

MATERIALS FOR A FLORA OF TURKEY: XIX

LEGUMINOSAE: VICIEAE

P. H. DAVIS

The Tribe *Vicieae*, especially *Vicia*, *Lens*, *Lathyrus* and *Pisum*, has its main concentration of species in Anatolia and adjacent areas. Several cultivated legumes seem to have been derived in prehistoric times from wild types growing in the mountainous arc flanking the north and west side of the 'fertile crescent', from N Iraq and E Anatolia southwards to Palestine (see notes under *Cicer echinospermum* Davis described below). Many species complexes in *Vicia* and *Lathyrus* have their maximum variability in Anatolia.

I am indebted to Dr. A. Huber-Morath for co-authorship of *Lathyrus phaselitanus*. In future most new combinations and names (as distinct from new taxa) will be published in the *Flora of Turkey*, of which volume 3 (*Leguminosae*) is due to appear early in 1970.

CICER L.

Cicer isauricum P. H. Davis, sp. nov.

Affinis *C. floribundo* Fenzl et *C. montbretii* Jaub. & Spach, sed ab ambabus forma indumenti et foliorum differt.

Herba erecta, ramosa, 20–40 cm alta, caulibus flexuosis ut in foliis pilis glandulosis brevibus (minus 0.5 mm longis) parce pubescentibus. *Folia* imparipinnata, patentia, brevius petiolata, 4–9 cm longa; stipulae triangulares, 3–4 mm longae, versus basin dentatae; foliola 3–6-juga, subcoriacea, 8–24 × 5–15 mm, glauco-virentia, late oblonga vel late ovato-oblonga, obtusa vel truncata, basi plerumque subcordata, dentibus late triangularibus apice breviter spinulosis ambitu patenter et simpliciter dentata, nervis lateralibus divergentibus anastomosantibus subtus prominentibus provisa. *Flores* 18–20 mm longi, 1–2 in pedunculis axillaribus quam foliis duplo brevioribus in aristam subulatam 4–12 mm longam abeuntibus dispositi. *Pedicelli* pedunculo multo breviores, 5–11 mm longi, ut calyx dense glanduloso-hirsuti, in fructu deflexi. *Bractaeae* c. 1 mm longae, dentatae. *Calyx* basi profunde gibbosus, ore obliquo, florifer 10–12 mm longus, in fructu ad 15 mm longus, ad $\frac{3}{4}$ in dentes lanceolatos subaequales fissus. *Corolla* albida (?); vexillum late obovatum, c. 20 × 13 mm, limbo ungue duplo longiore; alae oblongae, 14 mm longae, ungue 4 mm longo quam appendice duplo longiore; carina 12 mm longa, ungue triplo longior. *Ovarium* 4 mm longum; stylus 10 mm. *Legumen* oblongo-ellipsoideum, c. 25 × 10 mm, dense glanduloso-villosum, 3-spermum. *Semina* (immatura) suborbicularia, obscure verrucosa. Floret Jun.-Jul.

TURKEY. C3 Antalya: distr. Akseki, Akseki—Beyşehir, *Pinus pallasiana* Wald auf Eruptivgestein, 13 km nördlich ob Akseki, 1340 m, 4 vii 1964, Huber-Morath 17174 (holo. Hb. Huber-Morath); 9 km N of Akseki, 1300

m, *Abies cilicica* forest, Sorger 65-37-8. C4 Antalya: distr. Alanya, Kargi Çay, between Durbanas and Derince Dere, c. 1000 m, 24 viii 1947, Davis 14396 (K).

The new species occupies an area in S Anatolia between *C. montbretii* Jaub. & Spach (Albania, S Bulgaria, NW Turkey and W Anatolia) and the little-known *C. floribundum* Fenzl (S Anatolia: Cilician Taurus and Amanus). It differs from both species in its broad subcoriaceous subcordate leaflets with more spreading lateral veins and broader horny teeth, and in the sparse indumentum of its stems and leaves, consisting entirely of very short glandular hairs (in *C. montbretii* the hairs are much longer, and in *C. floribundum* eglandular hairs predominate over glandular ones). *C. isauricum* differs further from *C. montbretii* in its usually fewer leaflets, smaller flowers, and dentate bracts. From *C. floribundum* (of which the type and three other sheets have been seen) it is distinguished by its fewer-flowered peduncles only half as long as the subtending leaf, smaller narrower bracts (toothed in both species), and longer-haired fruits.

***C. echinospermum* P. H. Davis, sp. nov.**

Affinis *C. arietino* L. sed caulibus prostratis vel procumbentibus, foliolis minoribus et paucioribus, legumine minore, et insuper seminibus dense echinatis recedit.

