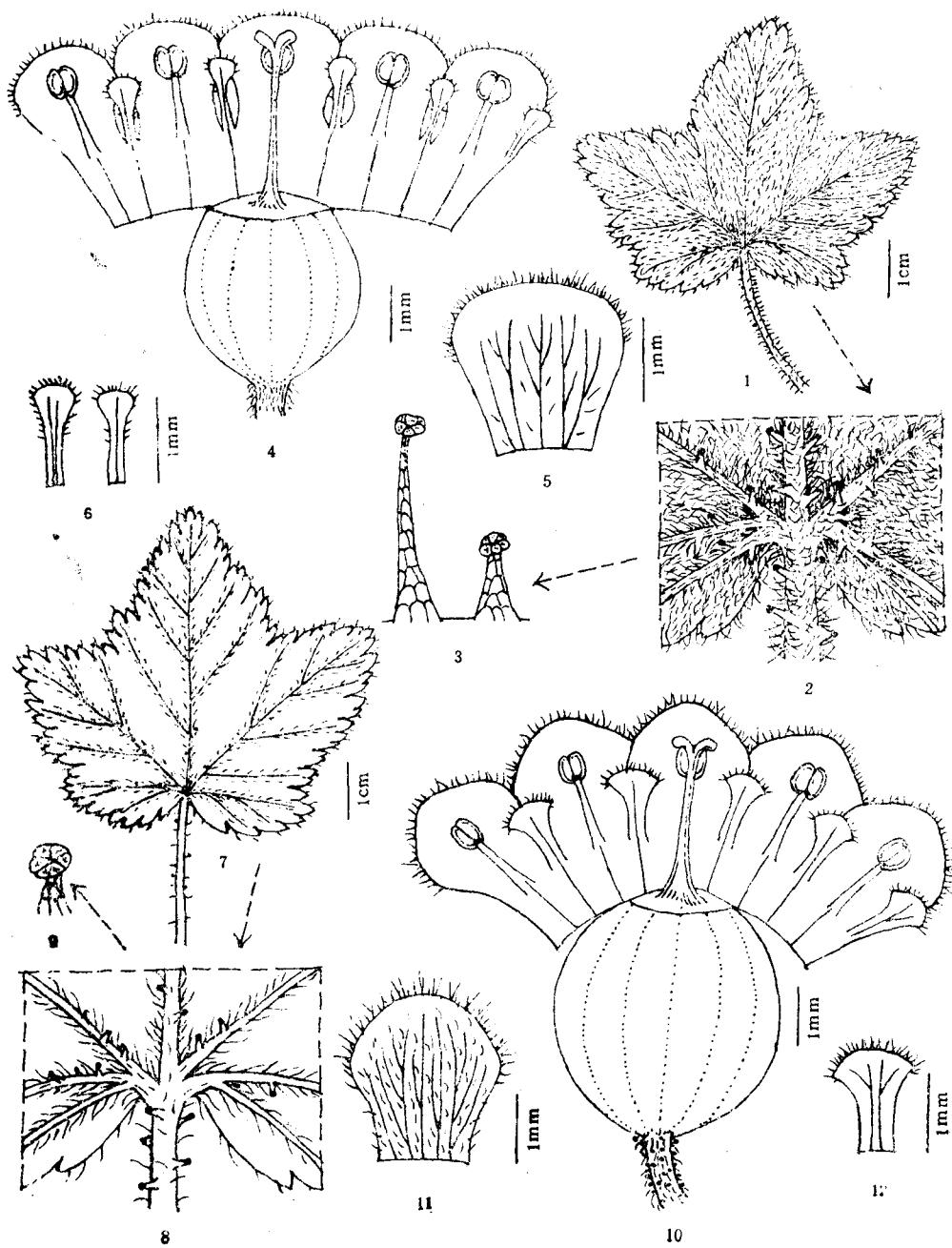


图 1 1—6. 青藏茶藨: 1. 叶背面; 2. 叶背面一部分; 3. 叶背面腺毛; 4. 幼浆果及花(展开); 5. 萼片背面; 6. 花瓣。7—12. 坛状茶藨: 7. 叶背面; 8. 叶背面一部分; 9. 叶背面腺毛; 10. 幼浆果及花(展开); 11. 萼片背面; 12. 花瓣。(潘锦堂绘)

Fig. 1 1—6. *Ribes gingzangense*: 1. leaf (back); 2. part of leaf (back); 3. glandular-hairs of leaf(back); 4. young berry and flower opened; 5. sepal (back); 6. petal. 7—12. *Ribes qingzangense* var. *urceolatum*; 7. leaf (back); 8. part of leaf (back); 9. a glandular-hair of leaf (back); 10. young berry and flower opened; 11. sepal (back); 12. petal.

