

横断山虎耳草属新分类群

吴征镒

潘锦堂

(中国科学院昆明植物研究所, 昆明 650204)

(中国科学院西北高原生物研究所, 西宁 810001)

NEW TAXA OF THE GENUS *SAXIFRAGA* FROM HENGDUAN MOUNTAINS

WU CHENG-YIH

(Kunming Institute of Botany, Academia Sinica, Kunming 650204)

PAN JIN-TANG

(North western Plateau Institute of Biology, Academia Sinica, Xining 810001)

Abstract Some new taxa of the genus *Saxifraga* (Saxifragaceae) are described from the Hengduan Mountains of China. They are *Saxifraga yezhiensis* C. Y. Wu, *S. subomphalodifolia* J. T. Pan, *S. gonggashanensis* J. T. Pan, *S. setulosa* C. Y. Wu, *S. maxiongouensis* J. T. Pan, *S. yunlingensis* C. Y. Wu, *S. pellucida* C. Y. Wu, *S. baimashanensis* C. Y. Wu, *S. naneloides* C. Y. Wu, *S. draboides* C. Y. Wu, *S. degenensis* C. Y. Wu, *S. implicans* var. *weixiensis* C. Y. Wu, *S. omphalodifolia* var. *callosa* C. Y. Wu, *S. omphalodifolia* var. *retusopetala* J. T. Pan, *S. diversifolia* var. *angustibracteata* (Engl. et Irmsch.) J. T. Pan, In addition, one new name (*S. dianxibeiensis* J. T. Pan) is included.

Key words *Saxifraga*; new taxa.

关键词 虎耳草属; 新分类群

叶枝虎耳草 新种 图 1: 1—9

Saxifraga yezhiensis C. Y. Wu, sp. nov.

Species proxima *S. peplidifoliae* Franch. a qua pedicellis longe crispulo-glanduloso-pilosis etiam pilis erectis glandulosis tectis, sepalis margine omnino glanduloso-ciliatis, 8—11-nervi-bus, petalis oblongis usque anguste ovatis, apice acutis, 5-nervi-bus dignoscenda.

Herba perennis, 6.5—11 cm alta. Caules longe brunneo-crispulo-glanduloso-pilosi etiam pilis brevioribus glandulosis tecti. Folia basalia saepe decidua, longe petiolata, laminis ellipticis, fere 4 mm longis et 2 mm latis, apice obtuso-acutis, utrinque margineque glanduloso-

pilosis, petiolis c. 7 mm longis, margine longe glanduloso-pilosis; folia caulina subsessilia, inferiora minora, superiora majora, oblonga, 6—9 mm longa, 1.5—2.8 mm lata, apice acuta, basi cuneata, utrinque et margine glanduloso-pilosa (margine pro ima parte sparsim atque longe glanduloso-pilosa). Flos solitarius vel cyma 2—3-flora; pedicelli dense brunneo-crispo-longo-glanduloso-pilosi etiam pilis erectis glandulosi tecti; sepala sub anthesi erecto-patentia ovata, 3.2—3.9 mm longa, 1.9—2 mm lata, apice paullo acuminata vel acuta, ventre pro superiore parte et dorso et margine glanduloso-pilosa, 8—11-nervia, nervis apice non confluentibus; petala flava, oblonga usque anguste ovata, 4.8—5.3 mm longa, 2.1—2.3 mm lata, apice acuta, basi ungue fere 1 mm longo instructa, 5-nervia, basi juxta nervos laterales bicallosa; stamina 3.5—3.9 mm longa, filamentis subulatis; ovarium subsuperum ovoideum, c. 2.3 mm longum, stylis 2 fere 2.3 mm longis divergentibus.

Yunnan (云南): Weixi (维西), Yezhi (叶枝), on slopes, alt. 3600 m, 1935.8., C. W. Wang (王启无) 68336 (holotype, PE), 68389.

此种与 *S. peplidifolia* Franch. 近缘, 但其花梗被卷曲长腺毛并被有直腺毛, 萼片之全部边缘具腺睫毛, 8—11 脉, 花瓣长圆形至狭卵形, 先端急尖, 5 脉, 可以区别。

小刚毛虎耳草 新种 图 1:10—16

Saxifraga setulosa C. Y. Wu, sp. nov.

Species valde similis *S. trinerviae* Franch. et *S. forrestii* Engl. et Irmsch., sed a priore sepalis margine glanduloso-ciliatis, petalis 4-callosis, a posteriore laminis foliorum apice uniaristato-glanduloso-pilosis, pedicellis longe crispulo-glanduloso-pilosis, sepalis dorso glanduloso-pilosis, petalis ellipticis usque obovatis, 5-nervibus haud aegre distinguitur.

Herba perennis, 5—6 cm alta. Caulis longe brunneo-glanduloso-pilosus (glandulis interdum deciduis). Folia basalia longe petiolata, laminis ovatis usque oblongis, 3—4 mm longis, 1.6 mm latis, apice acutis etiam uniaristato-glanduloso-pilosis (pilis interdum deciduis), ventre et margine sparse brunneo-longo-glanduloso-pilosis, dorso glabris, petiolis 0.4—1 cm longis, margine longe glanduloso-pilosis; folia caulina media et inferiora petiolata, laminis lanceolatis usque oblongis, fere 5 mm longis et 1.6 mm latis, ventre et margine longe glanduloso-pilosis, dorso glabris, petiolis 1—4 mm longis, margine longe glanduloso-pilosis, superiora subsessilia oblonga, c. 4 mm longa et 1.1 mm lata, apice pilo 1 longo glanduloso aristato instructa, utrinque glabra, margine longe glanduloso-pilosa. Flos solitarius; pedicellus 0.7—1 cm longus, longe crispulo-glanduloso-pilosus; sepala sub anthesi patentia, late subelliptica, apice obtusa, ventre glabra, dorso et margine glanduloso-pilosa, 3(—6)-nervia, nervis liberis; petala flava, elliptica usque obovata, fere 5 mm longa, 3.1—3.6 mm lata, apice obtusa, basi in unguem c. 0.5 mm longum abrupte contracta, 5-nervia, basi juxta nervos laterales plerumque 4-callosa; stamina 3.5—4 mm longa, filamentis subulatis; ovarium subsuperum ovoideum, fere 2.1 mm longum, stylis 2, c. 0.8 mm longis.

