

的网紋，緣边有不整齐嚙痕状齿，蓋长仅 3 毫米左右，仅及下唇的半长，基部稍寬，約 1.5 毫米，上部略較狹，前額向前下方斜下使額頂高凸，下緣截头而作方角状；花絲一对有毛；柱头稍稍伸出。蒴果极細长，长达 15 毫米，寬在基部仅 4 毫米，狭三角状披針形，下綫几伸直，上綫徐徐斜下至近端处突然急斜而与下綫組成一个三角形的尖头，另具不显著的小凸尖。 花期 6 月。

为我国特有种，产西藏昌都专区中部的波密地区，生于海拔 3,900 米左右的針叶林中禾草丛生的土岸上。

152. 角蓋馬先蒿 图版 XLII, 1—3

Pedicularis angularis Tsoong, sp. nov., in Addenda 408. — *P. szetschuanica* Maxim. subsp. *typica* var. *angulata* Tsoong, in MS. H. Smith, Plantae Sinenses, Scrophular. (1950) ined.? — *P. szetschuanica* Maxim. in Bull. Acad. St. Pétersb. XXXII (1888) 601, pro parte, f. 125 pro parte, quoad galeam sinistram. et in Mém. Biol. XII (1888) 892, pro parte, f. 125, pro parte, quoad galeam sinistram. — *P. szetschuanica* Maxim. var. *typica* Li, in Proc. Acad. Nat. Sci. Philad. C(1948) 317, quoad Rock 12620 saltem!

一年生草本，一般高仅 15 厘米，但有时也升高达 40 厘米，干时不变黑色。根小，单条或有分枝，多少木質化，老时变为黑色，长仅 2 厘米左右，有少数須状側根。莖直立，但在有多条的情况下基部多弯曲而上升，有縱条紋，多少密布橫展的白色或淡褐色长柔毛，在上部与近节处为尤密。叶基出者早枯或有时宿存，有柄，柄长 7—20 毫米，密生长毛；叶片卵形至卵状长圓形，长 7—15 毫米，寬 4—8 毫米，上面密布压平而整齐的粗毛，背面脉上密布伸展的长毛，前半部較疏，緣有圓鈍的裂片，裂片 3—6 对，小而有重齿，莖叶柄較短，一般仅有 2 輪，极少有 3 輪，最下一輪相距极远，在較高的植株中可达 12 厘米以上，叶片一般較长，有时为狭长圓形，裂片多者可达 10 对。花序下方的花輪一般多疏距，有时可达 4 厘米，其余花輪有时常有間断，但一般則成为較密的穗状；苞片下部者叶状，向上很快就变为菱状长卵形，后小半部全緣，而前面大半部有齿，短于花，与花序軸均密布长毛；萼狭钟形，长约 4—5 毫米，外面脉上密生长毛，管部多少有疏网脉，齿 5 枚，后方一枚多少較小而呈三角形，尖头，其余 4 枚約略相等，基部三角形，膜質，上部微微卵状膨大，多少綠色草質，緣有不清晰的鋸齿至几乎全緣，有网脉，长约 1.5 毫米；花冠浅紅色，长约 15 毫米，管基部仅寬 1.5 毫米左右，約在离基部 3.5 毫米左右处以 60—90° 角向前上方膝屈，上方一段短，长仅 6 毫米，向上扩大，至喉部寬达 4 毫米，下唇圓，长 6 毫米，寬 8.5 毫米，裂片均多少倒卵形，多少

微凹头,中裂仅略小于侧裂,而其两侧为后者所掩迭,盔粗短,前缘长仅 3.5—4 毫米,下半部圆凸,宽 2—2.5 毫米,有厚皱折,近端处仅宽 1.7 毫米,顶圆而微有狭条的鸡冠状凸起,额部斜下与凸出的前缘共同组成一方形的角;雄蕊花丝无毛;柱头稍稍伸出。