Frutex 1—1.5m altus, densissime ramosus. Ramuli glabri, vetustiores atrobrunnei, hornotini fulvi. Folia longe petiolata, lamina ambitu cordata, 4.3—6.7cm longa, 5—8.7cm lata, 5-lobata, lobis apice acuminatis, margine irregulariter serrato-dentatis necnon parce ciliatis, ventre parce glandulosostrigosa, dorso ad nernos pilosa necnon dorso inferne ad nervos parce glanduloso-pilosa, petiolo 4.7—7.5cm longo, piloso necnon pilis glanduliferis intermixtis pauce instructo. Racemus axillaris c. 3.8 cm longus, fere 10-florus; pedicelli fere 3 mm longi cum pedunculo pilosi, hypanthium in parte inferiore cum ovario connatum, superne liberum tubulosum glabrumque fere 2mm longum; sepala late spathulata, c. 3.3mm longa et 3mm lata, apice obtusa, glabra multinervia; petala subobtriangularia, c.1.5mm longa et 1.1 mm lata, apice emarginata, glabra trinervia; stamna fere 2 mm longa, filamentis subulatis, stylus cylindricus, fere 4.1 mm longus, apice leviter bifidus. Bacca semimatura globosa glabra, fere 8 mm in diametro.

Xizang (西藏): Gyirong (吉隆), at the base of a mountain, on the margins of forests, alt. 2900m, 1972. 06. 01, Xizang Chin. Med. Herb. Exp. (西藏中草药普查队) 37 (holotype, NWBI).

灌木，高1—1.5米，极多分枝。小枝无毛，较老者黑褐色，当年生者黄褐色。叶具长柄；叶片轮廓心形，长4.3—6.7厘米，宽5—8.7厘米，5裂，裂片先端渐尖，边缘具不规则锯齿状齿和睫毛，腹面疏生糙伏腺毛，背面沿脉被柔毛，且下部沿脉还疏生腺毛；叶柄长4.7—7.5厘米，被柔毛，并混生少数腺毛。总状花序腋生，长约3.8厘米，约具10花；花梗长约3毫米，与花序梗均被柔毛；托杯下部与子房合生，上部离生，筒状，长约2毫米，无毛；萼片宽匙形，长约3.3毫米，宽约3毫米，先端钝，无毛，具3脉；花瓣近三角形，长约1.5毫米，宽约1.1毫米，先端微缺，无毛，具3脉；雄蕊长约2毫米，花丝钻形；花柱圆柱状，长约4.1毫米，先端稍2裂。半成熟浆果球形，直径约8毫米，无毛。

本种与 *R. himalense* Royle ex Decne. 和 *R. qingzangense* J. T. Pan 近缘，但与两者之不同在于其叶裂片先端渐尖，腹面疏生糙伏腺毛，无柔毛，萼片无毛，花瓣近倒三角形，先端微缺，无睫毛。

#### 门源茶藨 新种 图2: 6—10

##### *Ribes menyuanense* J. T. Pan, sp. nov.

Species persimilis *R. stenocarpo* Maxim. et *R. alpestri* Wall. ex Decne., sed a priore baccis plus minusve glandulosohispidis (in illo glabris), laminis foliorum basi truncatis usque late cuneatis, utinque margineque pilis glandulosis intermixtis pauce tectis (in illo non glanduloso-pilosus), a posteriore baccis anguste oblongis usque oblongis (in *R. alpestri* ellipsoideis), sepalis apice retusis, glabris (in *R. alpestri* apice obtusis, dorso et margi-