Yunnan (云南): Gongshan (贡山), in clefts of rocks, alt. 3900 m, 1938. 10. 9, T. T. Yü (俞德浚) 22892 (holotype, KUN).

此种与 *S. trinervia* Franch. 和 *S. forrestii* Engl. et Irmsch. 极相似, 但其萼片边缘具腺睫毛, 花瓣具 4 痂体, 与前者不难区别; 其叶片先端具 1 芒状腺毛, 花梗被卷曲长腺毛, 萼片背面被腺毛, 花瓣椭圆形至倒卵形, 5 脉又易与后者区别。

维西虎耳草 新变种 图 1:17—22

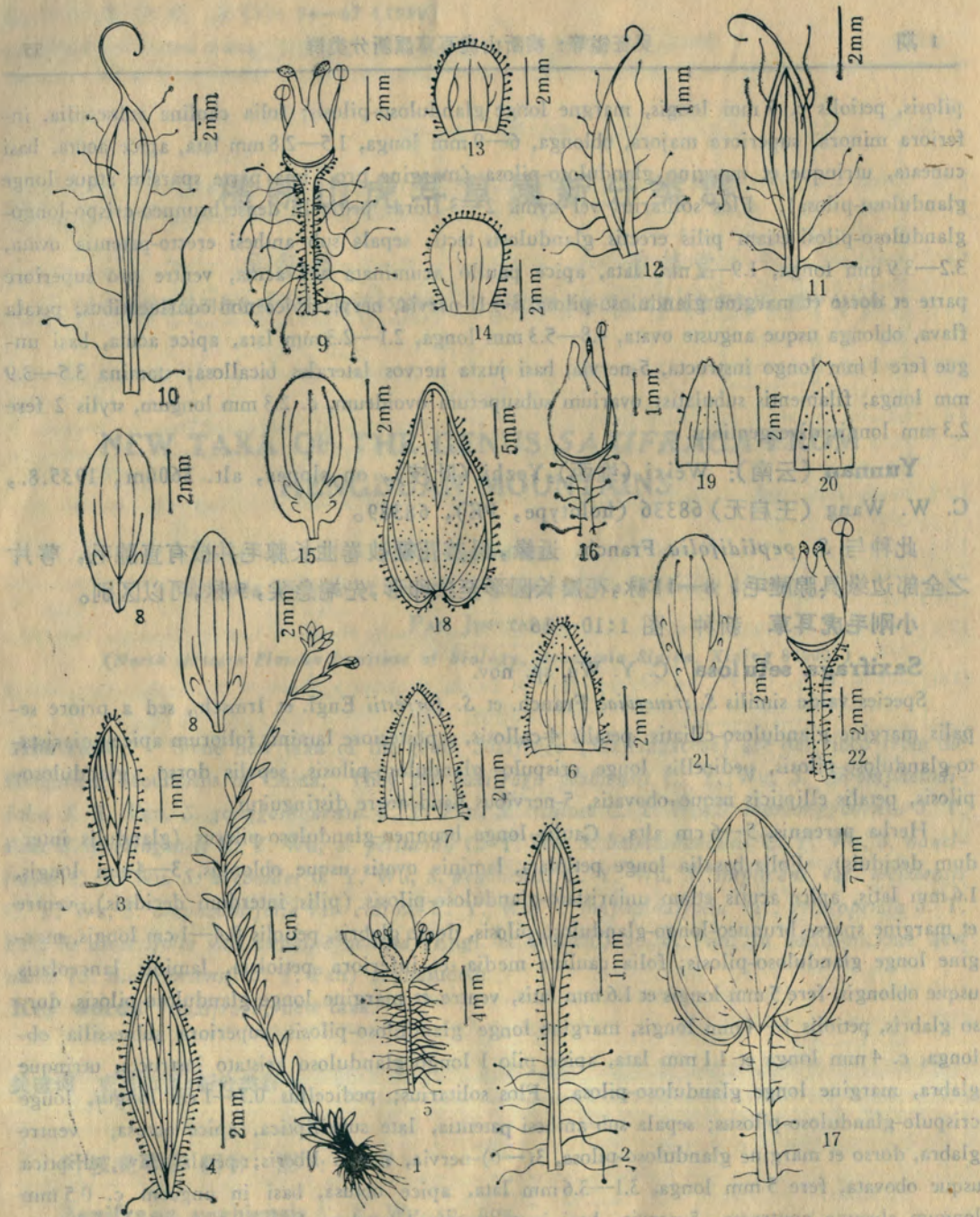


图1 1—9. 叶枝虎耳草 1. 全株; 2. 基生叶; 3. 茎下部叶; 4. 茎中部叶; 5. 花; 6. 萼片腹面; 7. 萼片背面; 8. 花瓣; 9. 花梗、雄蕊和雌蕊。10—16. 小刚毛虎耳草 10. 基生叶; 11. 茎中部叶; 12. 茎上部叶; 13. 萼片腹面; 14. 萼片背面; 15. 花瓣; 16. 花梗、雄蕊和雌蕊。17—22. 维西虎耳草 17. 下部茎生叶; 18. 最上部茎生叶; 19. 萼片腹面; 20. 萼片背面; 21. 花瓣; 22. 花梗、雄蕊和雌蕊。(潘锦堂、刘进军绘)

Fig. 1 1—9. *Saxifraga yezhiensis* 1. entire plant; 2. basal leaf; 3. lower cauline leaf; 4. middle cauline leaf; 5. flower; 6. sepal (ventral surface); 7. sepal (back); 8. petal; 9. pedicel, stamens and pistil. 10—16. *Saxifraga setulosa* 10. basal leaf; 11. middle cauline leaf; 12. upper cauline leaf; 13. sepal (ventral surface); 14. sepal (back); 15. petal; 16. pedicel, stamen and pistil. 17—22. *Saxifraga implicans* var. *weixiensis* 17. lower cauline leaf; 18. the uppermost cauline leaf; 19. sepal (ventral surface); 20. sepal (back); 21. petal; 22. pedicel, stamen and pistil.



