

为我国特有种,产四川西北部及西部。生于海拔 2,550—3,100 米的干石山坡上。

系 35 藓生系——Ser. Muscicolae Maxim. in Bull. Acad. St. Pétersb. XXXII (1888) 525 et in Mém. Biol. XII (1888) 797, pro parte; Prain, in Ann. Bot. Gard. Calc. III (1890) 68.

### 分 种 检 索 表

- 1(10) 盔不在含有雄蕊部分的下面扭折,喙短而直,指向前方,长最多 7 毫米。
- 2(9) 花管被毛。
- 3(6) 植株较粗壮;叶的羽片大者长达 18—20 毫米,宽达 8—12 毫米。
- 4(5) 花管长不达 2.5 厘米;萼前方不裂……………72. 南川馬先蒿 *P. nanchuanensis* Tsoong
- 5(4) 花管长达 9 厘米以上;萼前方开裂至一半……………73. 花椒叶馬先蒿 *P. sorbifolia* Tsoong
- 6(3) 植株较细弱;叶的羽片大者长不超过 7 毫米,宽不过 5 毫米。
- 7(8) 花冠下唇中裂卵形而短;萼管前方不裂,植物干时变为黑色;茎多数,植株丛密……………74. 細管馬先蒿 *P. gracilituba* Li
- 8(7) 花冠下唇中裂长圆形;萼管前方深裂至一半,植物干时不变黑色;茎少数远距而不丛密……………75. 地管馬先蒿 *P. geosiphon* H. Smith et Tsoong
- 9(2) 花管不被毛;植株较大,茎可长达 40 厘米,丛密……………76. 大管馬先蒿 *P. macrosiphon* Franch.
- 10(1) 盔在含有雄蕊的部分以下突然扭折,使盔顶指向下方,喙长而捲曲,反指向上而多少为 S 形,长至少在 7 毫米以上。
- 11(12) 萼前方不开裂;花冠下唇中裂比侧裂为小,长圆形……………77. 藓生馬先蒿 *P. muscicola* Maxim.
- 12(11) 萼前方开裂;花冠下唇中裂几圆形,约与侧片等大……………78. 假藓生馬先蒿 *P. pseudomuscicola* Bonati

#### 72. 南川馬先蒿 图版 XVI, 5—7

*Pedicularis nanchuanensis* Tsoong, sp. nov. in Addenda, 399.

多年生草本,干时不变黑色,高 15—25 厘米。根多少肉质变粗,径可达 3 毫米,有分枝;根茎粗壮,被有卵形的厚鳞片多枚。茎基部有綫状长圆形膜质的鳞叶数枚,多分枝,枝互生,半直立或基部多少倾卧而上部弯曲上升,密生白色长毛,而主茎则不很发达,直立,长仅 4—7 厘米。叶互生,在分枝上者互生至亚对生,厚膜质至薄纸质,有柄,柄在主茎上者长可达 5 厘米,在分枝上者仅长 1.5—2 厘米,疏被长柔毛;叶片长圆状披针形至卵状长圆形,长 6—11 厘米,宽 2.5—5 厘米,分枝上者较小,长 2.5—4 厘米,宽 1—2 厘米,两面均疏被短毛,基部不等,以羽片渐狭的基部成为亚心脏形,端多钝圆或微锐,羽状全裂,裂片每边 7—12 枚,互生至亚对生,形状与大小变异极大,

自菱状卵形而基部长渐狭至线状披针形,基部多下延于轴而为翅,端钝圆至锐头,自身亦为羽状浅裂至半裂,或较小者仅有缺刻状重锯齿,小裂片每边 3—6 枚,为三角状卵形至长圆状卵形,后缘常长于前缘,大者长达 5 毫米,有锐锯齿,齿与上卷的叶缘均有白色胼胝。花腋生而疏,红色,梗长可达 3.5 厘米,纤细,上部者及分枝上者较短,均被长柔毛;萼圆筒形,长约 10 毫米,前方不开裂,沿 5 条主脉密生长柔毛,此外尚有次脉 5—7 条,无网脉,齿 5 枚,近于相等,长约为筒部的  $1/2$  强,基部三角形,向上收缩,至一半以上处又稍稍膨大而有细锯齿,多少披针形至卵形,有毛;花冠长约 3 厘米,管长约 2.5 厘米,细直,被有短柔毛,盔无毛,直立部分短,自基部至盔顶长约 6 毫米,约以直角折向前方而成含有雄蕊的部分,长约 4.5 毫米,前方延伸为伸直的喙,长仅 3—4 毫米,下唇长于盔,长约 12 毫米,宽约 15 毫米,以锐角开展,侧裂较大,斜椭圆形,中裂较小,宽过于长,为菱状广卵形,长 4 毫米,宽 5 毫米,钝头,二侧不迭置于侧片之下;雄蕊着生于花管中部,前方 1 对花丝上部被有微毛;子房卵圆形,长 2—3 毫米,柱头不伸出。