为我国特有种,产四川西北部,生于海拔 3,750 米左右的山坡上。

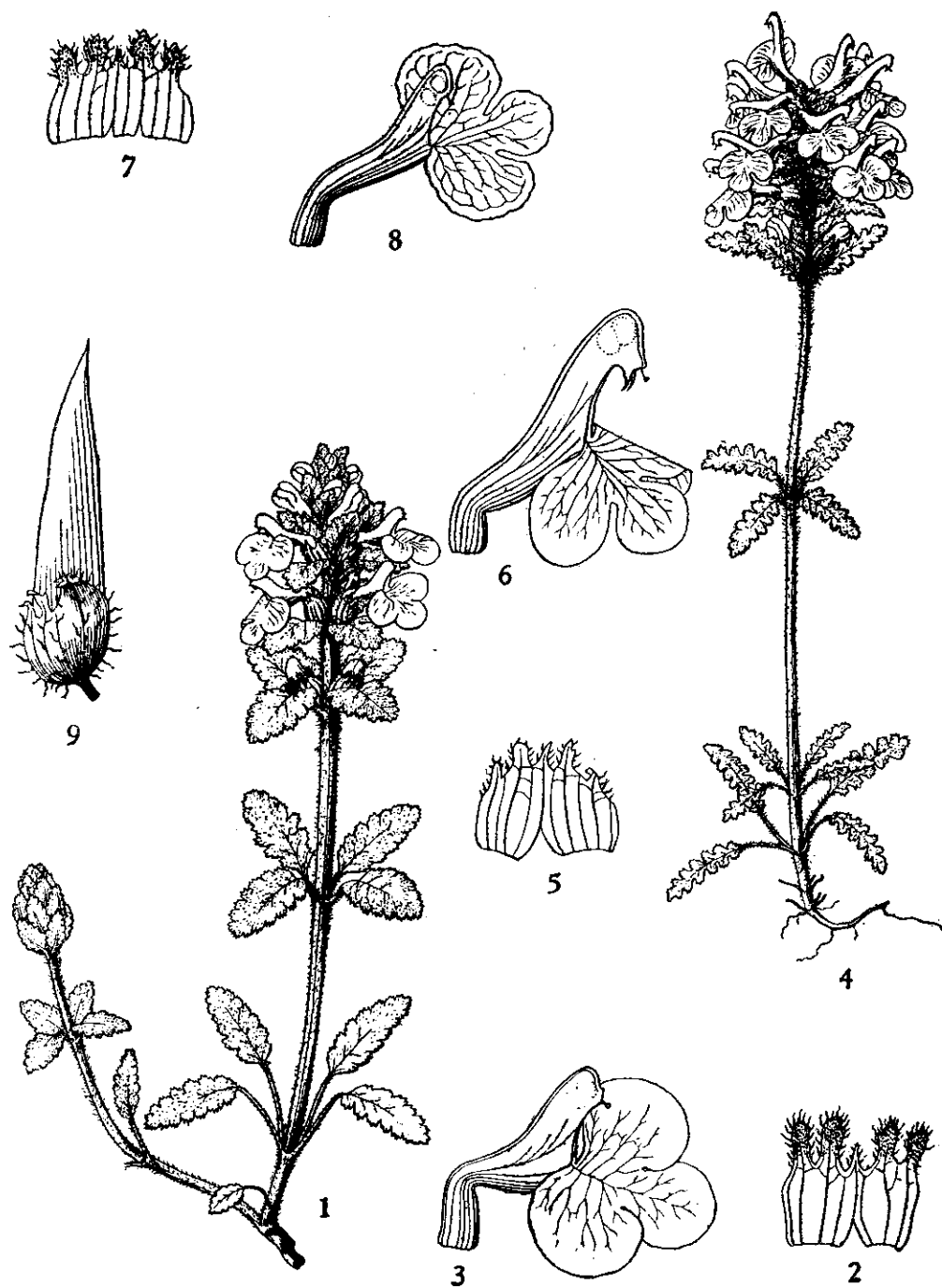
这一新种与四川馬先蒿的关系,很象假多色馬先蒿 (*P. pseudoversicolor* H.-M.) 与欧氏馬先蒿 (*P. oederi* Vahl) 之间的关系。它的盔端具有稜角,几乎与那两种中的前一种一样,显然是进入双齿型的第一步。它不但以盔有稜角而不同,并且,盔与下唇的比例,也要比四川馬先蒿中短得多;此外毛被也厚得多。从这些方面看起来,显然进化和分化,是在花冠和体态的好几方面进行着,所以不但不应该仅仅作为四川馬先蒿的一个种下阶层中的成员,而且为了表示确实的进化步骤,必须和其它有稜角和有齿的类型组合起来,另成一个新系,放在輪叶系后面,以表明两者之间的关系,正象假多色馬先蒿 (*P. pseudoversicolor*) 与哈巴山馬先蒿 (*P. habachanensis* Bonati) 共同组成假欧氏系 (ser. *Pseudo-oederianae*), 以与包括欧氏馬先蒿 (*P. oederi*) 的火焰系 (ser. *Flammeae*) 相区别一样。在麦氏的图 125 中,这一种为中間仅画有盔部上端的两个小图中的左手一个所代表。

153. 草莓状馬先蒿 图版 XLIII, 1—4

Pedicularis fragarioides Tsoong, sp. nov. in Addenda 409.