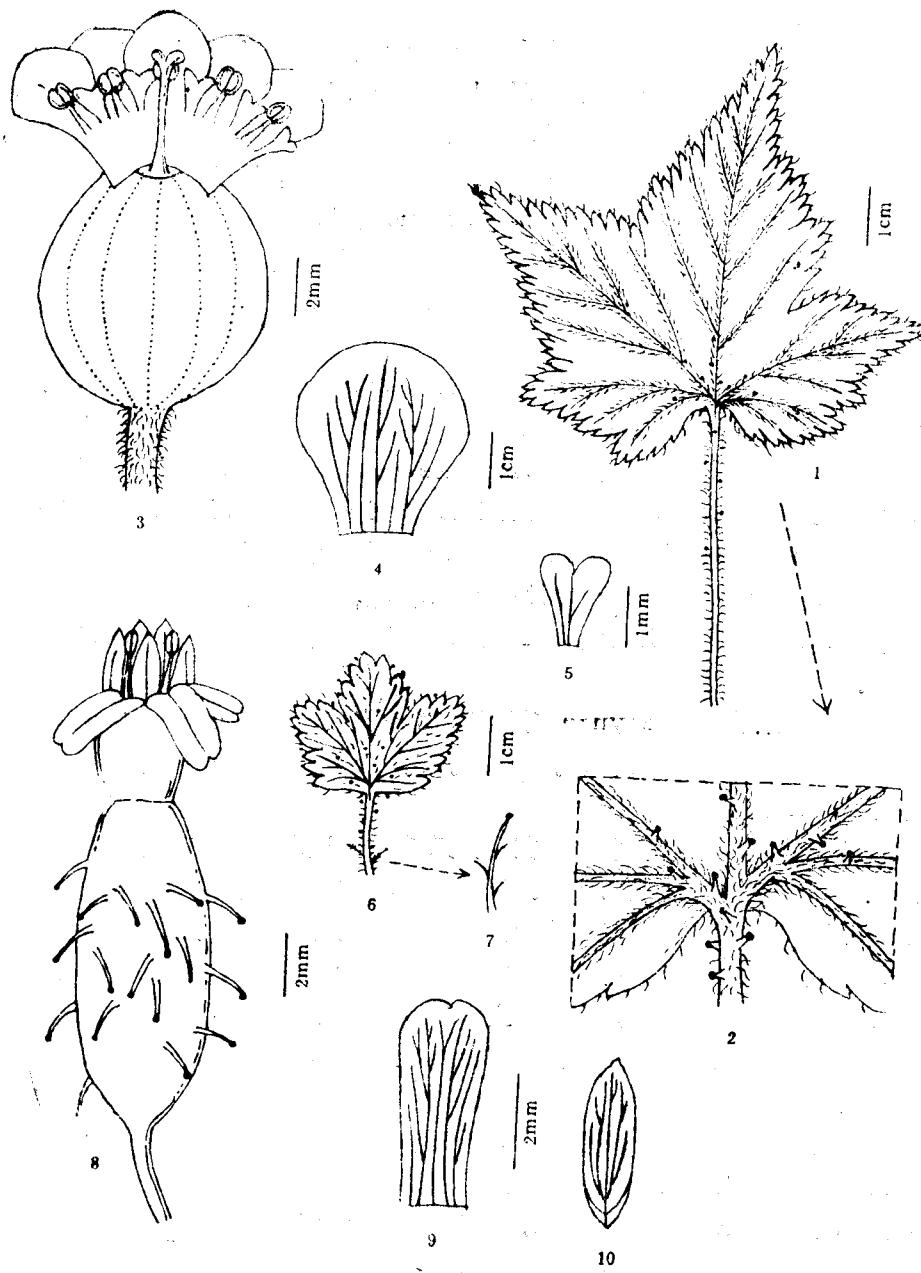


图 2 1—5. 吉隆茶藨；1. 叶背面；2. 叶背面一部分；3. 浆果和花（展开）；4. 萼片；5. 花瓣。6—10. 门源茶藨；6. 叶；7. 叶柄之羽状腺毛；8. 浆果和花；9. 萼片；10. 花瓣。（潘锦堂绘）

Fig. 2 1—5. *Ribes gyirongense*; 1. leaf (back); 2. part of leaf (back); 3. berry and flower; 4. sepal; 5. petal. 6—10. *Ribes menyuanense*; 6. leaf; 7. a feathery glandular-hair of petiole; 8. berry and flower; 9. sepal; 10. petal.

ne glanduloso-pilosus), petiolis pilis glanduliferis plumosis intermixtis instructis recedit.

