

角状披针形而长,有反捲而具胼胝的锯齿;花冠黄色,长20—25毫米,花管約与萼等长,在中上部稍稍向前膝屈,下唇与盔等长或稍长,浅裂,側裂斜椭圆形而略帶方形,甚大于亚菱形而显著的中裂,盔直立部分內緣約高(长)6毫米,背綫向前上方轉折形成多少膨大的含有雄蕊部分,而后再轉向前下方成为傾斜之額,頂端漸細成为稍稍下弯的短喙,喙长短和粗細很不一律,长2—3毫米;雄蕊花絲着生于管的基部,前方一对端有长柔毛。

为我国特有,分布于青海、甘肃、内蒙古,也可能見于宁夏回族自治区。生于河谷多石砾与沙的向阳山坡及湖边平川地。

麦克齐莫維奇氏的图86中,仅把这一亚种的萼加以展示,而其余一个萼和花的图則属于下一亚种,因为这是由普采瓦爾斯基由西藏北部“Tibet boreali orientali: valle fl. Assakgol cum *P. curvituba*”(不是 cum specie praecedente 如李氏所引)采得的标本上画下来的,它具有較直的花管与較短的喙,以及全緣的萼齿;麦氏在图下的名字中,也写作“*P. alaschanica*...m...var.”。李惠林氏未曾分清,把这一个图全部都作为属于这一亚种(var. *typica* Prain),是錯誤的,这一点在他前面的泊兰氏却分得很清楚。

阿拉善馬先蒿西藏亚种

Pedicularis alaschanica Maxim. subsp. ***tibetica*** (Maxim.) Tsoong, comb. nov.——*P. alaschanica* Maxim. var. *tibetica* Maxim. in Bull. Acad. St. Pétersb. XXXII (1888) 578; f. 86, pro parte; et in Mém. Biol. XII (1888) 860; f. 86, pro parte; Prain, in Ann. Bot. Gard. Calc. III (1890) 164, t. 25, B; Limpr. in Repert. Sp. Nov. XX (1924) 243; Li, in Proc. Acad. Nat. Sci. Philad. C (1948) 283.

这亚种的不同,在于其叶常对生,少有3枚輪生者;萼有密毛,其齿均全緣而为卵状披针形,喙显然較短。

产东喜馬拉雅,我国西藏亚东春丕谷及帕里有之。也見于藏布江中流地区。

这一亚种几乎无疑地是大部属于西喜馬拉雅和一小部属于东喜馬拉雅的篦齿系中种类的祖先,所以在分布上說来是十分重要的。

172. 假弯管馬先蒿 图版 XLIX, 5—8

Pedicularis pseudocurvituba Tsoong, sp. nov., in Addenda 412.——*P. curvituba* Maxim. in Bull. Acad. St. Pétersb. XXXII (1888) 578, et in Mém. Biol. XII (1888)

图版 XLVIII 1—5. 塔氏馬先蒿 *Pedicularis tatarinowii* Maxim., 1. 植株×1; 2. 花×3; 3. 花萼×3; 4. 下唇×3; 5. 果实×2。6—9. 阿拉善馬先蒿阿拉善亚种 *P. alaschanica* Maxim. subsp. *alaschanica*, 6. 植株×1; 7. 花×2; 8. 花萼×2; 9. 下唇×2。(繪图人刘春荣)

859, pro parte, quoad pl. Tibet bor., non Maxim. (1877); Limpr. in Repert. Sp. Nov. XX (1924) 242, pro parte; Li, in Proc. Acad. Nat. Sci. Philad. C (1948) 332.