图2 1—6. 马熊沟虎耳草 1. 植株一部分; 2. 基生叶; 3. 最上部茎生叶; 4. 萼片; 5. 花瓣; 6. 花梗、花丝、雌蕊。7—14. 川西南虎耳草 7. 植株一部分; 8. 基生叶; 9. 花序; 10. 花; 11. 萼片腹面; 12. 萼片背面; 13. 花瓣; 14. 花梗、花丝、雌蕊。(潘锦堂、王颖、刘进军绘)

Fig. 2 1—6. *Saxifraga maxiongkouensis* 1. part of plant; 2. basal leaf; 3. the uppermost cauline leaf; 4. sepal; 5. petal; 6. pedicel, filament, pistil. 7—14. *Saxifraga subomphalodifolia* 7. part of plant; 8. basal leaf; 9. inflorescence; 10. flower; 11. sepal (ventral surface); 12. sepal (back); 13. petals; 14. pedicel, filament, pistil.

6.2 cm longus, triflorus; pedicelli glanduloso-pilosi (glandulis nigro-brunneis); sepala sub anthesi patentia, subelliptica usque ovata, 4—4.3 mm longa, 2.5—3 mm lata, apice obtusa vel paullo acuminata, ventre glabra, dorso et margine glanduloso-pilosa (glandulis nigro-brunneis), 5—7-nervia, nervis apice confluentibus; petala aurantia, ovata usque anguste ovata, 7.8—8 mm longa, 4—4.3 mm lata, apice obtusa, basi in unguem 0.8—1 mm longum contracta, 6—7-nervia, juxta nervos laterales 6-callosa; stamina 6—7 mm longa, filamentis subulatis; ovarium subsuperum ellipsoideum, fere 4 mm longum, stylis 2, c. 2 mm longis.

Sichuan (四川): Daocheng (稻城), under *Pinus* forests on slopes, alt. 4200m, 1981, 8. 23, Qinghai-Xizang Exp. (青藏队) 5463 (holotype, PE).

此种与 *S. omphalodifolia* Hand.-Mazz. 相似,但其基生叶于花期不枯凋,茎生叶具褐色柔毛,萼片具 5—7 脉,花瓣具 6—7 脉,可以区别;也与 *S. egregia* Engl. 和 *S. cardiophylla* Franch. 相近,但其最上部之茎生叶基部心形,边缘疏生褐色长柔毛,萼片 5—7 脉,花瓣具 6 脉,与后两种不同。

具痂虎耳草 新变种 图 3:1—5

***Saxifraga omphalodifolia* Hand.-Mazz. var. *callosa* C.Y. Wu, var. nov.**

A var. *omphalodifolia* differt sepalis margine glaris, petalis 4—8-callosis.

Yunnan (云南): Zhongdian (中甸), under woods, alt. 3100m, 1937. 7. 8, T. T. Yü (俞德浚) 12707; the same locality, on slopes, 1939. 8. 20, K. M. Feng (冯国楣) 2091 (holotype, KUN).

此变种与原变种之区别在于其萼片边缘无毛,花瓣具 4—8 痂体。

微凹虎耳草 新变种 图 3:6—11

***Saxifraga omphalodifolia* Hand.-Mazz. var. *retusopetala* J. T. Pan, var. nov.**

— *S. omphalodifolia* aut. non Hand.-Mazz.: J. T. Pan in C. Y. Wu, Fl. Xizang. 2: 470. f. 8—13. 1985.

A ceteris varietatibus sepalis margine non glandulosociliatis, petalis apice retusis, haud callosis recedit.

Xizang (西藏): Mêdog (墨脱), alt. 4000 m, IX, 1974. 9. 17, Qinghai-Xizang Exp. (青藏队) 3277 (holotype, PE)。

此变种萼片边缘无腺睫毛,花瓣先端微凹,无痂体,可与其他变种区别。

滇西北虎耳草 新名称 图 3:12—17

***Saxifraga dianxibeiensis* J. T. Pan, nom nov.**—*S. diversifolia* (1) *diversifolia* typica (d) forma *alpina* Engl. et Irmsch. in Not. Bot. Gard. Edinb. 5 (24): 138. 1912, “fa.”

Yunnan (云南): Lijiang (丽江), in stony alpine pastures, alt. 3930—4550m, 1910. 8., G. Forrest 6358 (lectotype, KUN), 6506, 6615, 6666; the same locality, in clefts of rocks on mountain peaks, 1939, 9. 3, Z. G. Zhao (赵致光) 30581 (topotype, KUN).

