

Pedicularis ganpinensis Vnt. ex Bonati, in Bull. Acad. Géogr. Bot. XIII (1904) 245; Limpr. in Repert. Sp. Nov. XX (1924) 210; Li, in Proc. Acad. Nat. Sci. Philad. C (1948) 309, f. 37.——*P. refracta* sensu Maxim. 1888 in Bull. Acad. St. Pétersb. XXXII, 600, f. 124, et in Mém. Biol. XII, 892, f. 124, non sensu 1881.

一年或二年生草本,干时不变黑色,高达 30 厘米。茎近基处圓形,上部漸作不显著的方形,有稜沟,沟中有成行之毛,下部节間长达 10 厘米,上部者較短。叶基出者早枯,具长柄,柄长达 18 毫米,有疏白毛,茎生者柄較短,长仅 4 毫米,上部者无柄,叶片椭圆状披針形至长圓状披針形,长达 20 余毫米,寬 10 毫米,羽状深裂几至中脉,裂片 5—7 对,綫状披針形,长 4 毫米,寬 1.5 毫米,緣有銳鋸齿,齿有胼胝質刺尖,面有略略稠密的白色多細胞长毛,长者几达 1 毫米,压平,背面有短毛及白色肤屑状物。花序穗状,頂生,长短很不一律,下方花輪多疏距,上方者較密,苞片下部者叶状,向上漸短,为三角状披針形,仅基部深裂,向前部裂漸浅,两面多毛,柄明显,多毛;萼 3.5 毫米,具脉 12 条或更多,厚膜質,其主脉 5 条較粗,上有明显的羽状侧脉,在中部以上成疏网結,前方約开裂至 1/3,齿 3 枚,后方一枚中大,三角形,每一前侧方者与一个后侧方者結合成一卵形至卵状三角形的大齿,再在頂端具 1 浅缺以代表原来的两枚,筒部脉上与齿緣有长白毛;花冠紫紅色,长约 15 毫米,管的基部寬 0.8 毫米,在 2.5 毫米处作膝状弓曲,但不強烈,其上部約以与基部的 45° 角指向前上方,近端处漸漸扩大达 2.4 毫米,下唇长 5.8 毫米,寬 7 毫米,側裂大,为椭圆状卵形,基部丰满,伸至蓋的前緣之后,长 4.5 毫米,寬 3.2 毫米,中裂很小,心脏状圓形,长寬均为 1.8 毫米,蓋自管端重新仰起,其指向完全与花管基部一段相同,下部寬 2.4 毫米,上部寬 1.5 毫米,額頂稍圓形,頂部几直,与前緣相連处略略凸出而圓鈍;花絲前方 1 对被长柔毛;柱头略略伸出。未成熟之蒴果斜卵形,有指向前下方之凸尖。

为我国特有种,产貴州中西部。生于海拔 1,300 米的山上草坡中。

140. 連齿馬先蒿 图版 XXXVII, 8—12

Pedicularis confluens Tsoong, sp. nov., in Addenda 404.

多年生草本,純为草質,干时几不变黑色。根須状,粗細不等,成丛,长 1.5—5 厘米;根頸上有宿存的卵形鱗片多枚。茎单条,或自基发出多至 4 条,高达 22—50 厘米,粗达 4 毫米,节疏距达 12 厘米,有条紋而无明显之沟,有成行之毛 4 条,近节处与节上尤多伸张之白毛,上部常多短分枝。叶基出者柄长达 5 厘米,茎上部者几无柄,柄密生伸张之白毛;叶片长 2—5 厘米,寬 1—1.5 厘米,中上部者最大,基出及茎生者最下一对多为羽状全裂,裂片每边約 4—7 枚,卵形至长圓状披針形,基部狹縮成小叶