Herba annua, prostrata vel procumbens, pilis eglandulosis numerosis et pilis glandulosis paucioribus dense pubescens, caulibus tenuibus 20-35 cm longis. *Folia* imparipinnata, (1.5-)2-4 cm longa, breviter petiolata; stipulae ad medium inciso-dentatae; foliola 3-5-juga, obovato-oblonga, 5-11 × 2-5.5 mm, basi curvato-cuneata, saltem ad duos partes crebre serrata (serraturis integris vel superioribus ± denticulatis), apice saepe breviter cuspidata. *Pedunculi* axillares tenues, uniflori, petiolis longiores, apice bractea dorsali (arista) plerumque minus quam 1 mm longa provisa; pedicelli 8-13 mm longi, pedunculo saepe paulo longiores sed folio breviores, in fructu deflexi. *Flores* solitarii, 10-12 mm longi, purpurascens. *Calyx* obscure gibbosus, 6-7 mm longus, ore haud obliquo, ad $\frac{2}{3}$ in dentes lanceolatos subaequales fissus. *Vexillum* orbiculare 9-10 mm, vix emarginatum; alae obovatae, 7 mm longae ungue 1 mm longo incluso; carina 6-7 mm, ungue 1.5 mm incluso. *Ovarium* 2 mm longum; stylus 3.5 mm. *Legumen* late ellipsoideum, 16 × 11 mm, glanduloso-pilosum. *Semina* (immatura) ovoidea, c. 7 mm longa, spinulis crebre asperis albidis c. 1 mm longis dense echinata. Floret Maio.

TURKEY. B8 Diyarbakir: Silvan, rocky hillside with short grass, 700 m, flowers pinkish purple, F. Campbell 72. C7 Urfa: Orfa, in herbidis ad Tel Pinar, 28 v 1888, *Sinten* 747 (holo. K, iso. E); E. of Siverek, 800 m, rocky basalt slope, procumbent annual, flowers purple, Davis 28291. C8 Mardin: above (S of) Gerçüş, 1100 m, fallow field, flowers dirty mauve, Davis 42876; Savur, 900 m, vineyard, prostrate annual, flowers mauve, Davis 28545; Savur to Midyat, 13 km from Savur, 1100 m, fallow fields and amongst oak scrub in gully, annual, flowers dusky mauve, Davis 42509.

The new species described above is certainly very closely allied to the cultivated and variable *C. arietinum* L., but differs strikingly in the long

asperous spine-like projections (c. 1 mm long) that densely cover the seed; these are larger and differ in form from those characteristic of *C. bijugum* Rech. fil. (1951), a rare species whose seed was not described by Rechinger; in the latter the projections are 0.3–0.4 mm long and nearly smooth.

C. echinospermum is one of a group of four wild annual species related to the chick pea, *Cicer arietinum* L. The others are *C. pinnatifidum* Jaub. & Spach, the closely related *C. judaicum* Boiss., and *C. bijugum* Rech. fil. All these species are confined to parts of the hilly arc flanking the north and west side of the "fertile crescent". This is the region where J. R. Harlan and D. Zohary (*Science* 152: 1074–1080, 1966) have found the greatest concentration of wild barley and wild einkorn and emmer wheats. Aided by archaeobotanical evidence, they conclude that wheats and barley were probably first domesticated in or near this peripheral arc. The same may well be true of *Cicer arietinum*. P. Zhukovsky (*La Turquie Agricole*, 1933) considers that the cultivated species was probably derived through domestication of the Palestinian *C. judaicum*, which differs, however, in its indumentum, much smaller size, and in the form of its leaves. Apart from its remarkable seed coat, *C. echinospermum* is morphologically closer than *C. judaicum* to *C. arietinum*, and should certainly be studied in any biosystematic work on the origin of the chick pea.

VICIA L.

Vicia cracca L. subsp. **atroviolacea** (Bornm.) P. H. Davis, **comb. nov.** (Sect. *Cracca* S. F. Gray).

Syn.: *V. tenuifolia* Roth var. *atroviolacea* Bornm. in Beih. Bot. Centralbl. 24: 462 (1909).

Herba erecta, 30–60(–90) cm alta. *Caules* superne simplices, ut foliis et pedunculis dense vel parce adpressim vel patentim pilosae. *Folia* 4–12(–14) cm longa; foliola (6)–8–10(–12)-juga, oblongo-lanceolata vel oblonga, acuta vel obtusa mucronata, 8–25(–30) mm longa, 3–6(–12) mm lata, saepe subsericea. *Pedunculi* (1)–2–4(–7) cm longi, foliis suffulcientibus semper breviores. *Racemus* densus, 2–4(–6) cm longus, 10–15(–25)-florus. *Flores* magni, atroviolacei. *Calyx* 4–6 mm longus, dente inferiore lanceolato-subulato tubo aequali vel sublongiore. *Vexillum* (12)–14–17 mm longum, limbo quam ungue 1–1½-plo longiore. *Legumen* oblongum, 20–25 mm longum, 5–6 mm latum, versus apicem oblique truncatum, versus basin ad suturam superiorem gradatim curvato-angustatum, stipite tubum calycis aequante, 3–5-spermum.