云岭虎耳草 新种 图 3:18—27

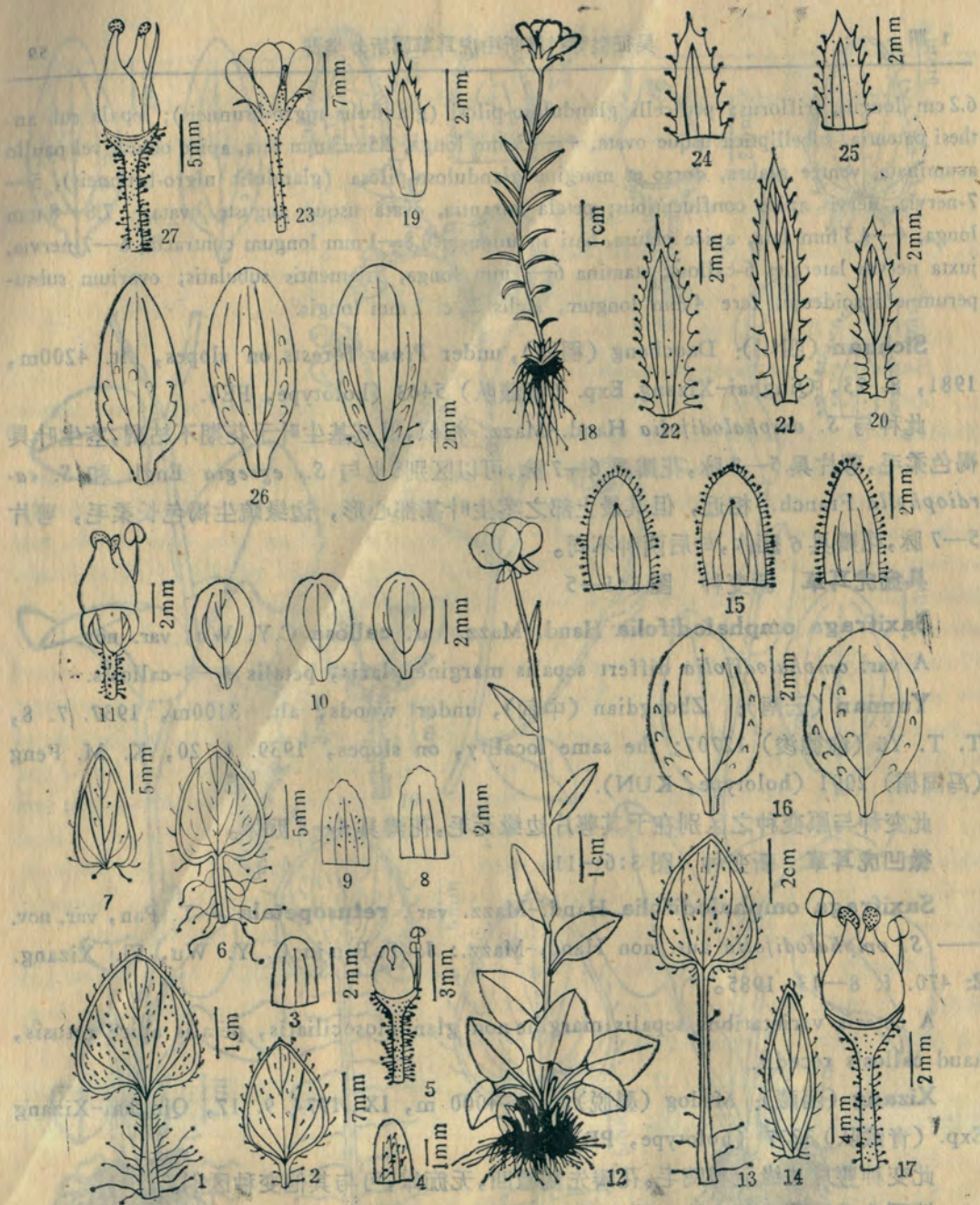


图3 1—5. 具痂虎耳草 1. 下部茎生叶; 2. 最上部茎生叶; 3. 萼片腹面; 4. 萼片背面; 5. 花梗、雄蕊、雌蕊。
6—11. 微凹虎耳草 6. 下部茎生叶; 7. 上部茎生叶; 8. 萼片腹面; 9. 萼片背面; 10. 花瓣; 11. 花梗、萼片、雄蕊、雌蕊。12—17. 滇西北虎耳草 12. 植株; 13. 基生叶; 14. 茎上部叶; 15. 萼片; 16. 花瓣; 17. 花梗、雄蕊、雌蕊。18—27. 云岭虎耳草 18. 植株; 19. 基生叶; 20. 茎下部叶; 21. 茎中部叶; 22. 茎上部叶; 23. 花; 24. 萼片腹面; 25. 萼片背面; 26. 花瓣; 27. 花梗、花丝、雌蕊。(潘锦堂、刘进军绘)

Fig. 3 1—5. *Saxifraga omphalodifolia* var. *callosa* 1. lower cauline leaf; 2. the uppermost cauline leaf; 3. sepal (ventral surface); 4. sepal (back); 5. pedicel, stamens, pistil. 6—11. *S. omphalodifolia* var. *retusopetala* 6. lower cauline leaf; 7. upper cauline leaf; 8. sepal (ventral surface); 9. sepal (back); 10. petal; 11. pedicel, stamens, pistil. 12—17. *S. dianxibeiensis* 12. plant; 13. basal leaf; 14. upper cauline leaf; 15. sepal; 16. petals; 17. pedicel, stamens, pistil. 18—27. *S. yunlingensis* 18. plant; 19. basal leaf; 20. lower cauline leaf; 21. middle cauline leaf; 22. upper cauline leaf; 23. flower; 24. sepal (ventral surface); 25. sepal (back); 26. petal; 27. pedicel, filament, pistil.

***Saxifraga yunlingensis* C. Y. Wu, sp. nov.**

Species reapse affinis *S. balfourii* Engl. et Irmsch., sed planta minore, non ultra 7 cm alta, foliis caulinis superioribus ventre glabris, mediis et inferioribus utrinque glabris sed margine cartilagineo-ciliatis, sepalis margine glanduloso-ciliatis, trinerviis, petalis 4—5-nerviis, 6—9-callosis haud aegre distinguitur.

Herba perennis caespitosa, 3—7 cm alta. Caules erecti simplices, glanduloso-pilosi. Folia basalia rariora, squamiformia, lanceolata, 5.7—6 mm longa, 1—1.2 mm lata, apice acuta, utrinque glabra, margine pro superiore parte cartilagineo-ciliata; folia caulina coriacea, rigida, inferiora petiolata et superiora sensim sessilia, oblonga usque anguste oblonga, 5—10.5 mm longa, 1.5—2.1 mm lata, apice acuta rigido-aristata, media et inferiora utrinque glabra sed margine cartilagineo-ciliata, superiora ventre glabra sed dorso et margine glanduloso-pilosa, petiolis c. 2 mm longis, margine ciliatis. Flos solitarius vel cyma biflora; pedicelli 5—15 mm longa, glanduloso-pilosi; sepala sub anthesi erecta usque paulo patentia, coriacea, anguste ovata, 3.5—5 mm longa, 1.5—2 mm lata, apice aristata, ventre glabra, dorso et margine glanduloso-pilosa, nervis 3 apice confluentibus instructa; petala flava, elliptica ovata usque anguste obovata, 5.5—7 mm longa, 2—3.5 mm lata, apice obtuso-rotundata vel paulo acuta, basi ungue 0.6—1 mm longo instructa, 4—5-nervia, 6—9-callosa, interdum basiad marginem sparsissime glanduloso-ciliata; stamina 4.4—6.5 mm longa, filamentis subulatis; ovarium subsuperum ovoideum, 2—3 mm longum, stylis 2, 1—2 mm longis.