状,端銳头到鈍头,緣有淺裂及缺刻状鋸齒,小裂約4—6对,長3—6毫米,中部之叶羽状深裂,軸有連續之翅,裂片狹長,为綫状長圓形,或卵状長圓形,長达9毫米,上部之叶有时为長三角状披針形,基部寬达17毫米,上面均有疏散压平之毛,中肋沟中密生短污毛,背面网紋細密,沿主肋及側脉有疏散長毛,常具白色肤屑状物。花序短穗状,長达6厘米,苞片叶状而有羽状淺裂,披針形,下部者稍長于花,上部者短于花;萼膜質,基部圓臙,口多少收縮,前方开裂至2/5,厚膜質而色暗,長5.5毫米,上部2/3有网紋,尤以近齿处較密,齿3枚,后方1枚三角形微銳,長1.5毫米,其余前側方者与后側方者各自結合为一大齿,端有三角形淺缺,較短很多,亦均有网紋;花冠紅色,管粗壯,基部徑2毫米,約在离基部2.5毫米处強烈向前膝屈,几乎指向前方,但仅經2毫米即又轉向前上方,約与基部一段同一指向,自轉折处至喉部長約6毫米,上方扩大很多,喉部徑达4—4.5毫米,下唇丰满,長7—8毫米,寬10—11毫米,側裂橢圓状卵形,長約5.4毫米,寬4毫米,鈍圓,中裂有短柄,長寬均約3毫米;盔显短于下唇而約为其長度的2/3,長約5毫米,其背綫几不弓曲,前緣基部三角形而寬,以連于管,寬2.6—3毫米,上方漸狹到中部仅寬1.8毫米,額完全以直角由背綫轉折而为平截,或轉角处稍稍圓鈍,前緣无凸出;花絲兩对均无毛;柱头略略伸出。

为我国特有种,仅見于四川南川县,生于海拔1,500—2,500米的路旁湿润处。

这一种与日本的 *P. refracta* 与我国产的前面两种最相近似,但其花部构造相去很远,管弯得強烈得多,其余部分都較粗肥,易于区别。与下一种也有极近的亲緣关系,但这一种不但花大得很多,盔与下唇的比例較長,而且其他部分的比例也很不同,不易发生混淆。这一新种的下部叶子,常常完全裂开,而裂片形如小叶,极象蘚居系及腋花系中种类的叶子,也是其不同点。

141. 全萼馬先蒿 图版 XXXVIII, 1—4

Pedicularis holocalyx Hand.-Mazz. Symb. Sin. VII (1936) 849; Li, in Proc. Acad. Nat. Sci. Philad. C (1948) 305, f. 33. — *P. szetschuanica* Maxim. var. *elata* Bonati, in Bull. Soc. Bot. France LIV (1907) 187; Limpr. in Repert. Sp. Nov. XX (1924) 205. — *P. spicata* Pall. var. *australis* Bonati, in Bull. Herb. Boiss. Sér. 2, VII (1907) 545; Limpr. in Repert. Sp. Nov. XX (1924) 206.

一年生草本,干时不变黑色,少毛,高达50余厘米。主根強烈木質化,有时作蚯

图版 XXXVIII 1—4. 全萼馬先蒿 *Pedicularis holocalyx* Hand.-Mazz., 1. 植株×1; 2. 花萼×3; 3. 花冠×3; 4. 果×3. 5—8. 条紋馬先蒿 *P. lineata* Franch. ex Maxim., 5. 植株×1; 6. 花萼×3; 7. 花冠×3; 8. 果×3. (繪图人张荣厚)

fusa auct. non Prain: Tsoong in Acta Phytotax. Sin. III (1955) 332, pro parte.

Inter *Verticillatas* fronte galeae valde elevata excellens.