多年生草本,干时多少变黑,草质,多毛。地下部分包括伸长而蔓延的根茎,黑色光滑,向各方发出不育的成丛基叶和着花的茎,其节上有对生的披针形膜质鳞片,并发出许多细长而柔软的须状根,长达 7 厘米,略粗而微带肉质,其上更生细须根,根颈上也有膜质鳞片,并生有成丛的须状根。茎高不及 10 厘米,常倾卧或斜升,节间短,多少四棱形而生有稠密的淡褐色毛,常在中下部分枝。叶基出者紫黑色,具长柄,柄黑色如铁丝,扁平有沟,长达 3 厘米,长于叶片 3—4 倍,后者宽卵状心脏形至椭圆状心脏形,钝头,缘有 3—6 对宽卵形裂片,裂片有小裂或重锯齿;茎生叶柄较短,但最下一輪柄亦可长达 10—25 毫米,常对生,其余者均为对生或偶有 4 枚輪生,其叶片较狭长,基部为广楔形至亚圆形,上面均散布压平捲曲之毛,背面脉上有长而伸直的刺状长白毛。花序有时在第二輪叶子的腋中开始,几乎连续,长者达 5 厘米,在分枝上者短而头状,均密生褐色毛;苞片三角状亚心脏形至菱状宽卵形,仅具浅圆齿,甚短于花,

图版 XLIII 1—4. 草莓状馬先蒿 *Pedicularis fragarioides* Tsoong, 1. 植株×1; 2. 花×2; 3. 花萼×4; 4. 下唇×4。5—8. 小唇馬先蒿 *P. microchila* Franch., 5. 植株×1; 6. 花×2; 7. 花萼×4; 8. 下唇×2。(繪图人刘春荣)



squamis ovatis vel lanceolatis praedito. Caules 1—8, erecti vel leviter adscendentes, longitudinaliter striati, usque 8-nodosi, nodis remotis, iis mediis usque 9 cm. distantibus. Folia verticillata, inferiora nunnumquam opposita, petiolis usque 20 mm. longis suffulta, superiora brevius petiolata; laminae ovatae usque elliptico-ovatae, ad 1.5 mm. longae, 1 cm. latae, supra intense virides, subtus dilute virides et prominente reticulatae, margine pinnatipartitae, lobis utrinsecus 3—4, obovatis, oblongis vel plus minus rectangularibus, inciso-duplicato-serratis, dentibus aristato-cuspidatis. Inflorescentiae e verticillastribus remotis, eisque saepe secus totam longitudinem caulis distributis; bractee superiores saepe graciliter longeque petiolatae, lamina triloba, multo quam petiolo breviora. Flores parvi, 9—10 mm. tantum longi, pedicellis 1 mm. longis suffulti; calyx parvus, 3 mm. longus, ovoideo-campanulatus, antice ad $2/5$ fissus, costis 8—10 intense coloratis exceptis membranaceus et enervatus, dentibus 5, postico minimo, 0.7 mm. tantum longo, reliquis majoribus, 1 mm. longis, omnibus e basi deltoidea angustatis quasi stipitatis, superne dilatatis, atroviridibus, fere integris; corolla circ. 5 mm. longa, tubus 2 mm. supra basin sub angulo 45° geniculatus, labium inferum minutum, quam galea manifeste breviora, 2.5—3 mm. tantum longum, lobo medio obovato, basi contracto, porrecto, apice leviter retuso, lobis lateralibus obovatis, apice fere rectangularibus et truncatis, margine antice medio prominenter retusis, basin versus attenuatis, vix plus quam 1 mm. latis, galea multo longior quam latior, 4 mm. longa, tota longitudine fere aequilata, apice truncata et fronte vix convexa; staminum filamentis totis glabris. Capsula brevis, 8—9 mm. tantum longa, deltoideo-ovoidea, complanata, manifeste reticulata, apice mucronulata; semina brunnea, oblonga, 3 mm. longa.

Szechuan: Ma-erh-Kang, Wang-kia-tsai-kou, alt. 3600 m. (H. Li 7193), VI. 26, 1957, (type).

152. **Pedicularis angularis** Tsoong, sp. nov. (Ser. Metaverticillatae). — *P. szetschuanica* Maxim. subsp. *typica* var. *angulata* Tsoong, in MS. H. Smith, Plantae Sinenses, Scrophular. (1950). — *P. szetschuanica* Maxim. in Bull. Acad. St. Pétersb. XXXII (1888) 601, pro parte, f. 125, pro parte, quoad galeam sinistram, et in Mém. Biol. XII (1888), 892, pro parte, f. 125 pro parte, quoad galeam sinistram. — *P. szetschuanica* Maxim. var. *typica* Li, in Proc. Acad., Nat. Sci. Philad. C(1948) 317, quoad Rock 12620 saltem.

Nostra cum galea apice angulata ac *P. pseudoversicolor* H.-M. certe in evolutione structurae floris media inter *P. szetschuanicam* Maxim., cuius galea ut in *P. oederi* Vahl anodonta est, et *P. Metaszetschuanicam* m., quae ac *P. habachanensis* Bonati galeam bidentatam habet. Praeterea a utraque differt longitudine galeae labio inferiore breviora indumentoque denso fere villosa.