Yunnan (云南): Dêqên (德钦), Yunling (云岭), in alpine shrub meadows, alt. 4150—4400m, 1981.8.24, Hengduan Mts. Exp. (横断山队) 3645 (holotype, PE), 3783, 3807.

此种确与 *S. balfourii* Engl. et Irmsch. 近缘,但其形体较小,高不过 7cm,茎生叶,上部者腹面无毛,中部和下部者两面无毛,但边缘具软骨质睫毛,萼片边缘具腺睫毛,3脉,花瓣 4—5 脉,6—9 痂体,不难区分。

透明虎耳草 新种 图 4:1—7***Saxifraga pellucida* C. Y. Wu, sp. nov.**

Species proxima *S. densifoliatae* Engl. et Irmsch., sed foliis caulinis mediis remotis, utrinque glanduloso-pilosis, sepalis apice non praemorsis et sparsim glanduloso-ciliatis, petalis ellipticis usque pandurato-ovatis differt.

Herba perennis, 9—14 cm alta. Caulis gracilis glanduloso-pilosus (glandulis brunneis). Folia basalia rosulatum conferta, laminis spatulatis, 4.5—5 mm longis, 1.2—1.5 mm latis, utrinque et margine setosis; folia caulina media et inferiora petiolata, laminis sublineari-oblongis usque lineari-oblancoelatis, 6.5—8.5 mm longis, 1.5—2 mm latis, apice acutis, utrinque et margine glanduloso-pilosis, petiolis 1—1.5 mm longis, glanduloso-pilosis, superiora sessilia suboblancoelata, c. 8.5 mm longa et 3 mm lata, apice acuta, basi cuneata, utrinque et margine glanduloso-pilosa. Cyma 2—7-flora; pedicelli graciles, 1.7—3 cm longi, sparse glanduloso-pilosi; sepala sub anthesi reflexa, elliptica, 1.9—2 mm longa, fere 1 mm lata, apice obtusa, ventre glabra, dorso et margine pro superiore parte sparsim glanduloso-pilosa, nervis 3 apice non confluentibus instructa; petala flava necnon infima dimidia parte aurantiopunctulata, elliptica usque pandurato-obovata, 4—4.6 mm longa, 1.8—2.5 mm lata, apice obtusa, basi in unguem 0.4—0.9 mm longum contracta, trinervia, juxta nervos laterales 4-callosa; stamina fere 3.6 mm longa, filamentis subulatis; ovarium subsuperum subellipsoideum, c. 2 mm longum, stylis 2 fere

1 mm longis.

Yunnan (云南): Dêqên (德钦), on grassy slopes, alt. 2700 m, 1935. 9., C. W. Wang (王启无) 70294 (holotype, KUN), 70297; the same locality, under alpine *Quercus* forests, alt. 2900—3400m, 1981. 8. 21, Hengduan Mts. Exp. (横断山队) 3384.

此种近于 *S. densifoliata* Engl. et Irmsch., 但其中部茎生叶疏离, 两面被腺毛, 萼片先端非啮蚀状且疏生腺睫毛, 花瓣椭圆形至提琴状倒卵形, 可以区别。

白马山虎耳草 新种 图 4:8—13

Saxifraga baimashanensis C. Y. Wu, sp. nov.

Species vero affinis *S. miralanae* H. Smith et *S. chrysanthoidi* Engl. et Irmsch., sed a priore sepalis subrotundatis 5-nervibus, nervis apice ex parte confluentibus, petalis 5-nervibus obscure bicallosis, a posteriore sepalis apice glabris necnon dorso pilosis, petalis obscure bicallosis dignoscenda.

Herba perennis caespitosa, 3.5—4.5 cm alta, caudiculis rarius ramosis. Caulis florifer crispè pallido-pilosus. Folia caudiculorum rosulatim conferta, carnosà, subspathulata, c. 3.7 mm longa et 1.2 mm lata, apice mucronulata, utrinque glabra, margine cartilagineo-setoso-ciliata; folia caulina carnosà, spathulato-oblonga, fere 3.3 mm longa et 1 mm lata, apice mucronulata, utrinque glabra, margine cartilagineo-setoso-ciliata. Flos solitarius; pedicellus gracilis, c. 1.7 cm longus pallido-pilosus; sepala sub anthesi patentia usque reflexa, carnosà subrotundata, fere 2 mm diam., ventre et margine glabra, dorso pallido-pilosa, nervis 5 ex parte confluentibus instructa; petala flava etiam infima dimidia parte aurantio-punctulata, ovata, c. 4.6 mm longa et 2.3 mm lata, apice acuta, basi ungue fere 0.3 mm longo instructa, 5-nervia, juxta nervos laterales obscure bicallosa; stamina fere 3.4 mm longa, filamentis subulatis; ovarium subsuperum late ovoideum, c. 2 mm longum, stylis 2 fere 1 mm longis.

Yunnan (云南): Dêqên (德钦), Mt. Baima (白马山), in clefts of rocks, alt. 4600—4700m, 1981. 7. 13, Qinghai-Xizang Exp. (青藏队) 2362 (holotype, PE).

此种确与 *S. miralana* H. Smith 和 *S. chrysanthoides* Engl. et Irmsch. 近缘, 但与前者之区别在于其萼片近圆形, 具 5 脉, 脉于先端一部分汇合, 花瓣具 5 脉, 具不明显之 2 痂体; 与后者之不同则在于其萼片先端无毛且背面被柔毛, 花瓣具不明显之 2 痂体。

拟光缘虎耳草 新种 图 4:14—20

Saxifraga nanelloides C. Y. Wu, sp. nov.

Species reapse affinis *S. atunsiensis* W. W. Smith, sed foliis anguste oblanceolatis, mediis et inferioribus margine glanduloso-ciliatis, sepalis 3—5-nervibus, petalis 3—5-nervibus, diffuse 3—5-callosis recedit.