为我国特有种,仅见于四川南川金佛寺、铁瓦寺等处。生于海拔 2,100—2,200 米的竹林边。

这一种的分布极为狭仄,显然是一个很小范围的地方种。它的体态与叶子是极与前一系的膜质马先蒿与本系的大管马先蒿相近似的,但是前一种的管很短,所以归在前一系中,而且管外也无毛。与后一种的不同,在于其管的长度相去太远,而且管的外面有毛,所以不能把它强作为后一种的亚种,它的体态似乎也要比那一种粗壮一些。

### 73. 花楸叶马先蒿

***Pedicularis sorbifolia*** Tsoong in MS. H. Smith: *Plantae Sinenses*, Scrophular. (1950) ined.?, et in *Addenda* 399.

多年生草本,有疏毛。茎细而弯曲,长达 20 厘米。叶基出与茎生,基出者大,叶柄长达 4.5 厘米,叶片外形为披针状倒卵形,羽状全裂,裂片 6—13 对,卵形至长圆形,长达 18 毫米,宽 8 毫米,基部连着于叶轴,端锐头,缘有锐重锯齿,有时有小裂片,茎叶与基出叶相似而较小。花腋生,有短梗,梗长 3—8 毫米;萼长几不达 1 厘米,前方开裂至中部,齿 2—4 枚,有柄,端卵形而有少数锯齿;花冠之管极长,达 9.5 厘米,外面有毛;盔与下唇如大管马先蒿;花丝无毛。花期 8 月。

为我国特有种,产四川西部,生于原始冷杉林下苔藓中。

这一种是在 1949 年为哈雷史密斯氏草拟“中国植物”一稿时所定新种,现在国内



centibus, iis longioribus usque 15 mm. longis, 5.5 mm. latis, iterum pinnatipartitis vel profunde inciso-dentatis, lobulis et dentibus serratis, margine saepe revolutis quasi integris, supra intense viridia saepeque purpureo-suffusa, subtus dilute viridia, pilis brevibus luteis densissime oblecta. Inflorescentia racemosa, 5.5—11 cm. longa, floribus laxè dispositis; bracteis inferioribus longis linearibus, superioribus anguste ovatis vix acuminatis, margine albo-lanatis; calyx 3 mm. longus, 1.4—2 mm. latus, herbaceus, vix hyalinus ut corolla pulchre rubropurpureus, prominenter reticulatus, dentibus triangularibus integris, lanato-ciliatis; corollae tubus 3 mm. longus, calicem aequans vel paulo illum excedens, galea ut in *P. recurva* Maxim., sed 2.5—3 mm. tantum lata, labium inferum trilobum, lobis rotundato-obtusis, quorum medio neque manifeste stipitato, neque valde producto ut in *P. recurva*; stylus paulo exsertus.

Szechuan: "Kangting, Yu-ling-kong, Gomba La, in prato alpino, ca. 3600 m. (H. Smith 10664), VII, 22, 1934", (Typus); same distr., vicinity of San-tao-chiao (W. K. Hu & T. Ho 10560), VII, 27, 1951.

72. **Pedicularis nanchuanensis** Tsoong, sp. nov. (Ser. Muscicolae).

Habitu foliorumque forma arcte *P. membranaceae* Li (ser. Longipedes) et *P. macrosiphoni* Franch. accedit, sed a utraque imprimis tubo corollae extus pubescente, hoc ut videtur multo brevior in prima, magisque longior in secunda, differt.

Perennis, exsiccando non nigrescens, 15—25 cm. alta. Radices plus minus in-crassatae, usque ad 3 mm. diam., ramosae; rhizomate crasso, squamis nonnullis ovatis crassis praedito. Caulis squamis lineari-oblongis membranaceis basi ornatus, saepe male evolutus, 4—7 cm. tantum altus, erectus, profuse ramosus, rami cum saepe excedentes, alternati, elongati, suberecti vel basi plus minusve procumbenti superne arcuato-ascendenti, pilis longis albidis dense oblecti. Folia alterna, illa ramorum alterna vel subopposita, crasse membranacea vel tenuiter chartacea, petiolata, petiolis caulinaribus usque 5 cm. longis, iis ramorum 1.5—2 cm. longis, pilis longis laxè vestitis, laminae oblongo-lanceolatae usque ovato-oblongae, 6—11 cm. longae, 2.5—5 cm. latae, illae foliorum ramulorum minores, 2.5—4 cm. tantum longae, 1—2 cm. latae, utraque pagina laxè pubescentes, basi e segmentis decurrentibus subcordatae, apice obtusae vel leviter acutae, margine pinnatisectae, segmentis utrinsecus 7—12, valde variabilibus, e rhomboideo-ovatis basique longe attenuatis usque lineari-lanceolatis, basi plus minus in alas decurrentibus, apice obtusis, iterum pinnatifidis vel pinnatipartitis vel minoribus tantum duplicato-inciso-serratis, segmentis 3—6, oblique deltoideo-ovatis usque oblongo-ovatis, majoribus usque ad 5 mm. longis, acute serratis, serris margine saepe revolutis atque albo-cartilagineis. Flores axillares laxi, rubri, pedicellis gracilibus usque 35 mm. longis, iis florum superiorum et ramorum brevioribus, omnibus pilis longis oblectis; calyx cylindricus, circ. 10 mm. longus, antice vix fissus, extus secus costas 5 densissime pilosus, nervis intercostalibus 5—7, haud reticulatis, dentibus 5, subaequalibus,  $1/2$  longitudinem tubi aequantibus vel paulo ultra, basi deltoideis, sursum angustatis sed supra medium leviter expansis serrulatisque, lanceolatis usque ovatis, puberulis. Corolla circ. 3 cm. longa, tubus 2.5 cm. longus, rectus, pilis brevibus tectus, galea glabra, parte verticali brevis,