Frutex 2—3m altus, densissime ramosus. rami cinerei glabri, ad nodos aculeis ternis validis armati. Folia longe petiolata, lamina ovata late ovata usque rotundata, 1.3—2.1 cm longa, 1.6—2.6 cm lata, basi saepe truncata usque late cuneata, 3-lobata vel obscure 5-lobata, lobis obtusis, irregulariter crenato-dentatis, utrinque margineque pilosa necnon plis glandulosis intermixtis paucis obsita, petiolo 1.2—1.4 cm longo, glanduloso-piloso necnon pilis glanduliferis plumosis intermixtis instructo. Flores ad foliorum axillas solitarii vel duo pedunculo glabro insidentes, pedicelli glabri, hypanthium in parte inferiore cum ovario connatum, superne liberum tubulosum glabrumque; sepala reflexa ligulata, 4—5 mm longa, 1.8—2 mm lata, apice retusa, glabra multinervia, nervis apice non confluentibus; petala anguste oblonga, c. 3.5mm longa et 1mm lata, apice acuta, glabra multinervia; stamena fere 3.5mm longa, filamentis subulatis; stylus cylindricus, fere 5 mm longus, ad medium bifidus. Bacca nigro-purpurea, anguste oblonga usque oblonga, 1.2—1.9 cm longa, 4.5—7mm lata, plus minusve glanduloso-hispida.

Qinghai (青海), Menyuan (门源), Zhugu (朱固), at the base of a mountain, alt. 2800m, 1962. 06. 28, Y. C. Yang et al. (杨永昌等) 1488 (holotype, NWBI).

灌木，高2—3米，极多分枝。枝灰色，无毛，节上具粗状之三出皮刺。叶具长柄，叶片卵形、阔卵形至圆形，长1.3—2.1厘米，宽1.6—2.6厘米，基部通常截形至宽楔形，3裂或不明显5裂，裂片钝，具圆状齿，两面和边缘具柔毛，并混生少数腺毛；叶柄长1.2—1.4厘米，具腺柔毛，并混生羽状腺毛。花单生于叶腋，或两朵生于无毛之花序梗；花梗无毛，托杯下部与子房合生，上部离生，筒状，长约3毫米，无毛；萼片反曲，舌形，长4—5毫米，宽1.8—2毫米，先端微凹，无毛，具多脉，脉于先端不汇合；花瓣狭长圆形，长约3.5毫米，宽约1毫米，先端急尖，无毛，具多脉；雄蕊长约3.5毫米，花丝钻形；花柱圆柱状，长约5毫米，2裂达中部。浆果黑紫色，狭长圆形至长圆形，长1.2—1.9厘米，宽4.5—7毫米，多少具粗硬腺毛。

本种与 *R. stenocarpum* Maxim. 和 *R. alpestre* Wall. ex Decne. 极相似；但与前者之不同在于其浆果多少具粗硬腺毛（前者，无毛），叶片基部截形至宽楔形（前者，心形或截形），两面和边缘混生少数腺毛（前者，无腺毛）；与后者之区别在于其浆果狭长圆形至长圆形（*R. alpestre*, 椭圆球形）萼片先端微凹，无毛（*R. alpestre*, 先端钝，背面和边缘具睫毛），叶柄混生有羽状腺毛。

# NEW TAXA OF THE GENUS *RIBES* L. FROM QING-ZANG PLATEAU

Pan Jintang

(Northwest Plateau Institute of Biology,  
The Chinese Academy of Sciences, Xining, 810001)

Three new species of the genus *Ribes* (Saxifragaceae) are described from Qing-Zang Plateau of China. They are *Ribes qingzangense* J. T. Pan, *R. gyirongense* J. T. Pan and *R. menyuanense* J. T. Pan. Moreover a new combination, *R. qingzangense* J. T. Pan var. *urceolatum* (Jancz.) J. T. Pan, is also proposed.

**Key words:** *Ribes*; New taxa; Qing-Zang Plateau

## 更正

本刊第11集87页, [附录]: “野生动物保护管理现状与建议”第10行中“282”克改为705000克。



## 青海省早熟禾属三种禾草的 拉丁文描述之补充

耿伯介 宋桂卿

(南京大学生物学系, 南京, 210008)

THREE SPECIES OF GEN. *POA* LINNAEUS FROM QINGHAI  
PROVINCE SUPPLEMENTED ON LATIN DESCRIPTIONS

Bo-jie Geng and Gui-qing Song

(Dept. of Biology, Nanjing University, Nanjing, 210008)

本文在于补充青海省所产的早熟禾属3新种的拉丁文描述与特征纲要。它们原记载于《中国主要植物图说——禾本科》(科学出版社, 北京, 1959)一书中。但因当时仅有中文资料和绘图, 缺少拉丁文说明, 故多年来只能算是“不曾生效发表的名称invalid names,”今特予补充其拉丁文部分, 庶可使之成为合法的学名, 以便于国际认可和在科学上应用。

### 早熟禾属

Gen. *Poa* L., Sp. Pl. ed. 1. 67. 1753; Gen. Pl. ed. 5. 31. 1754.