Herba perennis, 2.5—3 cm alta, sparse caespitosa. Caudiculi ramosi; rami steriles ad apicem foliis rosulatim confertis instructi; caules floriferi superne brunneo-pilosi. Folia caulium floriferorum carnosà, inferiora minora etiam remotiora, superiora majora necnon rosulatim conferta, anguste oblanceolata, 4.5—6.3 mm longa, 0.7—1 mm lata, apice obtusa et glabra, utrinque glabra, media et inferiora margine setoso-ciliata, superiora margine glanduloso-ciliata. Flos solitarius; pedicellus 1—1.8 cm longus, brunneo-glanduloso-pilosus; sepala sub anthesi reflexa, subelliptica, c. 3.4 mm longa et 1.7 mm lata, apice obtusa, glabra, carnosà, 3—5-nervia, nervis apice in verruculam confluentibus; petala flava, ovata usque elliptica, fere 5.6 mm longa,



图4 1—7. 透明虎耳草 1. 植株一部分; 2. 茎中下部叶; 3. 茎上部叶; 4. 花; 5. 萼片; 6. 花瓣; 7. 花梗、雄蕊、雌蕊。8—13. 白马山虎耳草 8. 全株; 9. 莲座叶; 10. 茎生叶; 11. 萼片; 12. 花瓣; 13. 花梗、雄蕊、雌蕊。14—20. 拟光缘虎耳草 14. 全株; 15. 茎最下部叶; 16. 茎中部叶; 17. 茎最上部叶; 18. 萼片; 19. 花瓣; 20. 花梗、雄蕊、雌蕊。21—24. 狭苞异叶虎耳草 21. 萼片; 22. 花瓣; 23. 另一花之花瓣; 24. 花梗、雄蕊、雌蕊。(潘锦堂、刘进军绘)

Fig. 4 1—7. *Saxifraga pellucida* 1. part of plant; 2. middle and lower cauline leaves; 3. upper cauline leaf; 4. flower; 5. sepal; 6. petals; 7. pedicel, stamen, pistil. 8—13. *Saxifraga baimashanensis* 8. entire plant; 9. rosette leaf; 10. cauline leaf; 11. sepal; 12. petal; 13. pedicel, stamen, pistil. 14—20. *Saxifraga nanelloides* 14. entire plant; 15. the lowermost cauline leaf; 16. middle cauline leaf; 17. the uppermost cauline leaf; 18. sepal; 19. petal; 20. pedicel, stamen, pistil. 21—24. *Saxifraga diversifolia* var. *angustibracteata* 21. sepal; 22. petal; 23. a petal of another flower; 24. pedicel, stamen, pistil.

3—3.1 mm lata, apice obtuso-acuta, basi in unguem c. 0.4 mm longum contracta, 3—5-nervia, diffuse 3—5-callosa; stamina fere 3.5 mm longa, filamentis subulatis; ovarium superum, c. 2.7 mm longum, stylis fere 1.8 mm longis.

Yunnan (云南): Dêqên (德钦), on cliffs, alt. 4000m, 1940. 7. 10, K. M. Feng (冯国楣) 5236 (holotype, KUN).

此种确与 *S. atuntsiensis* W. W. Smith 近缘,但其叶狭倒披针形,中下部者,边缘具刚毛状睫毛,上部者,边缘具腺睫毛,萼片具3—5脉,花瓣具3—5脉,散生有3—5疣体,可资区别。

狭苞异叶虎耳草 改级新组合 图 4:2—24

Saxifraga diversifolia Wall. ex Ser. var. **angustibracteata** (Engl. et Irmsch.) J. T. Pan, stat. nov.—*S. diversifolia* Wall. ex Ser. forma *angustibracteata* Engl. et Irmsch. in Not. Bot. Gard. Edinb. 5(24): 139, 1912, “fa.”

Yunnan (云南): Dali (大理), Moist shady places in *Pinus* forests, alt. 2730—3330m, 1906. 8—9, G. Forrest 4207 (lectotype, E), 5056, the same locality, T. N. Liou (刘慎谔) 21254 (topotype, PE).

中甸虎耳草 新种 图 5:1—8

Saxifraga draboides C. Y. Wu, sp. nov.

Species proxima *S. drabiformi* Franch., sed a qua differt caule florifero pilis glandulosis nigro-brunneis dense obsito, foliis ramorum sterilium margine pro suprema parte sparse setoso-ciliatis, nervis sepalorum 3—5, apice in verruculam omnino confluentibus.

Herba perennis, sparse caespitosa, 2.5—5 cm alta, caudiculis ramosis. Caules floriferi pilis glandulosis nigro-brunneis dense obsiti. Folia summa ramorum sterilium et folia infima caulium floriferorum rosulatum conferta, spatulata, carnosa, 4—5 mm longa, 1.3—1.4 mm lata, apice mucronata, utrinque glabra, margine pro suprema parte sparse setoso-ciliata; folia cetera caulium floriferorum (praeter infima) remotiora, carnosa, suboblonga, anguste spatulato-obovata usque spatulata, 3—6 mm longa, 1—2.3 mm lata, apice obtusa, utrinque glabra vel dorso pro supera parte sparsim nigro-brunneo-glanduloso-pilosa, margine nigro-brunneo-glanduloso-ciliata. Flos solitarius; pedicellus 5—10 mm longus, pilis nigro-brunneis glandulosis obsitus; sepala sub anthesi reflexa, subovata, 3—3.8 mm longa, 1.9—2 mm lata, apice obtusa, ventre concava etiam glabra, dorso convexa necnon nigro-brunneo-glanduloso-pilosa, margine glanduloso-ciliata, 3—5-nervia, nervis apice in verruculam confluentibus; petala flava, late elliptica, late ovata usque late obovata, 5.5—8 mm longa, 4—5.1 mm lata, apice obtusorotundata, basi in unguem 1—1.1 mm longum contracta, 3—7-nervia, juxta nervos laterales obscure 2—8-callosa; stamina 4.3—5 mm longa, filamentis subulatis; ovarium superum subglobosum, 1.7—2.7 mm diam., stylis 1.1—1.5 mm longis.

