

25 毫米,管伸直,长达 12 毫米,管喉密被短柔毛,盔下部与管同一指向,上半部則向前作鑷状弓曲,盔之极端虽鈍头,然外形多少尖削而作舟形,額不高凸或稍稍圓凸,前緣无凹缺,在距頂端 3 毫米处生有主齿 1 对,在主齿以上更有附加的小齿两对,极不明显,下唇較盔为短,无緣毛,略有嚙痕状細齿,基部具有短而寬的柄,长仅 1—1.5 毫米,寬达 7.5 毫米,裂片約略相等而同形,均为菱状寬卵形,基部略作心脏形,中裂有柄长 1.5 毫米,与側裂組成深弯缺而伸出于其前大半,其柄的后方有褶襞两条通向喉部;雄蕊着生于花管中部以下,花絲上部均无毛,基部及着生点均有毛;子房后方生有代表花盘的披針形附属物 1 枚,长约 1 毫米,下部紧贴于子房,柱头伸出于盔外。蒴果斜披針状长圓形,长 12—13 毫米,約伸出于宿萼 1/3,下縫綫几伸直,上縫綫向下弓曲,端有小凸尖。花期 8 月,果期 9 月。

为我国特有种,产云南西北部和四川西南部,生于海拔 3,400—4,000 米的高山草原上。

229. 不等裂馬先蒿 图版 LXI, 4—5

Pedicularis inaequilobata Tsoong, sp. nov., in Addenda 415.

一年生草本,低矮,高仅 3.5—4.5 厘米,鋪散地面,干时不变黑色。主根垂直向下,长达 3.5 厘米,径約 2 毫米,略略肉質化,下部发出須状支根,根頸生有膜質鱗片 2—3 对,寬三角形。茎很短,不計花仅高 2 厘米,纤细,稍木質化,多分枝,枝对生,与茎均有毛綫两条,不連花序仅有节 1—2 枚。叶基生者早败,茎生者稀疏而对生,每枝上多仅 1 对,具长柄,柄长 4—9 毫米,扁平,基部多少膨大,具狭翅,有疏长毛或几无毛;叶片厚紙質,卵形至长圓状卵形,基部心脏形,长 2—6 毫米,寬 1.5—4 毫米,側脉不著,上面密被細而短的腺毛,背面疏生白色肤屑状物,羽状深裂,裂片 3—4 对,寬卵形,有缺刻状大齿及反捲的小齿。花每枝端有 1—2 对,花梗长达 6 毫米,纤细,有疏毛;萼膜質,粗管状,长约 8 毫米,前方不裂,主脉細而不很显著,为疏网脉所串連,疏被白色多細胞长毛,以主脉上尤密;萼齿 5 枚,后方 1 枚較小,基部寬三角形而低,再上即为大針形而全緣,其余 4 枚下半膜質有网脉,上半綠色叶状,后側方两枚最大,下部寬达 1.5 毫米,上半掌状 3—4 裂,前側方两枚較小一半,緣有反捲的大圓齿而不裂;花冠长约 24 毫米,黄色,管伸直,长约 9—10 毫米,喉部被短毛,盔长约 14 毫米,中上部作鑷形弓曲,含有雄蕊的部分稍扩大,端尖削,前緣无凹缺,約在距离 3 毫米处有短齿 1 对,长不及 0.5 毫米;下唇短于盔,具长 1.5 毫米的寬柄,无緣毛,略有嚙痕状細齿,裂片多少圓形,中裂比側裂大一倍,有明显之柄,长 1.5 毫米,其片长 4.5—5 毫米,大部向前凸出,側裂亦有短柄;雄蕊着生于管的基部稍上处,花絲仅着生处有短