多年生草本,常稠密,高一般在15厘米以下,偶有发达之植株高达30厘米,干时不变黑色。主根强大,垂直向下,近端处有细侧根或分枝,长者达9厘米,根茎常存在,在主根与根茎相接处常有小鳞片若干轮,根茎有纵条纹,亦为垂直生长,多单条而比主根为粗,或有时分为两条而发出根叶两丛,粗者径达7毫米,长达4厘米,仅在极偶然的情况下主根在根颈下即分多枝而无根茎存在。茎一般多条自根颈发出,与多数宿存之基叶成为密丛,在有分枝根茎的植株中则有与根茎分枝相等的丛数,但在地面上看时不易分辨,各丛中有一条主茎几直立,最早开花,其余者多倾卧上升,决不在中上部分枝,节仅1—2枚,连疏远的花轮合计也不超过4枚,节间长可达5.5厘米,在大植株中可达12厘米,有纵条纹及四条毛线。叶基生者柄长达2厘米,有膜质狭翅,茎生下部者柄亦长,中下部或上部的一轮则柄仅5毫米左右;叶片羽状全裂,大者长达4厘米,宽1.2厘米,一般较小,裂片5—9对,疏距,线形至披针形,羽状浅裂至半裂,小裂片锐头,有少数锯齿,多胼胝。花序有时下方一至二轮略有间断,一般穗状而密;苞片下部者叶状,向上很快变为卵状膨大而膜质,端有不规则亚掌状开裂而为绿色,甚短于花,上部者完全膜质而宽卵形,除小形绿色顶尖外均全缘;萼大,长达10毫米,前方开裂至一半或更多,脉10条,清晰,齿5枚,后方一枚较小,基部三角形全缘,端绿色而狭短,有不清晰之齿,后侧方两枚最大,较前者大1/3,宽则加倍,端有锯齿,前侧方两枚很斜,连于后侧方的一侧短,而另一侧则缘斜下以组成萼的深裂口,外方与管部均无毛,内方沿各齿之缘及缺口均有茸密之长毛;花冠黄色,长约17毫米,管极粗,约在中部向前膝屈,下方一段长5毫米,宽3.3毫米,上方一段向端扩大,自萼的缺口伸出,喉达5毫米,下唇长于盔,侧裂斜倒卵形,较横广椭圆而具有小尖的中裂大得很多,盔自管的上段仰起,其直立部分前缘上部有小缺状皱折,含有雄蕊的部分很膨大,背几圆形而徐徐转向前方,额不明显,前方由前缘与背线作近乎相等的渐狭而成为长约3毫米之喙,喙多少下弯,端多少膨大而薄;花丝全部有毛;柱头不伸出。蒴果长于萼1/3,斜卵形,锐头,下缘伸直,上缘弯曲,扁平,长18毫米,宽8毫米;种子扁平,椭圆形,种皮有细网纹,褐色,长3—3.5毫米。花期6月。

麦克齐莫维奇氏于1877年发表了 *P. curvituba*, 那是普采瓦尔斯基于甘肃采得的标本。到了1888年,他又在已有甘肃的记录上加上青海的记录(Tibet boreali),而没有注明采集人姓名号数。其后1890年,佛朗歇氏又把河北的一个植物定名为普洛氏马先蒿(*P. provotii*)。最近发现佛氏的种也见于山西北部,而它的花部与弯管马

先蒿十分相象,經過仔細比對,才知道佛氏的種是与麦氏的種在花部構造上几乎完全相同,而麦氏 1888 的植物,却与 1877 者有异,因此 *P. provoti* 以其微少的变异,只能作为 *P. curvituba* 的亚种,而麦氏 1888 的記錄則为一新种,它与前者的不同,在于基叶丛密而宿存,茎决不上部分枝,萼开裂較深,而在內緣沿齿及缺口有长密毛一环,其花管約在中部膝屈。这些特征使它成为一个很好的种,而它的体态則正如麦氏所說,是近乎阿拉善馬先蒿的,而弯管馬先蒿的上部多枝的体态,則更近万叶馬先蒿。