Yunnan (云南): Zhongdian (中甸), on rock surface, alt. 3800m, 1937. 9. 20, T. T. Yü (俞德浚) 13574; the same county, Haba snow Mt. (哈巴雪山), on slopes, 1939. 8. 22, K. M. Feng (冯国楣) 2137 (holotype, KUN); the same locality, in clefts of limestones, alt. 4300—4700m, 1962. 9. 1, Zhongdian Exp. (中甸队) 1803; the same county, in clefts of rocks on alpine slopes, alt. 4100m, 1981. 8. 10, Hengduan Mts. Exp. (横断山队) 2892.

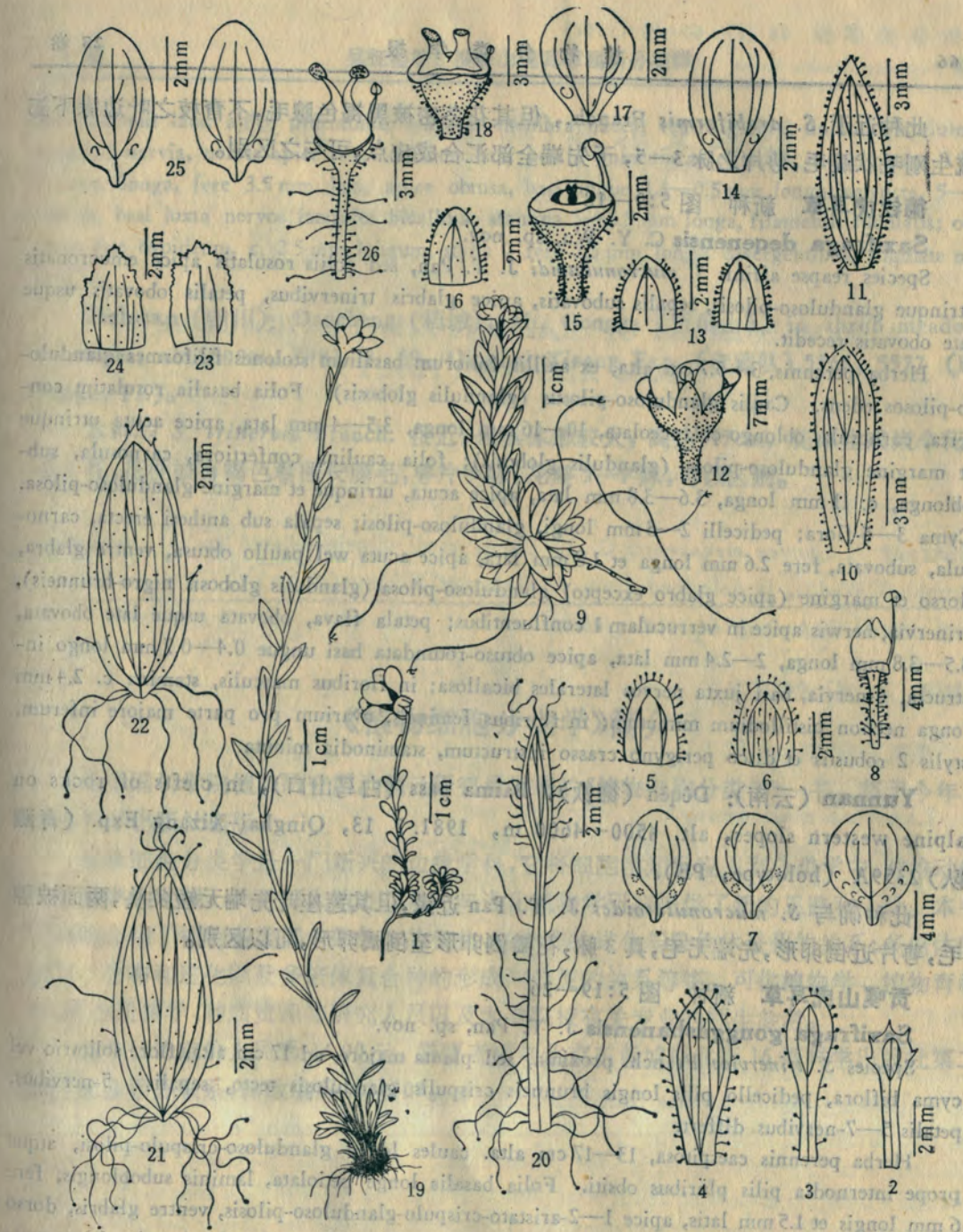


图5 1—8. 中甸虎耳草 1. 全株; 2. 不育枝之叶; 3. 茎下部叶; 4. 茎中上部叶; 5. 萼片腹面; 6. 萼片背面; 7. 花瓣; 8. 花梗、雄蕊、雌蕊。9—18. 德钦虎耳草 9. 全株; 10. 基生叶; 11. 茎生叶; 12. 花; 13. 萼片; 14. 花瓣; 15. 花梗、雄蕊、雌蕊(13—15. 雄花各部分); 16. 萼片; 17. 花瓣; 18. 花梗、雄蕊、雌蕊(16—18. 雌花各部分)。19—26. 贡嘎山虎耳草 19. 全株; 20. 基生叶; 21. 中部茎生叶; 22. 上部茎生叶; 23. 萼片腹面; 24. 萼片背面; 25. 花瓣; 26. 花梗、雄蕊和雌蕊。(潘锦堂, 刘进军绘)

Fig. 5 1—8. *Saxifraga draboides* 1. entire plant; 2. leaf of sterile branch; 3. lower cauline leaf; 4. middle and upper leaf; 5. sepal (ventral surface); 6. sepal (back); 7. petal; 8. pedicel, stamen, pistil. 9—18. *Saxifraga deqenensis* 9. entire plant; 10. basal leaf; 11. cauline leaf; 12. flower; 13. sepals; 14. petal; 15. pedicel, stamen, pistil (13—15. each part of male flower); 16. sepal; 17. petal; 18. pedicel, stamen, pistil (16—18. each part of female flower). 19—26. *Saxifraga gonggashanensis* 19. entire plant; 20. basal leaf; 21. middle cauline leaf; 22. upper cauline leaf; 23. sepal (ventral surface); 24. sepal (back); 25. petals; 26. pedicel, stamen and pistil.