TURKEY. B1 Balikesir: Mt. Kapu Dag, *Sintenis* 1883:674 (as *V. gerardii*). B2 Kütahya: Simav Dağ (6 miles from Simav), 1700 m, *Pinus nigra* woodland, flowers dark purple, 18 vi 1965, *Coode & Jones* 2659 (holo. E, iso. K); Murat Dağı above Banaz, forest road from Gürlek to S slope of Murat, 1700 m, clearing in *Pinus nigra* forest, flowers deep purple, *Coode & Jones* 2454; Murat Dağı (above Gediz) below Hamam, 1200 m, metamorphic shrubby slopes, perennial, *Davis & Coode*, D. 36851 (in fruit); Murat Dağ (above Gediz) above Kesik Söğüt, 1700 m, rocky limestone slopes in *Pinus sylvestris* forest, perennial, flowers violet, *Davis & Coode*, D. 36836 (shade form). B3 Konya: Sultan Dağ, above Akşehir, 1500–1800 m, *Bornmüller* 4357 (iso. E! W!). C3 Isparta: distr. Sütçüler, between Tota Beyli yayla (on

Kuyucuk Dağ) and Daribükü, under *Pinus nigra*, Davis 15885 (in fruit; shade form).

The *Vicia cracca* group is critical in the Balkans, and still more complex in Turkey and Caucasia. As with the annual *V. villosa* Roth, intermediates are so numerous that I find it necessary to recognise only one species in the *Flora of Turkey*, containing the following 5 subspecies: subsp. *cracca*, subsp. *gerardii* Gaudin (syn.: *V. incana* Gouan), subsp. *atroviolacea* (Bornm.) Davis, subsp. *tenuifolia* (Roth) Gaudin (syn.: *V. tenuifolia* Roth), and subsp. *stenophylla* Vel. (syn.: *V. elegans* Guss., *V. dalmatica* Kerner). These form a partly discontinuous morphological series, with subspecies *cracca* and *stenophylla* as the two extremes, and show partial eco-geographical separation. Although cytological work has been carried out on the *V. cracca* group in Europe, we know almost nothing about environmental modifications or crossability in its centre of variability—SW Asia. Here any formal classification can only be considered as tentative.

V. cracca subsp. *atroviolacea* is a plant of montane pine forests in the western half of Anatolia. In the shape of its leaflets and legumes, and in its indumentum, it approaches subsp. *gerardii* (which itself differs somewhat from W European material), but in the size and form of its large flowers it resembles subspecies *tenuifolia* and *stenophylla*; however, it differs from both the latter in its short peduncle and conformed inflorescence of dark violet flowers. Flowering material seen from Thessaly (*Sintenis* 1896: 932, 382—both syntypes of *V. tenuifolia* var. *platyphylla* Hal.) might be referable to subsp. *atroviolacea*. This subspecies, like subsp. *gerardii*, produces occasional variants with dentate stipules—a feature given in the type description of *V. incana* Gouan.

Clarification of the *V. cracca* complex has not been helped by two Turkish 'species' described by Freyn, of which I have been able to see the diverse type material. *V. boissieri* Freyn is based on forms of subsp. *tenuifolia*, and on material intermediate between the latter and Turkish subsp. *gerardii*; however, one syntype from Gümüşane (Moaldasdagh, *Sintenis* 1894:5962) could be subsp. *atroviolacea*, but another syntype from the same province (*Sintenis* 1894:6209), with flowers and young fruits, is apparently subsp. *tenuifolia*. The syntypes of *V. variabilis* Freyn (which has been misinterpreted by Soviet taxonomists dealing with the Caucasian flora) are subsp. *stenophylla*, and material intermediate between the latter and subsp. *gerardii*. Grossheim (*Fl. Kavkaza* ed. 2, 5:393–95, 1952) recognises no less than seven species in the *V. cracca* complex from Caucasia; the relation of these to each other, and to Turkish material, is not clear to me, but all appear to be conspecific at the level adopted here for *V. cracca*.

Vicia splendens P. H. Davis, sp. nov. (Sect. *Cracca* S. F. Gray).

Affinis *V. kotschyanae* Boiss. sed indumento densiore, foliolis lineari-lanceolatis acutis (plerumque magis numerosis), stipulis tenuioribus, floribus majoribus, legumine glaberrimo differt.