产我国青海昆仑山,鄂陵湖以北,柴达木盆地东南。生在海拔 4,300 米河谷沙地。

173. 弯管馬先蒿

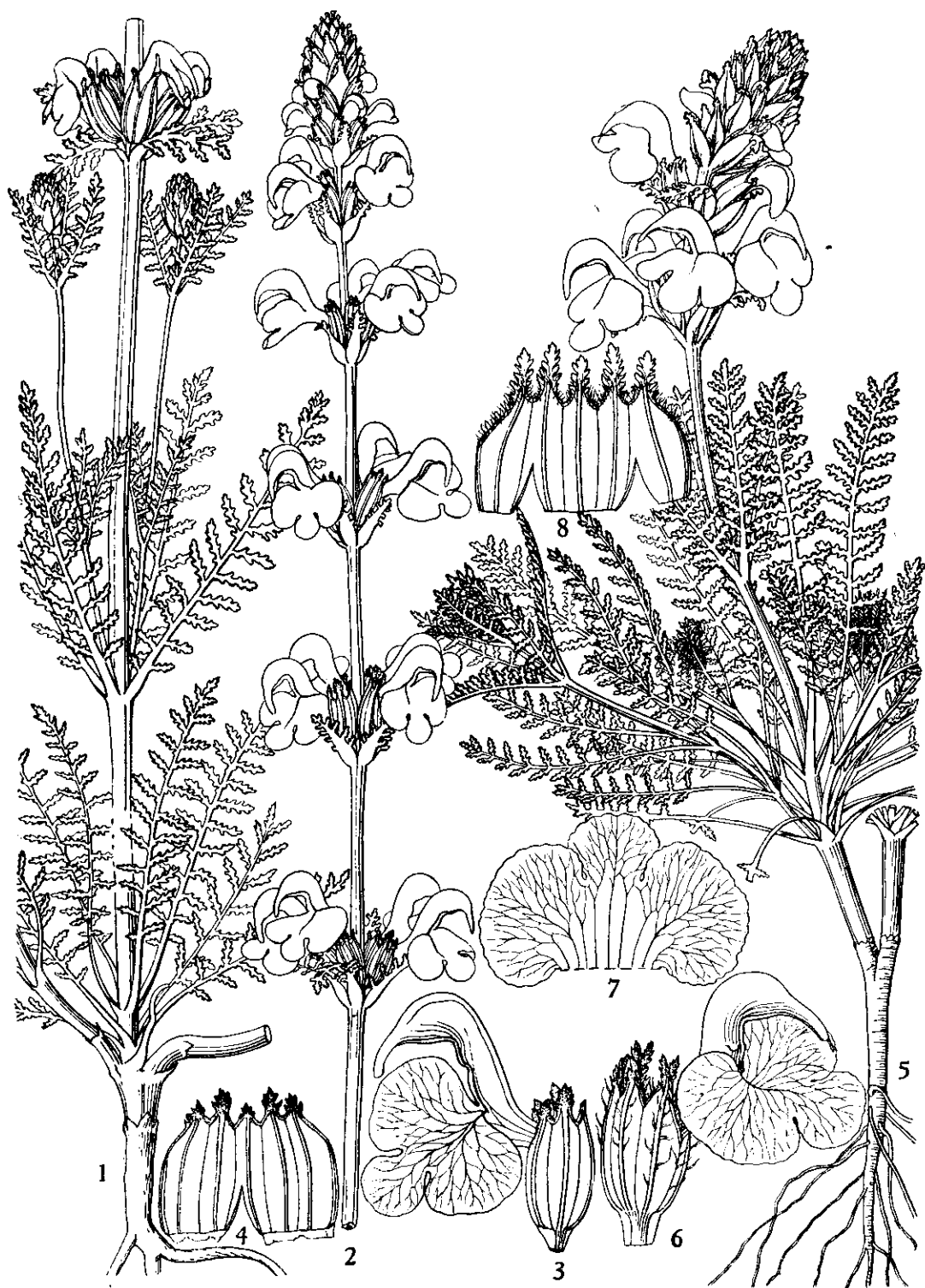
Pedicularis curvituba Maxim. in Bull. Acad. St. Pétersb. XXIV (1877) 60, et in Mém. Biol. X (1877) 92; et l. c. XXXII (1888) 578, pro parte, quoad spec. Kansuenses, f. 85, et l. c. XII (1888) 859, pro parte, quoad spec. Kansuenses, f. 85; Limpr. in Repert. Sp. Nov. XX (1924) 242, pro parte; Li, in Proc. Acad. Nat. Sci. Philad. C (1948) 332.

弯管馬先蒿弯管亚种 图版 XLIX, 1—4

Pedicularis curvituba Maxim. subsp. *curvituba*

一年生草本,常中等高低,高可达 50 厘米,一般約 30 厘米左右,干时不变黑。根多少木質化,有分枝,长达 8 厘米。茎多条自根頸发出,开花时基部多少木質化,上部草質,有毛綫 4 条,节不計間断的花輪約 4—5 枚,如合計則多达 10 枚,中上部几每一叶輪的腋間发出短枝两条或偶有 3 条。叶无基出之丛,茎叶下部者柄較长,达 15 毫米,上部者长仅 1.5—4 毫米;叶片綫状披針形、长圓状披針形至卵状长圓形,长达 20—45 毫米,寬 9—17 毫米,羽状全裂,裂片疏远,每边 6—10 枚,卵状披針形至綫状披針形,长 2—8 毫米,疏羽状开裂至具大鋸齿,齿常有胼胝,两面均几无毛。花序以多数間断的花輪組成(10 枚以上),在主茎上者长达 20 厘米;苞片下部者叶状,短于花,向上很快变短而甚短于花,基部膜質卵形膨大,上半部亚掌状羽状开裂,最高者仅具綠色有齿的小尖;萼花后迅速膨大,長約 11 毫米,下有具翅的短花梗,前方开裂不到 1/3,齿 5 枚,不等,有羽状浅裂至具深齿,齿常反捲而有胼胝;花冠长 20 毫米,管約在离基 7 毫米处向前作膝屈,径 2.5 毫米,上段自轉折处至花喉約长 5 毫米,喉扩大至 5.5 毫米,下唇長約 8 毫米,寬約 12.5 毫米,側裂大,斜橢圓形,中裂較小,橫广橢