Perennis, ad 20 cm. altus, siccitate plus minus nigrescens, herbacea. Radix brevis, crassa, simplex vel deorsum ramosa, plus minus carnosae. Caules saepe plures, medius ad 2.5 mm. diam., laterales saepe adscendentes, profunde sulcati sulcis pubescentibus. Folia basalia sub anthesi persistentia, petiolata, petiolis membranaceis ad 25 mm. longis, margine sparse longeque albo-pilosis, lamina petiolum aequans, pinnatipartita, lobis ovato-oblongis, circ. 5-jugatis, inciso-serratis lobulatisve, utrinque glabra, subtus manifeste denseque reticulata, folia caulinarum brevius petiolata, petiolis vix 1 cm. longis, 4-verticillata, verticillastri vulgo singulo, lamina breviora, plus minus ovata, circ. 4-jugatim lobata, lobis 5 mm. longis, petiolis ut nodis caulium pilis longis purpureis densissime vestitis, supra glabra, subtus albo-furfuracea. Inflorescentia capitata vel e verticillastri inferiori 1 cm. distant paulo elongata, 2.5—3.5 cm. longa; bracteae foliaceae sed breviores, pinnatipartitae; calyx 4 mm. longus, membranaceus, tubo 3 mm. longo, nervis 10, omnibus elevatis, antice non fissus, dentibus vix 0.5 mm. longis, apice saepe revolutis, paulo inaequalibus; corolla ore albida, alibi dilute rosea, 13 mm. longa, tubus parte inferiore circ. 5 mm. longus, fere angulo recto geniculatus, parte superiore 6 mm. longus, vix dilatatus, labium inferum 5 mm. longum, 6.5 mm. latum, lobis lateralibus oblique ovatis, basi apiceque rotundatis, lobo medio porrecto, late ovato, 2 mm. lato, basi manifeste in stipitem angustato, galea 4 mm. longa, basi 1.5 mm. lata, fronte valde elevata, summo subacute obtusa, circ. 1/3 totam longitudinem galeae aequante; filamentis omnibus glabris; stylus haud exsertus.

Tibet: Chamdo Region, "Langong Chu Valley, lat. N. 28 45', Long. E. 94 0', alt. 11,500 ft. (Ludlow, Sherriff & Taylor 3863), V, 26, 1938" (type); "Galea arcuate. Perianth lightly purplish-pink, white at the throat. Common on open, damp grassy meadow."

140. ***Pedicularis confluens*** Tsoong, sp. nov. (Ser. praeced.).

Ex affinitate *P. refracta* Maxim., *P. transmorrisonense* Hayata et *P. ganpinense* Vnt. ex Bonati, a quibus differt structura floris multo validiore, eius tubo multo magis infracto. Ut videtur etiam affinis *P. holocalici* H.-M., quae imprimis galea magis breviora quam labio infero distat.

Perennis, herbacea, siccitate non nigrescens, radices fibrosas, caespitosas, 1.5—5 cm. longas emittens; collo squamis ovatis praedito. Caules 1—4, ad 22—50 cm. alti, 4 mm. diam., nodis remotis usque 12 cm. distantibus muniti, striati, 4-fariam pubescentes, ad propeque nodos patenter albo-pilosi, superne saepe breviter ramosi. Folia basalia petiolo usque 5 cm. longo suffulta, superiora saepe fere sessilia, petiolis longe patenteque albo-pilosis; laminae 2—5 cm. longae, 1—1.5 cm. latae, illae foliorum basaliū et inferiorum minora, pinnatisectae, laciniis utrinsecus 4—7, ovatis usque oblongo-lanceolatis, basi attenuatis, apice acutis vel obtusis, margine subtiliter lobatis vel inciso-serratis, lobulis vel dentibus 4—6-jugatis, 3—6 mm. longis, illae foliorum mediorum pinnatipartitae, rhachide alatae, laciniis angustioribus, lineari-oblongis vel