Herba perennis, erecta, elata, saltem 60 cm alta, indumento (corolla et legumine glabro excluso) adpresse pilosa. *Caules* numerosi, sulcati, ± flexuosi, inferne ad 5 mm lati. *Folia* mediana 10–18 cm longa cirrhosa, breviter petiolata vel subsessilia; stipulae subulatae vel lanceolatae, basi

plerumque longe hastatae vel paucè inciso-dentatae, 10–20 mm longae; rhachis cirrho 3–5-secto terminata; foliola lineari-lanceolata, irregulariter 8–10(–11)-juga, 25–50 mm longa, 4–8 mm lata, longitudinaliter penninervia, basi rotundata, apice acuta mucronata; foliis superioribus minoribus foliolis c. 8-jugis. *Pedunculi* folia suffulcientia $\pm$ aequantes, in fructu saepe paulo longiores; pedicelli vix 1 mm longi. *Racemus* sublaxus, 2–6 cm longus, (6–)10–12(–15)-florus. *Flores* magni, 20–23 mm longi, subnutantes. *Calyx* 7–8 mm longus, tubulosus basi subgibbosus, ore obliquo, dentibus tubo brevioribus inaequalibus, dente infimo 2–3 mm longo lanceolato vel subulato aliis longiore, binis superioribus late triangularibus vix 1 mm longis conniventibus. *Corolla* rubro-purpurea; vexillum limbo obovato emarginato unguem exsertum aequans vel sub-breviore; alae vexillo brevioribus et carina longiores, limbo obovato basi conspicue auriculato quam ungue paulo longiore; carina 13–14 mm longa, ungue quam limbo naviculari breviter auriculato duplo longiore. *Ovarium* lineare, longe stipitatum, c. 5-ovulatum; stylus a latere compressus, 2.5 mm longus, sursum circumcirca pubescens sed pilis ad latus inferius longioribus. *Legumen* submaturum stipite tubo calycino sublongiore suffultum, anguste oblongum compressum, 30–35 mm longus, c. 9 mm latum, versus apicem curvato-truncatum, vix rostratum, versus basin ad suturam superiorem gradatione curvato-angustatum, 3–5-spermum. *Semina* immatura hilo $\frac{1}{8}$ peripheriae aequante. Fl. Junio.

TURKEY. C10 Hakkari: Sat Dağı, between Varegöz and Sat Gölü, 2300 m, pastures and rocky slopes, perennial, flowers reddish purple, 27 vi 1966, Davis 45609 (holo. K, iso. E); Sat Dağı, 1850 m, rocky slopes, perennial, flowers red-purple, Davis 45656.

Locally abundant on Sat Dağı (SE Anatolia), where it forms showy stands of many-stemmed clumps, 2–3 ft tall. Allied to the rare *V. kotschyana* Boiss., described in flower from Kuh Daena (Kuh-i-Dinar) in W Iran (*Kotschy* 594), but differing in the characters given in the diagnosis, and also in usually having more numerous leaflets. In addition to the type, the following specimens of *V. kotschyana* have been seen from W Iran: Sultana-bad (Arak), 31 v 1890, *Th. Strauss*; Bakhtiari, Tang-i-Sirdan region between Kurang and Bazuft valleys, amongst limestone boulders in steep west gully between cliffs, extensive masses of tangled stems, flowers rich purple-red, 7 viii 1966, *J. Archibald* 3041 (legumina juniora sparsim pilosa).

***Vicia glareosa* P. H. Davis, sp. nov. (Sect. *Cracca* S. F. Gray).**

Species caudiculosa nana ecirrhosa glaberrima, ob forma styli ut videtur ad Sect. *Viciam* pertinens, sed ab omnibus aliis speciebus distinctissima.

Herba perennis, nana, glaberrima, ecirrhosa, caudiculos tenues inter lapides gerens. *Caules* tenues angulati, 5–7 cm longi, saepe ramosi. *Folia* paripinnata, 1–2 cm longa; stipulae ovatae integrae, 1.5–3 mm longae, haud nectariferae, petiolo 3–6 mm longo breviores; rhachis molliter mucronata; foliola (1–)3–4-juga, carnosula, obovata, 3–6 mm longa, 2–4 mm lata, obtusa submucronata, subtus unicostata nervis lateralibus obsoletis. *Pedunculi* axillares 1(–2)-flori, 3–16 mm longi; pedicelli 1–2 mm longi. *Calyx* breviter tubuloso-campanulatus, 4(–5) mm longus, ore obliquo, in

dentes late triangulari-subulatos subaequales 1-1.5 mm longos fissus. *Corolla* crenea; vexillum 17-19 mm longum, platynchioideum, limbo late obovato-orbiculari, c. 10 mm longo et lato, emarginato, quam ungue paulo longiore; alae 18-19 mm longae, limbo oblongo breviter auriculato quam ungue sublongiore; carina 13-14 mm longa, limbo antice curvato-anguloso, apice caeruleo, quam ungue 8 mm longo brevior. *Ovarium* lineare, stipitatum, glabrum, c. 10 mm longum, 0.5 mm latum, 2-spermum; stylus 4.5 mm longus, a latere subcompressus, sursum circumcirca aequaliter puberulus. *Legumen* ignotum. Fl. Julio.