dorso circ. 6 mm. alta, fere angulo recto in partem antherigeram circ. 4.5 mm. longam inflexa, antice etiam in rostrum rectum circ. 3—4 mm. longum attenuata, labium inferum quam galea longiore, circ. 12 mm. longum 15 mm. latum, angulo acuto patentum, lobis 3, medio minore, latiore quam longiore, rhomboideo-ovato, 4 mm. longo 5 mm. lato, obtuso, lateralibus majoribus oblique ellipticis; stamina medio tubi inserta, filamentis anticis superne leviter pilosis; ovarium ovoideum, 2—3 mm. longum, stylo incluso.

Szechuan: Nanchuan Distr., King-fu-szu, alt. 2260 m., side of small temple before the monastery, side of path (T. H. Tu 3141), V. 25, ? (type).

73. **Pedicularis sorbifolia** Tsoong, sp. nov. in MS. H. Smith: *Plantae Sinenses*, Scrophular. (1950). (Ser. praeced.)

*P. nanchuanensi* m. proxima videtur, sed jam corollae tubo multo longiore usque 6.5 cm. longo, calycique antice ad medium fissio facile distinguenda. Quoque accedit *P. macrosiphoni* Franch., cuius tubo corollae extus glabro est, vix congruens.

Herba perennis, parce pubescens. Caules graciles flexuosi, ad 20 cm. longi. Folia radicalia et caulinaria, radicalia magna, petiolis ad 4.5 cm. longis, lamina ambitu lanceolato-obovata, pinnatisecta, segmentis 6—13—jugatis, ovatis usque oblongis, ad 18 mm. longis 8 mm. latis, basi rhachide adnatis, apice acutis, folia caulinaria radicalia similia sed minora. Flores axillares, breviter pedicellati, pedicellis 3—8 mm. longi; calyx vix 1 cm. longus, antice ad medium fissus, dentibus 2—4, stipitatis, apice ovato-dilatatis pauciserratis; corollae tubus longissimus, ad 9.5 mm. longus, externe pilosus; galea et labium ut in *P. macrosiphoni*; filamenta staminum glabra.

Szechuan: "Karloug, in silva abietina primava, muscosa, 3300 m.s.m. (H. Smith 3024), VIII, 4, 1922", (typus).

75. **Pedicularis geosiphon** H. Smith et Tsoong, in MS. H. Smith: *Pl. Sinenses*, Scrophular. (1950). (Ser. praeced.)

Arcte affinis *P. gracilitubae* Li, cuius specimina mihi non visa, e descriptione abhorret exsiccando vix nigrescente, caulibus paucioribus distantioribusque, calycis tubo usque ad medium fissio et precipue lobo medio labii inferioris oblongo nec rotundato. Species habitu gracillimo laxissimo inter affines excellens.

Perennis, siccitate nonquam nigrescens, fere glabra. Rhizoma valde elongatum filiforme nigrum, ad 10 cm. longum, saepe dichotome ramosum, internodiis longissimis, ad 25 mm. longis, nodis saepe squamis membranaceis purpureo-coloratis lanceolato-oblongis ad 4 mm. longis praeditum, vetustiore saepe ad nodos squamis ovatis incrassatis vel residuis earum praeditum, e nodis ramorum nunquam radices fusiformes emittente, sed interdum crassum et ramosum, ad 4 mm. diam., napiforme. Caules 2—4, per rhizoma elongata saepe distantes, brevissimi, parte erecta 1—2 cm. tantum alta, nigri, glabri, folia 5—6 floresque 1—3 gerentes. Folia longe petiolata, petiolis ad 3 cm. longis, complanatis striatisque, fere glabris, lamina lineari-oblonga, majora ultra 4 cm. longa, 15 mm. lata, pinnatisecta, segmentis oblique ovatis, utrinsecus circ. 4—5, manifeste petiolulatis, in planta validiore remotioribus, ad 14 mm. distantibus, saepe manifeste alternis, margine argute duplicato-