异名: *Panicularia* Fabric. Enum. 207. 1759.

*Poidium* Nees in Lindl., Nat. Syst. ed. 2. 450. 1836.

*Poagris* Raf. in Fl. Tell. 1:18. 1837.

*Dasyposa* Pilg. in Bot. Jahrb. 25:716. 1898.

*Paneion* Lunell in Am. Midl. Nat. 4:221. 1914.

*Bellardiochloa* Chiov. Stud. Veg. Piemonte 60. 1929.

*Arctopoa* (Griseb.) Probat. in Nov. Sist. Vysh. Rast. 11:49.

1974.

*Parodieochloa* C. E. Hulbard in Bull. Brit. Mus. 8:395. 1981.

模式种: 草地早熟禾 *P. pratensis* L.

本文1993年2月17日收到。

## 1. 窄颖早熟禾

*Poa*. (sect. *Poa*) *stenachyra* Keng in Clav. Gen. et Sp. Gram. Prim. Sin. (中国主要禾本科植物属种检索表) pp. 31, 45, 164. 1957, nom. nud.; Fl. Illustr. Plant. Prim. Sin.-Gram. (中国主要植物图说——禾本科) pp. 135, 144, 155, f. 105. 1959, nom. invalid. Sine Lat. descript.

Gramen perenne, rhizomatibus brevibus; radicibus fibrosis; culmi solitarii, erecti vel basi leviter decumbentes, 80—110 cm alti, c. 2 mm crassi, leves, 2—4-nodes, nodo supremo e basi culmi c. 20 cm. remoto; vaginæ basales exceptae internodiis breviores, leves vel scaberulae, ea summa 16.5—21cm longa; lamina sua longiore, ligula membranacea, semi-rotundata vel triangularis, superiore c. 2mm longa, basi 0.8—1mm longa; laminae marcidæ, acutæ, 9—16cm longæ, 3—4mm latae, planæ vel leviter involatae, infra leves, supra scaberulae. Panicula aperta, pyramidalis, 9.5—15.5cm longa, 4—8cm lata, ramis 2—4-nis vel raro 5-nis, tenuibus, scaberulis, patentibus vel pentulis, in 1/2—2/3 inferiore nudis, basibus usque ad 6.5—8mm longis; spiculae lanceolatae, saepissime 3-floræ, 5—6mm longæ. ad maturitatem stramineæ et leviter purpureæ; glumæ angustæ, lanceolatae; acuminatae, superme scaberulae, carina scaberula, prima 3—4mm longa, 1-nervi, secunda 4—5mm longa, 3-nervi; lemmata oblonga, ad apicem et marginæ superiores membranaceæ, infra apicem membranaceum leviter aeneocolorata nervis intermediis distinctis, medianis superne scaberulis, in 1/3 marginalibusque in 1/4 inferiore longius pilosis, callo moderatim lanuginoso, lemmate primo 4—4.5mm longo; palea lemmate paulo brevior, carinis scabris; antheræ flavæ, c. 2 mm longæ.

Qinghai (青海); Menyuan (门源), ad locum alt. c. 2400m. crescens, 1936-09-06. Ji-Meng Liu (刘继孟) 6993 (Typus in NJU 南京大学植物标本室).

Species Ussuriae *P. angustiglumi* Roshev. (Bull. Jard. Bot. Acad. Sci. URSS 30: 773. 1932) valde affinis, sed, ex eventu per comparationem cum descriptione originali speciei supra scriptæ obtento, item differt (1) panicula breviore angustiore que, (2) spiculis brevioribus, pauciorifloris, (3) lemmatum nervis mediis in 1/3 et marginalibusque in 1/4 inferiore tentum pilosis, (4) laminis angustioribus, et ligulis brevioribus c. 2 mm longis.

## 2. 长稃早熟禾

*Poa dolichachyra* Keng in Clav. Gen. et Sp. Gram. Prim. Sin. pp. 31, 45, 164. 1957, nom. nud.; Fl. Illustr. Plant. Prim. Sin.-Gram. pp. 135, 144, 157, f. 106. 1959, nom. invalid. Sine Lat. descript.