TURKEY. B7 Tunceli: Munzur Dağ above Ovacik, 2900 m, limestone screes with *Viola dichroa*, scarce, 17 vii 1957, Davis & Hedge, D. 31295 (holo. E, iso. K).

A rare and remarkably distinct alpine perennial, having peduncles somewhat shorter than the flowers (as in Sect. *Vicia*), but on style indumentum probably best referred to Sect. *Cracca*. Here it has no close allies, but in its laterally compressed style approaches *V. alpestris* Stev. However, in other characters it seems to have more in common with the allied Caucasian *V. semiglabra* Rupr. ex Boiss. (incl. *V. ecirrhusa* Rupr. ex Boiss.), from which it differs in its caudiculate habit, fewer glabrous 1-nerved leaflets, ovate stipules, shorter 1(-2)-flowered peduncles, and cream flowers. A distant relationship with the annual *V. cypria* Boiss. (also in Sect. *Cracca*) is also possible.

***Vicia quadrijuga* P. H. Davis, sp. nov.** (Sect. *Ervum* (L.) S. F. Gray).

Affinis *V. ervillae* (L.) Willd., sed statura nana, foliis 3-4-jugis minoribus obovato-ellipticis, et forma corollae diversa recedit.

Herba annua nana parce pubescens, caulibus tenuibus angulatis ad 10 cm longis ramosis rubescentibus provisa. *Folia* breviter, 12-26 mm longa; stipulae lanceolatae, basi saepe subdentatae vel hastatae, 1-2 mm longae; petiolus laminam $\pm$ aequans, rhachide mucronata; foliola 3-4-juga, obovato-elliptica obtusa submucronata, 3-6 mm longa, 2-3.5 mm lata, nervis lateralibus c. 3-juga. *Pedunculi* 1-2-flori, foliis breviores, 5-14 mm longi, molliter aristati; pedicelli c. 1 mm longi. *Flores* nutantes parvi. *Calyx* 6 mm longus, subgibbosus, ore subobliquo, in dentes subulatos subincurvos aequales tubo sublongiores fissus. *Corolla* pallide flava; vexillum 10 mm longum, limbo late obovato emarginato reflexo 5.5-6 mm lato in unguem brevem sensim angustato; alae 8-9 mm longae, roseae(?), ungue quam limbo oblongo-obovato auriculato paulo brevior; carina 8 mm longa, limbo triangulare fere 4 mm lato apice in sicco caeruleo quam ungue paulo longiore. *Ovarium* 5-6 mm longum, lineare, substipitatum; stylus 3-3.5 mm longus, subteres, filiformis, sursum circumcirca aequaliter puberulus. *Legumen* junius sub lente puberulum, c. 8 mm longum, 2 mm latum, anguste oblongum, vix torulosum, breviter rostratum, 3-4-spermum. Fl. Maio. TURKEY. A7 Gümüşane: Gümüşane, 1500 m, fine scree, keel pale yellow, wings pink, stems red, 18 v 1960, Stainton 8429 (holo. E).

In facies and leaf shape having some resemblance to another new scree species described in this paper, *V. glareosa* Davis, but the likeness is only superficial. Floral dissection shows *V. quadrijuga* to be closely allied to the widespread *V. ervilia* (L.) Willd.; the style and puberulous young legume are

identical in both species, the torulose condition being scarcely evident at this stage of development. The new species is distinguished by its dwarf bushy habit, short leaves with only 3-4 pairs of differently shaped leaflets, reflexed standard, and limb of keel curved sharply upwards almost at a right angle. In Stainton's field notes 'keel' may refer to the standard.

Vicia ervilia (both wild and cultivated in Turkey) has hitherto held a rather isolated position in Sect. *Ervum*, so that the discovery of a new species, more closely related to it than the Central Anatolian *V. caesarea* Boiss. & Bal. appears to be, is relevant to the question of *V. ervilia*'s origin. The latter species, widely grown in the Mediterranean and SW Asia as a fodder crop, may well have originated in Anatolia, where its nearest allies are found.

LATHYRUS L.

Lathyrus satdaghenensis P. H. Davis, sp. nov. (Sect. *Orobis* (L.) Gren. & Godr.).