图版 XLIX 1—4. 弯管馬先蒿弯管亚种 *Pedicularis curvituba* Maxim. subsp. *curvituba*, 1—2. 植株×1; 3. 花×2; 4. 花萼×2。5—8. 假弯管馬先蒿 *P. pseudocurvituba* Tsoong, 5. 植株×1; 6. 花×2; 7. 下唇×2; 8. 花萼(內面)×2。(繪图人刘春荣)



ore inflatus, 4.5 mm. latus, labium inferum 6 mm. longum, 7—9 mm. latum, lobis margine plus minus sese tegentibus, lateralibus obovatis, medio late ovato, paulo quam lateralibus minore, galea 5.5—6.5 mm. longa, apice rotundata, antice subito cum marginibus anticis rostrum brevissimum oblique truncatum ad angulos inferos dentibus 2 filiformibus ornatos formata; staminum filamentis omnibus glabris.

Szechuan: "Sungpan, mont. orient., in prato aprico, 3200—3400 m.s.m. (H. Smith 2521), 1913, VII, 22", (typus).

158. **Pedicularis latirostris** Tsoong, sp. nov. (Ser. Cheilanthifoliae)

Proxima *P. cheilanthifoliae* Schrenk videtur, galea autem medio valde incurvata vix falcata parteque antherigera in rostrum latissimum oblique truncatum abeunte distinctissima.

Perennis, ad 12—24 cm. alta. Radix ramosa, gracilis, leviter fusiformis, 2.5 mm. diam., ad 8 cm. longa; collo squamis membranaceis ovatis usque lineari-lanceolatis ornato. Caules saepissime singuli, rarius 2, plus minusve quadriangulares et 4-fariam pubescentes, inflorescentia excepta plerumque 2—3 nodosi, internodio medio longissimo, ad 8 cm. longo. Folia inferiora longe petiolata, petiolis 2.5 cm. circ. longis, filiformibus, sparse pubescentibus vel laevibus; lamina anguste oblonga usque lineari-oblonga, 10—15 mm. longa, pinnatisecta, segmentis utrinsecus 6—8, ovatis usque lanceolatis, sed saepe e marginibus revolutis quasi linearibus, ad 2.5 mm. longis, 1.5 mm. latis, pinnatilobatis vel inciso-serratis, folia media brevius petiolata, petiolis 2.5—13 mm. longis, lobis laminae numerosioribus, usque 13-paribus. Inflorescentia subcapitata vel breve spicata, saepe continua, 2—5 cm. longa, sed verticillastri infimo nonnumquam reliquis longe distante; bractee inferiores foliiformes, superiores basi dilatatae et membranaceae, superne virides et 2—3-lobatae; calyx tubulosus, medio leviter inflatus, antice $1/2$ usque $2/3$ fissus, circ. 8 mm. longus, costis 8, inaequalibus, iis in dentes calicis postico-laterales extensis validissimis, dentibus 5, postico basi late triangulare, superne parvo, atroviride, postico-lateralibus maximis, 1.8 mm. longis ac latis, apice atroviridibus et latis, manifeste trilobatis, antero-lateralibus minimis, basi vix deltoideo-dilatatis, vix 1 mm. longis, anguste oblongis, atroviridibus, secus margines fissurae tubi decurrentibus; corolla alba, paulo purpureo-maculata absque parte horizontale galeae 20 mm. longa, tubus circ. 10 mm. longus, ad medium circ. angulo 35° geniculatus, labium inferum 6 mm. longum, 12 mm. latum, lobis lateralibus rhomboideo-ovatis, 5 mm. latis, lobo medio minore, multo latiore quam longiore, ad 3 mm. longo, 5.5 mm. lato, ovato-deltoideo, basi utrinque angustato, galea parte verticali leviter reflexa, margine antice circ. 4.5 mm. alta, medio plus minus inflata, apice sub angulo recto vel paulo ultra geniculata, dorso rotundato-falcata, parte horizontale circ. 10 mm. longa, antice gradatim in rostrum latum tantum paulo quam parte antherigera angustius attenuata, apice truncata vel paulo rotundata; filamentis staminum anteriorum solum apicem versus sparsissime pilosis, loculis antherarum apiculatis; stylus 1—2 mm. exsertus.