ovato-oblongis, ad 9 mm. longis, illae foliorum superiorum saepe deltoideo-lanceolatae, basi ad 17 mm. latae, supra sparse adpresque pubescentes, subtus dense reticulatae, saepe albo-furfuraceae, secus costam nervosque pilis longis albidis sparse obsitae. Inflorescentiae breviter spicatae, ad 6 cm. longae; bracteae foliaceae, pinnatifidae, lanceolatae, inferiores flore longiores; calyx membranaceus, basi subinflatus apice plus minus contractus, antice ad $2/5$ fissus, 5.5 mm. longus, $2/3$ superne reticulatus, dentibus 3, postico deltoideo, acutiusculo, 1.5 mm. longo, lateralibus multo majoribus, apice breviter bifidis; corolla rubra, tubus validus, basi 2 mm. diam., supra basin valde geniculatus, parte superiore 6 mm. longus, sursum valde dilatatus, ore ad 4–4.5 mm. diam., labium inferum amplum, 7–8 mm. longum, 10–11 mm. latum, lobis lateralibus elliptico-ovatis, circ. 5.4 mm. longis, 4 mm. latis, obtusis, lobo medio breviter stipitato, circ. 3 mm. longo ac lato, galea circ. $2/3$ longitudinem labii inferii aequans, 5 mm. longa, basi 2.6–3 mm. lata, sursum gradatim angustata, parte media 1.8 mm. tantum lata, fronte vix convexa, fere truncata; staminum filamentis omnibus glabris; stylus paulo exsertus.

Szechuan: Nanchuan District, King-fu Shan under bamboo groves, alt. 1730 m. (Hsung Tsi-hua & Chow Tze-lin 90822), V, 17, 1957, (type).

142. **Pedicularis spicata** Pall. subsp. **bracteata** Tsoong, subsp. nov.

A subsp. *spicata* recedit bracteis post anthesin valde auctis flabelliformibus, ad 10 mm. longis, 8 mm. latis; filamentis staminii minus pilosis.

Hopei: Hsiaowutai Shan, north peak (Y. Yabe s.n.), VI, 28, 1960 (subsp. type).

Pedicularis spicata Pall. subsp. **stenocarpa** Tsoong, subsp. nov.

A subsp. *spicata* differt capsulis angustioribus et longioribus, ad 8–10 mm. longis, lanceolato-ovatis, parte superiore valde curvatis longeque apiculatis.

Hopei: Tung-lin Shan (C. K. Yang 1480), IX, 6, 1953 (subsp. type).

143. **Pedicularis szetschuanica** Maxim. subsp. **latifolia** Tsoong, subsp. nov.—*P. szetschuanica* Maxim. subsp. *ovatifolia* Tsoong, MS. H. Smith, *Plantae Sinenses*, Scrophular. (1950), non *P. szetschuanica* var. *ovatifolia* Li, in Proc. Acad. Nat. Sci. Philad. C (1948) 317.

Haec subspecies a subsp. *szetschuanica* abhorret fere glabra, foliis oblongis usque ovatis, basi rotundatis usque subcordatis, ad 27 mm. longis, 13 mm. latis, petiolis foliorum basalium ad 67 mm. longis, iis foliorum mediorum ad 4–13 mm. longis, floribus saepe multo majoribus.

Szechuan: reg. bor., Dongrego, in prato herboso-fruticoso, c. 4000 m.s.m. (H. Smith 3868) VII, 22, 1922 (subsp. type).

Pedicularis szetschuanica Maxim. subsp. **anastomosans** Tsoong, subsp. nov.—*P. szetschuanica* Maxim. subsp. *angustifolia* var. *normalis* Tsoong, in Acta Phytotax. Sin. III (1954) 311.

Haec subspecies, huius caulibus saepe plus minus lignosis, tantum ad 10 cm. altis, calicibus omnino anastomosantibus, labio infero corollae irregulariter eroso etc., ab omnibus subsp. huius speciei facile distinguenda.

Tibet: Chamdo Region, "Kongbo, Besang Landup, Lechen Chu, 14500' (Lud-