Affinis *L. karsiano* Davis sed indumento canescenti-pubescenti, foliolis magis numerosis, pedunculis brevioribus, stylo brevior recedit.

Herba perennis, erectus, caulibus rigidis striatis c. 60 cm altis basi 4 mm latis superne ramosis. *Indumentum* (corolla glabra exclusa) subadpresse canescenti-pubescent. *Folia* paripinnata, 2.5-8.5 cm longa; stipulae subulatae, semi-sagittatae, petiolo brevi longiores; rhachis 10-50 mm longa, mucronata; foliola 4-8-juga, lanceolato-linear, 18-55(-60) mm longa, 2-5.5 mm lata, acuta mucronata, longitudinaliter 5-nervosa. *Pedunculi* 2-3.5 cm longi, folia suffulciantia $\pm$ aequantes. *Racemi* densi, 3-8-flori, pedunculum $\pm$ aequantes. *Pedicelli* calyces aequantes. *Calyx* late campanulatus, 6 mm longus, ore obliquo 4-5 mm lato, dentibus superioribus triangularibus 1.5 mm longis conniventibus, caeteris triangulari-subulatis tubo paulo brevioribus vel eum subaequantibus. *Vexillum* 20-22 mm longum, limbo suborbiculiari quam ungue paulo longiore; alae pallidiores, vexillo paulo breviores, unguibus e calyce breviter exsertis; carina profunde navicularis, limbo unguem aequanti. *Legumen* (immaturum) lineare, dense adpresse-pubescent, c. 40 mm longum, 4.5 mm latum, apice breviter rostratum plurispermum; stylus 6-7 mm longus, rectus linearis sursum vix dilatatus 0.5 mm latus a dorso complanatus pubescens. Fl. Junio.

TURKEY. Cio Hakkari: distr. Yüsekova, Sat Dağı, first ridge between Yüsekova and Vargöz, 2150 m, stony slopes, erect perennial, flowers lavender-blue, standard darkest, 26 vi 1966, Davis 45642 (holo. E, iso. K); Sat Dağı, between Yüsekova and Vargöz, 1900-2000 m, abundant, Davis 45564.

The only hairy SW Asian member of this narrow-leaved group of species in Section *Orobis* has hitherto been the little-known *L. atropatanus* (Grossh.) Širj., originally inadequately described in Russian (under *Orobis*) in Grossheim's *Flora Kavkaza* ed. 1, 2:375 (1930), from a specimen collected by I. Gavrilov in Nakhichevan (an enclave in S Armenia). Although Grossheim described the leaflets, he omitted to say whether the leaves were subdigitate or pinnate, or how many leaflets there were. An illustration, however, appears in *Flora Azerbaijan* 5: t. 50 (1954). From this it is clear that *L. atropatanus* has pinnate leaves with (2-)3 pairs of leaflets, and is evidently very closely allied to *L. nivalis* Hand.-Mazz., if not conspecific.

New material of the latter species from SE Anatolia varies from glabrous to $\pm$ pubescent, even in the same gathering. *L. satdaghenensis* is, in fact, more closely allied to *L. karsianus* Davis, collected several times from the neighbourhood of Kağızman (between Erzurum and Kars), from which it differs in the characters given in the diagnosis.

***Lathyrus tauricola* P. H. Davis, sp. nov.** (Sect. *Orobastrum* (Taub.) Boiss.).

Species valde distincta, forsan *L. angulato* L. magis affinis, sed foliolis foliorum inferiorum ellipticis, foliis superioribus plerumque simpliciter cirrhosis, pedunculis brevioribus haud aristatis, floribus flavescentibus, stylo latius spathulato deorsum plicato-canaliculato legumine longius rostrato inter alia differt.

Herba annua modesta subglabra glaucescens in caules tenues ascendentes angulares 13–25 cm longos basi ramosa. *Folia* manifeste dimorpha, omnibus foliolis unijugis; stipulae anguste lanceolatae, 3–6(–7) mm longae, integrae, semi-sagittatae; petiolus stipulos $\pm$ aequans mucronatus, vel in foliis superioribus plerumque cirrho simplice foliolis sublongiore terminatus; foliola foliorum inferiorum persistentia, elliptica vel anguste elliptica, 5–15 mm longa, 2–3.5 mm lata, subobtusata mucronata, ea foliorum superiorum linearia, 20–35 mm longa, 1–2 mm lata, acuta mucronata. *Pedunculi* uniflori, gracillimi, 10–20 mm longa haud aristati; pedicelli calyce paulo breviores. *Flores* parvi, in sicco flavescentes. *Calyx* $\pm$ regularis, 3–4 mm longus, in dentes aequales lanceolatos ad medium fissus. *Vexillum* 7–10 mm longum, limbo late obovato in unguem 1.5–2 mm longum angustatum; alae 7–8 mm longae, obovatae, ungue 2.5 mm longo quam appendice basali multo longiore; carina 5–6 mm longa, antice 3–4 mm lata, limbo antice curvato-anguloso basi breviter auriculato quam ungue sublongiore. *Ovarium* 4 mm longum, lineare, sessile, 6–8-ovulatum; stylus 3 mm longus, manifeste spathulatus, rectus, deorsum etiam versus apicem profunde plicato-canaliculatus, dorso puberulus. *Legumen* (immaturum) late lineare, 28 mm longum (rostrum ensiformi 3–4 mm longo incluso), 4 mm latum, obscure reticulato-venulosum, substipitatum, ad 8-spermum. Semina ignota. Fl. Maio-Jun.