此种近于 *S. drabiformis* Franch., 但其花茎密被黑褐色腺毛, 不育枝之叶边缘下部疏生刚毛状睫毛, 萼片之脉 3—5, 于先端全部汇合成疣点, 可与之区别。

德钦虎耳草 新种 图 5:9—18

Saxifraga deqenensis C. Y. Wu, sp. nov.

Species reapse affinis *S. mucronulatoidi* J. T. Pan, sed foliis rosulatis apice emucronatis utrinque glanduloso-pilosis, sepalis subovatis, apice glabris trinerviis, petalis obovatis usque late obovatis recedit.

Herba perennis, 3—5.7 cm alta, ex axillis foliorum basaliu stolones filiformes glanduloso-pilosos edens. Caulis glanduloso-pilosus (glandulis globosis). Folia basalia rosulatum conferta, carnosula, oblongo-oblancoolata, 10—16 mm longa, 3.5—4 mm lata, apice acuta utrinque et margine glanduloso-pilosa (glandulis globosis); folia caulina confertiora, carnosula, sub-oblonga, c. 11 mm longa, 3.6—3.8 mm lata, apice acuta, utrinque et margine glanduloso-pilosa. Cyma 3—5-flora; pedicelli 2—3 mm longi, glanduloso-pilosi; sepala sub anthesi erecta, carnosula, subovata, fere 2.6 mm longa et 1.8 mm lata, apice acuta vel paullo obtusa, ventre glabra, dorso et margine (apice glabro excepto) glanduloso-pilosa (glandulis globosis nigro-brunneis), trinervia, nervis apice in verruculam 1 confluentibus; petala flava, obovata usque late obovata, 3.5—3.8 mm longa, 2—2.4 mm lata, apice obtuso-rotundata basi ungue 0.4—0.7 mm longo instructa, 6-nervia, basi juxta nervos laterales bicallosa; in floribus masculis, stamina c. 2.4 mm longa necnon pistillodium minutum; in floribus femineis, ovarium pro parte majore inferum, stylis 2 robustis et disco perigyno crasso instructum, staminodia minuta.

Yunnan (云南): Dêqên (德钦), Baima pass (白马山口), in clefts of rocks on alpine western slopes, alt. 4500—4600 m, 1981. 7. 13, Qinghai-Xizang Exp. (青藏队) 2359A (holotype, PE).

此种确与 *S. mucronulatoides* J. T. Pan 近缘, 但其莲座叶先端无短尖头, 两面被腺毛, 萼片近倒卵形, 先端无毛, 具 3 脉, 花瓣倒卵形至倒阔卵形, 可以区别。

贡嘎山虎耳草 新种 图 5:19—26

Saxifraga gonggashanensis J. T. Pan, sp. nov.

Species *S. trinerviae* Franch. proxima, sed planta majore, ad 17 cm alta, flore solitario vel cyma biflora, pedicello pilis longis brunneis crispulis glandulosis tecto, sepalis 5-nerviis, petalis 5—7-nerviis differt.

Herba perennis caespitosa, 13—17 cm alta. caules longe glanduloso-crispulo-pilosi, atque prope internodia pilis pluribus obsiti. Folia basalia longe petiolata, laminis suboblongis, fere 6 mm longis et 1.5 mm latis, apice 1—2-aristato-crispulo-glanduloso-pilosis, ventre glabris, dorso et margine brunneo-pilosis (interdum glandulosis), petiolis c. 10 mm longis, margine longe crispique brunneo-glanduloso-pilosis; folia caulina inferiora petiolata, foliis basalibus similia, anguste oblongo-ovata, c. 6.6 mm longa et 2 mm lata, ventre glabra, margine et dorso glanduloso-pilosa, petiolis fere 6 mm longis, dorso margineque glanduloso-pilosis, media et superiora subsessilia, anguste ovata usque anguste oblongo-ovata, c. 10 mm longa, et 3.5 mm lata, apice 1—4-aristato-glanduloso-pilosa (pilis circa 1.2 mm longis), utrinque et margine glanduloso-pilosa, sed basi pilis longis brunneis crispulis glandulosis instructa. Flos solitarius vel cyma biflora; pedicelli 1.2—3 mm longi, brunneo-glanduloso-pilosi, etiam pilis brunneis crispulis longis glandulosis tecti; sepala sub anthesi erecta usque patentia, ovata usque subelliptica, c. 4 mm longa,

2.5—2.8 mm lata, apice praemorsa, margine membra nacea, ventre glabra, dorso glanduloso-pilosa, 5-nervia, nervis apice non confluentibus; petala aurantiaca, elliptica usque ovata, 5.5—5.6 mm longa, fere 3.5 mm lata, apice obtusa, basi ungue 0.3—0.5 mm longo instructa, 5—7-nervia, basi juxta nervos laterales bicallosa; stamina 3—3.5 mm longa, filamentis subulatis; ovarium late ovoideum, c. 2.5 mm longum, stylis 2 fere 2.5 mm longis divergentibus, stigmatem majore.

Sichuan (四川): Daocheng (稻城), Mt. Gongga (贡嘎山), in shrub meadows on slopes, alt. 4600m, 1981. 8. 29, Qinghai-Xizang Exp. (青藏队) 5566, 5577 (holotype, PE)。

本种与 *S. trinervia* Franch. 接近,但其体形较大,高达 17cm,花单生或聚伞花序具 2 花,花梗被有褐色卷曲长腺毛,萼片 5 脉,花瓣 5—7 脉,可以区别。

《植物细胞分类学》简介

由中国科学院植物研究所洪德元研究员编著的《植物细胞分类学》一书,将于今年 6 月由科学出版社出版。

植物细胞分类学是一门新兴的边缘学科,它将细胞学知识应用到分类学中,对推动经典分类学的发展,为更深入地进行系统与进化植物学研究提供了新的思路 and 手段。本书全面地介绍了植物各类群中染色体的变化、各类群的进化与染色体进化的关系;多倍体的起源、分布和进化以及多倍体复合种的形成与分类的关系等等。可供植物学、植物育种学、细胞遗传学、种质资源等研究人员以及大专院校有关专业的师生参考。

该书估计定价人民币 16.00 元,需要者请与北京东黄城根北街 16 号科学出版社第二编辑室曾桂芬联系,邮政编码 100707。