Kansu: Labrang, alt. 3800 m. (T. P. Wang 7292), VII, 19, 1937 (type).

172. **Pedicularis pseudocurvitiba** Tsoong, sp. nov. (Ser. Myriophyllae). — *P.*

curvituba Maxim. in Bull. Acad. St. Pétersb. XXXII (1888) 578, et in Mém. Biol. XII (1888) 859, pro parte, quoad pl. Tibet bor., non Maxim. (1878); Limpr. in Repert. Sp. Nov. XX (1924) 242, pro parte; Li, in Proc. Acad. Nat. Sci. Philad. C(1948) 332, pro parte.

Species certe *P. curvitubae* Maxim. arctissime affinis, quacum ab auctore anno 1888 confundit, sed foliis basalibus densis persistentibus, caulibus sursum nihil ramosis, calice profundeus fisso secusque faucem annulo densissime piloso ornato, et tubo corollae ad medium infracto etc. dissimillima est, quin conjungatur.

Perennis, 15 rarius 30 cm. alta, in sicco nunquam nigrescens. Radix valida, perpendicularis, apicem versus radiculis gracilibus praedita vel paulo ramosa, ad 9 cm. longa, saepe rhizomatosa, ad apicem rhizomatis saepe squamata, rhizomatibus longitudinaliter striatis, sive singulo atque radice crassiore sive binis et gracilioribus, crassiore ad 7 mm. diam. et 4 cm. longo. Caules plures, centralis validior, erectus, laterale plus minus adscendentes, supra medium non ramosi, inflorescentia excepta tantum 1—2-nodosi, internodiis ad 5.5 cm. longis, longissimis ad 12 cm. longis, longitudinaliter striati et 4-fariam pubescentes. Folia petiolata, petiolis foliorum basalium et caulinarium inferiorum ad 2 cm. longis, anguste membranaceo-alatis, iis foliorum mediorum et superiorum multo brevioribus, 5 mm. tantum longis; lamina pinnatisecta, majora ad 4 cm. longa, 1.2 cm. lata, segmentis utrinsecus 5—9, distantibus, linearibus usque lanceolatis, pinnatifidis vel pinnatilobatis, lobulis acutis, pauciseratis, cartilagineis. Inflorescentia saepe densiflora et spicata, nonnumquam verticillastribus 1—2 interrupta; bractae inferiores foliiformes, sursum cito breviores, ovato-dilatatae, membranaceae, apice irregulariter subdigitato-lobatae, virides, multo quam flore breviores, superiores omnino membranaceae, apice viride parva excepta integrae; calyx magnus, ad 10 mm. longus, antice ad vel ultra medium fissus, costis 10, prominentibus, dentibus 5, postico minore, basi deltoideo integro, apice viride et breve, indistincte dentato, postico-lateralibus maximis, illo $\frac{1}{3}$ majoribus et 2 plo latioribus, apice serratis, antero-lateralibus valde obliquis, extus omnino glaber, intus secus margines dentium fissuraeque densissime villosus; corolla lutea, circ. 17 mm. longa, tubo crassissima, prope medium geniculata, parte inferiore 5 mm. longo, 3.3 mm. lato, parte superiore sursum dilatato, e fissura calicis exserto, ore ad 5 mm. lato, labium inferum galea longiore, lobis lateralibus oblique obovatis, quam lobo medio horizontaliter elliptico apiculato multo majoribus, galea e parte superiore tubi erecta, margine antice partis verticalis apicem versus retuso-plicata, parte antherigera valde dilatata, dorso rotundata, fronte vix prominente, antice gradatim in rostrum circ. 3 mm. longum attenuata, rostro plus minus deflexo, apice leviter dilatato; filamentis omnibus pilosis; stylus non exsertus. Capsula $\frac{1}{3}$ calicem persistentem superans, oblique ovata, acuta, sutura inferiore stricta, superiore curvata, compressa, 18 mm. longa 8 mm. lata; semina complanato-elliptica, crebre reticulata, brunnea, 3—3.5 mm. longa.

Chinghai (Kokonor): "Burhan Budda (Ladegin 153), VI, 15, 1901." (type, in Herb. Liningr.).