TURKEY. C3 Antalya: Isaurischer Taurus, c. 20 km N Akseki an der Strasse nach Beyşehir, 1200–1300 m, *Pinus pallasiana*—Parklandschaft mit Weidematten und tonerdereichen Rohböden, über Eozänflysch; Gehängeschutt: Kreidekalke; 29–30 v 1962, *F. Ehrendorfer* 62–1/59–2 (holo. W). Antalya: Hafis Paşa (Antalya-Bucak), 800 m, 12 iv 1936, *T. A. Tengwall* 304.

An inconspicuous but very distinct species, referable to Sect. *Orobastrum*. It seems to be rather distantly related to *L. angulatus* L. (a Mediterranean species extending as far east as Greece) and the more widespread *L. sphaericus* Retz., (which extends into W Anatolia), but is apparently closer to the former in having a spathulate (though somewhat differently-shaped) style, and obscurely reticulate legumes.

***Lathyrus phaselitanus* Huber-Morath & Davis, sp. nov.** (Sect. *Cicerula* (Medic.) Gren & Godr.). Affinis *L. lycio* Boiss. sed statu glaberrimo, foliolis angustioribus, stipulis et pedicellis longioribus, floribus majoribus, forma carinae differt.

Herba annua(?), glaberrima (vexillo et legumine excluso), glaucescens, scandens, ad 90 cm alta, caulibus anguste alatis. *Folia* remota, cirriferà; stipulae subulatae, 5–8 mm longae, saepe semi-sagittatae; petiolus tenuis, vix alatus, 20–40 mm longus; rhachis petiolo saepe longior, cirrho longo 3–5-secto praedita; foliola unijuga, lineari-elliptica, 15–35 mm longa, 4–8 mm lata, mucronata, nervis lateralibus subparallelis anastomosantibus. *Pedunculi* stricti, 1–2-flori, foliis longiores, 8–15 cm longi, haud aristati; pedicelli 6–11 mm longi. *Flores* fere 2.5 cm longi, in sicco caeruleo-violacei. *Calyx* glaber, 10–12 mm longus, ore vix obliquo, ad c. duos partes in dentibus lanceolatis $\pm$ acuminatis 4.5–8 mm longis fissus, dentibus superioribus aliis paulo brevioribus, omnibus tandem patentibus. *Vexillum* 23 mm longum, limbo orbiculari integro, 17–18 mm longo, 21 mm lato, dorso pubescens, basi in ungue 5–6 mm longo abrupte contracto; alae obovato-oblongae, 21 mm longae, ungue quam appendice paulo longiore; carina triangularis, 18 mm longa, antice 14 mm lata, dorso pilosa, basi appendice triangulari-acuminata 5 mm longa semi-sagittata, ungue 5 mm longa. *Ovarium* lineare, breviter stipitatum, 6-ovulatum, ut in legumine juniore glanduloso-verruculosum et pilis brevibus basi haud tuberculatis pilosulum; stylus contortus subtus canaliculatus, sursum flexus, 11 mm longus, linearis, dorso puberulus. *Legumen* (valde immaturum) recurvum.

TURKEY. C3 Antalya: Bucht von Tekirova (Phaselis nom. vet.), Macchie am Südfuss des Tahtali Dağ, 70 m, 31 v 1950, *Huber-Morath* 9704 (holo. Hb. Huber-Morath).

A very handsome species, known only from the one Lycian gathering, where it grows with the allied S Anatolian *L. lycius* Boiss. In addition to the characters given in the diagnosis, it apparently differs further from the latter species (which extends from Lycia to Isauria) in its darker-coloured flowers. The indumentum of the ovary and young fruit is the same as that of *L. lycius*, which was wrongly described by Boissier as having legumes with tuberculate hairs; in both species the rufous wart-like glands are separate from the hairs; the latter are not tuberculate at the base.