Annua, circ. 15 cm. alta, sed nunnumquam ad 40 cm. attingens, siccitate non nigrescens. Radix parva, simplex vel ramosa, plus minus lignosa, 2 cm. longa. Caules erecti, vel lateralibus plus minus adscendentes, longitudinaliter striati, pilis longis, patentibus, albidis vel fuscis, dense sed superne et ad nodos densius vestiti. Folia basalia evanida vel nunnumquam persistentia, petiolata, petiolis 7—20 mm. longis,

dense pilosis, laminae ovatae vel ovato-oblongae, 7—15 mm. longae, 4—8 mm. latae, supra appresse hispidulae, subtus ad costam dense et patenter pilosae, margine repandulo-lobulatae, lobis utrinsecus 3—6, duplicato-dentatis, folia caulinaria brevius petiolata, verticillastribus sub quoque caule 2 vel rarius 3, infimis usque ad 12 cm. distantibus, laminae saepe ea foliorum basaliū longiores, anguste oblongae, lobis numerosioribus, usque 10-jugatis. Inflorescentiae saepius spicatae, verticillastribus inferioribus haud raro interruptae; bracteae inferiores foliiformes, mediae superioresque rhomboideo-ovatae, basin versus solum integrae, flore breviores, ut rhachide densissime pilosae; calyx anguste campanulatus, 4—5 mm. circ. longus, tubo plus minus reticulato, costis densissime longeque pilosus, dentibus 5, postico minore, deltoideo, acuto, ceteris subaequalibus, basi triangularibus membranaceis, superne leviter ovato-expansis, herbaceis et viridibus, fere integris vel indistincte crenatis, 1.5 mm. longis; corolla dilute rubra, 15 mm. longa, tubus 3.5 mm. supra basin sub angulo 60—90° geniculatus, parte inferiore 1.5 mm. latus, superiore 6 mm. longus, sursum dilatatus, ore 4 mm. latus, labium 6 mm. longum, 8.5 mm. latum, lobis omnibus plus minus obovatis, margine sese tegentibus, leviter retusis, lobo medio lateralibus tantum paulo minore, galea brevis, margine antice 3.5—4 mm. alta, parte inferiore convexa, 2—2.5 mm. lata, plicata, parte superiore 1.7 mm. tantum lata, apice rotundata, angustissime cristata, antice subito cum marginibus anticis angulos obliquos edentatos formans; staminum filamentis omnibus glabris; stylus leviter exsertus.

Szechuan: Hai-shui Distr., Ke-szu-pa-kou, alt. 3750 m. (H. Li 73242), VII, 21, 1958, (Type). Ma-erh-Kang, Tze-ku Shan, alt. 3750 m. (H. Li 71602). Li Hsien, alt. 4000 m. (F. T. Wang 21543), VI, 24, 1930. "Dongrergo, supra Huang-lung-ssu, in silvis nivalibus, ca. 4300 m.s.m. (H. Smith 3868), VII, 20, 1922". "Hsio-eh-shan, in prato alpino, ca. 4300 m.s.m. (H. Smith 3898), VII, 19, 1922". Kansu: "Tao River basin, highest alpine meadow on Mt. Lissedzadza, alt. 12750 ft. (J. F. Rock 12620), VII, 7, 1925."

153. **Pedicularis fragarioides** Tsoong, sp. nov. (Ser. praeced.)

Planta in saxosis delabentibus peculiaris, stolonifera, habitu fere *Fragariae*, inter *Metaverticillatas* excellens.

Perennis, siccitate plus minus nigrescens, pilosa, herbacea. Rhizoma elongatum, nigrum, sursum folia caespitosa sterilia caulesque scapiformes floriferos, deorsum radices graciles fibrosas plus minusve carnosas ad 7 cm. longas emittens, nodosque squamis membranaceis lanceolatis oppositis obtectos munitum; collo eodemmodo squamifero caespitosoque radiculoso. Caules vix 10 cm. alti, plerumque decumbentes vel nonnumquam adscendentes, internodiis brevibus praediti, plus minus 4-angulati, pilis fuscis dense obtecti, infra medium saepe ramosi. Folia basalia atropurpurea, longe petiolata, petiolis nigrescentibus, complanatis et canaculatis, ad 3 cm. longis, quam lamina 3—4 plo longioribus, illa late ovato-cordata usque elliptico-cordata, obtusa, margine utrinsecus 3—6-lobata, lobis iterum lobulatis vel duplicato-serratis; folia caulinaria brevius petiolata, sed illa verticillastribus inferioris usque ad 10—25 mm. longe petiolata, saepissime opposita vel raro verticillata, lamina angustiora,