毛;子房狭卵圆形,长约3毫米,一侧生有代表花盘的长1毫米的附属物,基部宽而环抱子房,上部圆锥形,下部1/3与子房贴着,柱头约伸出于盔外1.5—2毫米。

为我国特有种,产云南西北部。

这一种最与前一种相近,但以其特小的体态,与特大而等于侧裂两倍的中裂而极易区别。在下唇的特征上,则很象绒毛马先蒿,但在毛被与叶形上,相去很远。

230. 绒毛马先蒿

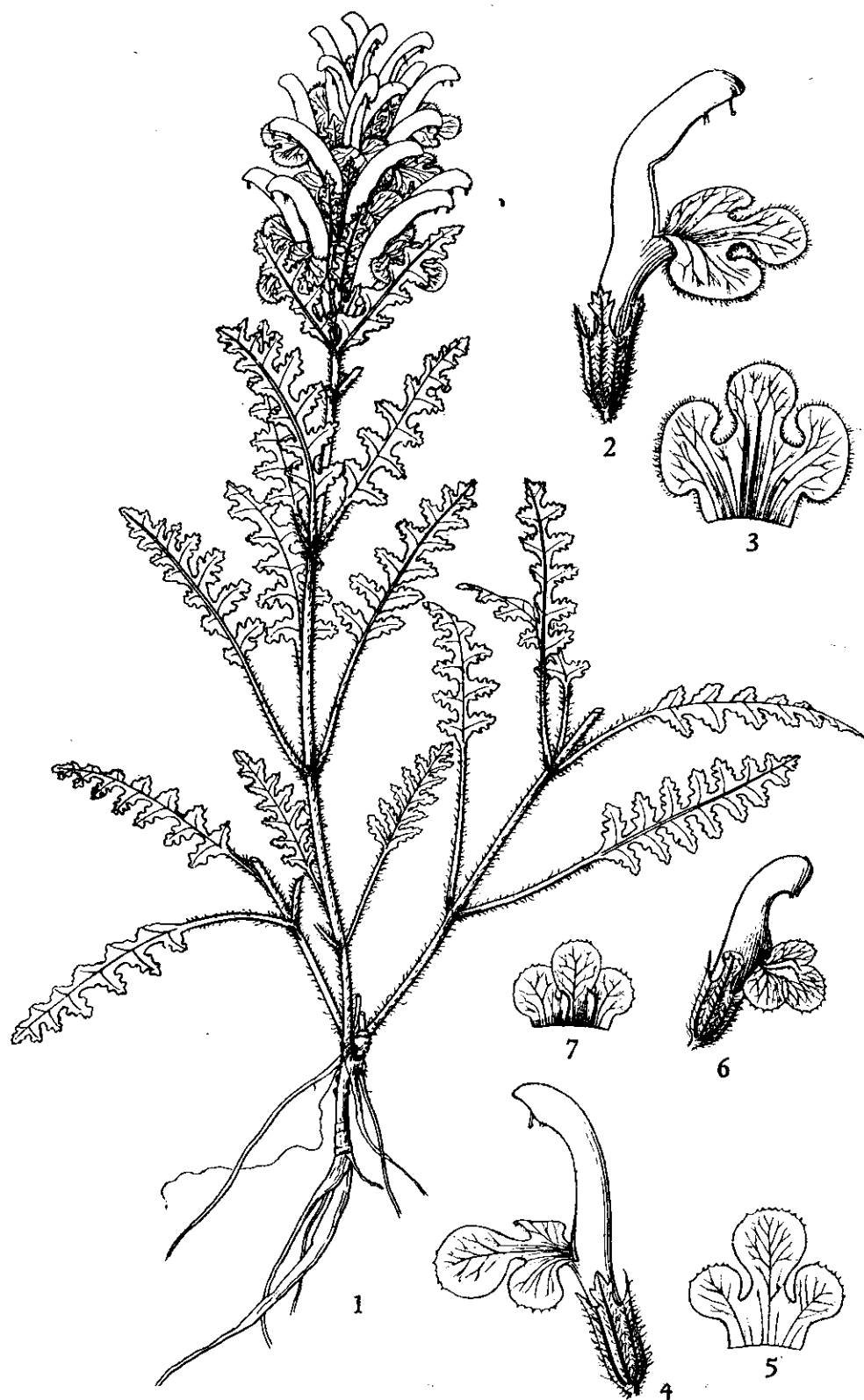
Pedicularis tomentosa Li, in Proc. Acad. Nat. Sci. Philad. C (1948) 357, f. 74.

一年生草本,干后不变黑色,高达12厘米,全体密被短绒毛;主根细长,多少木质化,生有少数须状侧根,长达3—7厘米。茎极少单条,多由根颈之端发出2—6条,上部有时有短枝,纤细而圆,上部稍有棱角。叶稀疏,对生或4枚轮生,无柄,在茎枝之上成有间距的3—4轮,叶片长圆状卵形至三角状卵形,长10—13毫米,宽5—7毫米,两面密被短绒毛,下面间有白色肤屑状物,顶端钝,基部截形至亚心脏形,缘有圆形大齿或小形裂片,约5—9对。花序短总状或花少数,长可达4厘米;苞片叶状而宽,为圆卵形,每边齿多达10枚以上,齿反卷;花几无梗;萼管宽圆筒形,膜质,长约6毫米,宽约3毫米,密被短绒毛,主脉不显著,有疏网脉串连,萼齿5枚,下半均膜质透明,多少三角形,上部均多少膨大而绿色,后方1枚线状长圆形,近于全缘,其余较大,略不等,边缘具圆齿;花冠黄色,长约22—25毫米,管伸直,仅略长于萼,喉部被短毛,盔下部与管同一指向,长12—13毫米,上部镰状弯曲,额圆形,前缘离端1.5毫米处有齿1对,下唇与盔等长或稍短,基部有明显之宽柄,长1.6毫米左右,前方3裂,裂片圆形,近于相等或中裂稍较大,后者前端微凹,基部有明显之柄,与侧裂构成弯缺,基部后方有明显之褶皱;雄蕊着生于管的基部,花丝无毛;子房1侧有细形附属物,仅基部与子房贴合,花柱伸出盔外。