***Lathyrus aphaca* L. var. *modestus* P. H. Davis, var. nov.**

Annua, gracilis, caulibus 5–20 mm longis. *Stipulae* medianae 5–10 $\times$ 5–8 mm. *Pedunculi* uniflori, stipulis 2–3-plo longiores. *Flores* parvi, (7)–8–10 mm longi. *Corolla* concolor, lutea vel intense sulphurea. *Legumen* (vix maturum) c. 20 mm longum, 3.5–4 mm latum, saepe subincurvum.

TURKEY. C4 İçel: distr. Mut, Magras Dağ, limestone slopes and rocks, flowers yellow, 11 v 1965, *Coode & Jones* 792. C5 Adana: Pozanti, above Adana, c. 760 m, *V. Christian* 1917. C6 Maraş: distr. Pazarcik, between Narli and Karabiyikli, 600–700 m, rocky slopes in oak scrub, annual, flowers bright yellow, 11 v 1957, *Davis & Hedge*, *D.* 27837 (holo. E); Narli, 500 m, fallow fields, flowers yellow, *D.* 27761.

CYPRUS. Stavros, Paphos forest, *A. Foggie* 180 & 156. Yaila (Kyrenia range), flowers yellow, 27 iii 1941, *Davis* s.n.

Lathyrus aphaca (sensu lato) has its maximum variability in Turkey. Six varieties (including *L. pseudoaphaca* Boiss.) will be recognised for the *Flora of Turkey*, differing mainly in size of parts, colour of flowers and

number of flowers per peduncle. Several of these varieties have fairly distinctive distributions and ecology, but are linked by intermediates. *L. aphaca* var. *modestus* has the small stipules, flowers and fruits of '*L. pseudo-aphaca*', but differs in its bright yellow, concolorous flowers (instead of cream or pale sulphur, with a violet-veined standard). Intermediates have been seen between var. *modestus* and var. *biflora* Post from C6 Adana (Toprakkale, Davis 26917; Nur Dağ, Davis 42272). The situation is evidently complex in Cilicia and the Amanus, whence more material is needed in flower and fruit. Field notes should always be made on flower colour—whether pale or bright yellow, concolorous or violet-veined. *L. stenolobus* Boiss. is only known from Cassius (S Amanus), and seems to be specifically distinct. Seed coat patterns cannot be relied on for species recognition in the *L. aphaca* group (cf. B. Barnes in *Journ. Bot.* 71: 10, 25, 1933), and the same probably applies elsewhere in *Lathyrus* and *Vicia*.

PISUM L.

Pisum sativum L. subsp. *elatus* (Bieb.) Aschers. & Graebn., Syn. Mitteleur. Fl. 6(2):1064 (1910).

var. *elatus*.

S Europe (including Crimea), N Africa, Turkey, Syria, Lebanon, Palestine, Cyprus, Caucasia, N Iran.

var. *pumilio* Meikle, **nom. nov.** Syn.: *P. humile* Boiss. & Noë in Boiss., Diagn. ser. 2(2):45 (1856) non Miller (1768).

Syria, Lebanon, Palestine, Cyprus, N Iraq, NW & W Iran, N Egypt.

var. *brevipedunculatum* Davis & Meikle, **var. nov.**

Planta 30–60 cm alta. *Foliola* (1–)2(–3)-juga, ovato-elliptica, integra vel subdentata. *Pedunculi* uniflori, stipulis $\frac{1}{4}$ –1(–1 $\frac{1}{2}$)-plo longiores, haud vel breviter aristati. *Flores* c. 20–22 mm longi. *Legumen* (50–)60–65 mm longum, 10–12 mm latum. *Semina* rotundata, 5–7 mm lata, dense papillosa. Fl. Mai-Junio.

TURKEY. A5 Çorum: 2 miles S of Iskilip, 700 m, roadside bank, Coode & Jones 1818 (and cult. Edinburgh). B4 Ankara: Weg nach Dikmen, Bergsteppe, 8 vi 1933, Kotte (holo. K); Çankaya, nr. Ankara, c. 1000 m, Lindsay 59; Ankara, Kezlar Pounar, vineyards, Frères E.C. 494. C6 Hatay: nr. Belen, Apifik Gaya, 900 m, Kotschy 358.

CYPRUS. Platres, 1220 m, gulley under pines, 22 v 1938, Kennedy 1319A. Phini, 1097 m, hedge between bridle path and vineyard, 26 v 1938, Kennedy 1319.

Distinguished from var. *elatus* by its shorter 1-flowered peduncles, smaller flowers, and leaflets mostly 2-paired. Largely replacing var. *elatus* and var. *pumilio* in C Anatolia, and somewhat intermediate between them, though closer to the former. The new variety maintains its diagnostics in cultivation. Wild specimens have been seen that are intermediate between the three varieties of subsp. *elatus* (distinguished from subsp. *sativum* by its papillose seeds) recognised here.