Gramen perenne, rhizomatibus gracilibus, radicibus fibrosis, tenuibus densisque, culmi c. 35 cm alti, c. 1 mm crassi, saepissime 2-nodes, nodo superemo in loco 1/3 inferiore culmi sito; vaginae pleraeque internodiis breviiores, leves, glabrae, inferne clausae, suprema 9—10 cm longa, lamina sua 3—4-plo longiore; ligula membranacea, fere triangularis, 2—3 mm longa, illa inferiore breviore, c. 1 mm longa; laminae infra leves et glabrae, supra puberulae, 2.5—6.5 cm longae, 2—3 mm latae, acutae, plicatae, illis surculariis involutis, usque ad 25 cm longia, c. 2 mm latis. Panicula ovata vel oblonga, c. 6 cm longa, ramis saepissime binis, patentibus vel leviter pendulis, basalibus, usque ad 3—4.5 cm longis, inferne nudis, levibus glabrisque vel superne scaberulis; spiculae ovatae, 4—6 mm longae, 2—4-florae, glauco-viridulae purpureaeque, articalis rhachillae glabris, 0.5 mm longis; glumae lanceolatae, acutae, prima 1-nervi, c. 3 mm longa, secunda 3-nervi, c. 4 mm longa; lemmata antice leviter membranacea, distincte 5-neria, nervis mediis superne scaberulis, in 1/2 vel 2/3 marginalibus in 1/2 inferiore longius pilosis, callo pilis longioribus copiose lanuginoso, lammata prima 4—4.5 mm longo; palea lemma aequans vel eo paulo brevior, carinis brevissime ciliolatis, antherae 2 mm longae.

Qinghai (青海): Menyuan (门源), ad declivitatem crescens, alt. 3000 m., 1935-10-23, Ji-Meng Liu (刘继孟) 6781 (Typus in NJU).

Species *P. pratensi* L. (Sp. Pl. ed. 1. 67. 1753) affinis, sed panicula minore, ramis binis, et glumis lemmatisque longioribus recedit.

### 3. 印度早熟禾

*Poa.(Sect. Hylopoa)indattenuata* Keng in Clav. Gen. et Sp. Gram. Prim. Sin. pp. 39, 49, 168, 1957, nom. nud.; Fl. Illustr, Plant. Prim. Sin.-Gram. pp. 140, 148, pl. 151. 1959, nom. invalid., Sine Lat. descript.

Gramen perenne, dense caespitosi, radicibus fibrosis densis, culmi 15—25 cm alti, 0.8—1 mm crassi, 1—2-nodes, vaginae internodiis longiores, glabrae, summa lamina sua paulo-longiore; ligula membranacea, truncata vel obtusa et dentata, 1.5—2 mm longa; laminae 2—4 cm longae, c. 1 mm latae, acutae, planae vel involutae, glabrae, supra scaberulae. Panicula anguste contracta, 2—4 cm longa, 0.5—1 cm lata, ramis 2-nis, erectis, scabris, basalibus 1—1.5 cm longis, e basi spiculiferis vel inferne nudis, spiculae purpureae vel glauco-purpureae, 3—5 mm longae, (2—) 3—4-florae, rhachilla glabra; glumae acutae, fere aequilongae vel prima paulo brevior, 2.5—3.5 mm longae, 3-nerviae raro prima 1-neria, carina scaberula, lemmata ovata vel ovato-oblonga, antice leviter membranacea, obscure 5-

nervia, ad partem inter nervos glabra, nervis medianis in 1/3 vel 1/2 marginalibus in 1/4 vel 1/3 inferiore parce breviterque pilosis, callo sparse lanuginoso, lemmata primo 2.5—3.5mm longo; palea lemma fere aequans carina scabris vel ciliolatis, antherae 1—1.5mm longae.

Qinghai (青海): Jishi-shan (积石山), ad alluvionem palustrium gramineorum crescens, 1935-07-16, Zhong-Wu Yao (姚仲吾) 855 (Tupus in NJU).

Species in "Flora of Britisch India" probabiliter perperam *Poae attenuatae* Trin. (Mem. Acad. Sci. St. Petersb. Sav. Etrang. 2:527. 1835) ascribitur, ex qua sed differt (1) planta himiliore, tantum 2—3-nodi, (2) spiculis tantum 2—4~ non 3—5-floris, (3) glumis lemmatibusque praecipus his haud longe acuminatis et (4) callo sparse vel haud lanuginoso.