为我国特有种,产云南西北部。

231. 三角叶马先蒿 图版 LXI, 6—7

Pedicularis deltoidea Franch. ex Maxim. in Bull. Acad. St. Pétersb. XXXII (1888) 604, f. 133, et in Mém. Biol. XII (1888) 169, f. 133; Forbes et Hemsl. in Journ. Linn. Soc. Bot. XXVI (1890) 208; Bonati, in Notes Bot. Gard. Edinb. V (1911) 89, et VII (1912) 241; Limpr. in Repert. Sp. Nov. XX (1924) 226; Hand.-Mazz. Symb. Sin. VII (1936) 855; Li, in Proc. Acad. Nat. Sci. Philad. C (1948) 357, f. 73.



curvata, apice apiculata.

Szechuan: "Kangting distr.: Yu-ling-kong, Gomba La, in prato alpino, ca. 3800 m.s.m. (H. Smith 10699, typus), VII, 22, 1934", (typus).

226. **Pedicularis stenocorys** French. subsp. **stenocorys**, var. **angustissima** Tsoong, var. nov.

A var. *stenocorys* recedit galea valde elongata, angustissima, ad 19 mm. longa, 1.8 mm. tantum lata.

Szechuan: Hai-shui, Valley Kerh-szu-pa, on slope, alt. 3750 m. (H. Li 73241) VII, 21, 1957, (var. type).

Pedicularis stenocorys Franch. subsp. **melanotricha** Tsoong, subsp. nov.

A subsp. *stenocorys* recedit planta tantum 10 cm. circ. alta, caule pilis multicellulatis atro-ferrugineis oblecto, laminis foliorum minoribus, minima tantum 5 mm. longa, ovata, maxima vix 16 mm. longa, lobis paucioribus, tantum 4—8-jugis.

Szechuan: "Kangting, Yülingkong, Gomba La, in prato alpino, ca. 3900 m.s.m. (H. Smith 10672), 1934, VII, 22." (typus subsp.).

229. **Pedicularis inaequilobata** Tsoong, sp. nov. (Ser. Lyratae)

P. stenocorydi Franch. affinis, sed habitu minimo, lobo medio labii inferioris maximo, fere lateralibus plus duplo maiore diversa. *P. tomentosa* Li, quamvis eodem labio instructa est, pilositate foliorumque forma longe distat.

Annua, nana, 3.5—4.5 cm. tantum alta, diffusa, siccitate nunquam nigrescens. Radix perpendicularis, ad 3.5 cm. longa, 2 mm. diam., leviter carnosa, inferne radiculis fibrosis praedita; collo squamis membranaceis 2—3 paribus late ovatis ornato. Caulis brevis, floribus exclusis 2 cm. tantum altus, gracilis, leviter lignosus, profuse ramosus, ramis oppositis, ut caulis bifariam pubescentibus, infra inflorescentiam tantum 1—2 nodosis. Folia basalia evanida, caulinarum opposita, sparsa, longe petiolata, petiolis 4—9 mm. longis, complanatis, basi plus minus dilatatis, anguste alatis, sparse pilosis vel fere glabris; lamina crasse chartacea, ovata usque oblongo-ovata, basi subcordata, 2—6 mm. longa, 1.5—4 mm. lata, nervis lateralibus indistinctis, supra pilis brevibus glandulosis dense vestita, subtus sparse albo-furfurea, margine pinatipartita, segmentis utrinsecus 3—4, late ovatis, inciso-serratis et crenatis dentibusque revolutis. Flores 2—4 ad apices ramuli siti; pedicellis ad 6 mm. longis; gracilibus, sparse pilosis; calyx membranaceus, crasse tubulosus, circ. 8 mm. longus, antice non fissus, nervis tenuibus indistinctis sparse reticulatus, pilis multicellulatis laxè oblectus, dentibus 5, postico minore, basi late triangulari sursum subulato, integro, reliquis infra medium membranaceis reticulatis, superne viridibus foliaceis, iis postico-lateralibus maximis, inferne ad 1.5 mm. latis, superne palmate 3—4-lobatis, antereo-lateralibus dimidio minoribus, grosse dentatis vix lobulatis; corolla circ. 24 mm. longa, lutea, tubo recto, circ. 9—10 mm. longo, fauce pilis brevibus vestito, galea circ. 14 mm. longa, superne falcato-curvata, parte antherigera leviter dilatata, apice acuta, margine antice non emarginata, circ. 3 mm. infra apicem dentibus duobus vix 0.5 mm. longis ornata, labium inferum quam galea brevior, stipite 1.5 mm. lato suffultum, eciliato, leviter eroso-denticulato, lobis plus minus rotunda-

tis, lobo medio lateralibus duplo majore, basi stipite usque 1.5 mm. longo prominente suffulto, limba 4.5—5 mm. longa, manifeste porrecta, lobis lateralibus quoque breviter stipitatis; stamina paulo supra basin tubi inserta, ad insertiones pubescentia; ovarium anguste ovoideum, circ. 3 mm. longum, appendice circ. 1 mm. longa, inferne basin ovarii amplexante, superne conica, longitudine sua circ. $\frac{1}{3}$ ovario adnata, praedito, stylus 1.5—2 mm. ex apice galeae exsertus.

Yunnan: without exact loc. (T. T. Yu 12689), (type).

240. **Pedicularis alopeculos** Franch. var. **lasiandra** Tsoong, var. nov.

A var. *alopeculos* differt filamentis superne breviter pilosis antherisque longe sparseque pilosis.

Szechuan: without exact loc. (T. T. Yu 3355), (var. type).

241. **Pedicularis debilis** Franch. subsp. **debilior** Tsoong, subsp. nov.—*P. liana* Pennell ex Li, in Proc. Acad. Nat. Sci. Philad. C(1948) 370, text-fig. 3 F, ex Yu 12446, nom. non *P. nudicaulis* Bonati.

A subsp. *debile* differt planta 5—8 cm. tantum alta, foliis plus orbiculatis margineque minus profunde lobatis, circ. ad $\frac{1}{3}$ — $\frac{1}{2}$ vel ultra lobatis, labio infero corollae minus eroso-denticulato, nervis loborum in dentes parvos triangulares excurrentibus.

Yunnan: without exact loc. (T. T. Yu 12446), (subsp. type).

245. **Pedicularis pheulpinii** Bonati subsp. **chilienensis** Tsoong, subsp. nov.—*P. heydei* auct. non Prain: Maxim. in herb.

Usque ad 5—15 cm. alta; ambitu folii ei subspeciei *pheulpini* simile, sed lobis paucioribus (7—14); labio infero majore, ad 10 mm. lato, 7 mm. longo.

Chinghai: Chieh-lien Hsian, Tza-ma-szu, in wet stony places in Picea forest (P. C. Tsoong 8639), VII, 30, 1958 (subsp. type).

268. **Pedicularis tenacifolia** Tsoong, sp. nov. (Ser. Asplenifoliae).

P. umbelliformis auct. non Li: Tsoong in Phytotax. Sinic. III, (1955) 321, et in Bull. Brit. Mus. (Nat. Hist.) Bot. II (1955) 34.

Nostra *P. meyanae* H.-M. arcte propinquat, sed laminis siccis foliorum anni praecedentis tenacissime persistentibus (nec petiolis solum praeditis), lobis foliorum basium paucioribus latioribusque, labio infero haud eroso sed manifeste ciliato satis distare videtur.

Perennis, siccitate nigrescens, 5—7 cm. alta, dense pilosa. Radices fibrosae vel paulo incrassatae subcarnosae, ad 4 cm. longae, 1—2 mm. diam.; collo apice petiolis siccis anni praecedentis saepe cum laminis omnino persistentibus caulibusque vetustis nonnullis interdum intermixtis densissime coronato. Caules 3—5, simplices validiusculi, sulcati, secus sulcos pilis multicellularibus ferrugineis dense praediti ceterum sparse pubescentes, basi squamis late ovatis membranaceis 4—5 mm. longis ornati. Folia omnia basalia, petiolis 2—3 cm. longis, membranaceis, complanatis, secus costam mediam late alatis, circ. 2 mm. latis, margine densissime pilosis, ceterum fere glabris; lamina 1—1.5 cm. longa, 5—6 mm. lata, ovato-oblonga vel anguste ovata, herbacea, utraque pagina pilis ferrugineis sparse, subtus etiam furfuribus albidis in-