
CONTRIBUTIONS TO THE FLORA OF WEST PAKISTAN

I. LEGUMINOSAE

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Abstract


In connection with the preparation of an account of the family Leguminosae for the Flora of West Pakistan, the author had the opportunity of evaluating the material present in W. Pakistan and European Herbaria. In some cases this has resulted in revised taxonomic or nomenclatural conclusions. Only new or interesting cases pertaining to *Dorycnium*, *Lotus*, *Hippocrepis*, *Asylosia*, *Tephrosia* and *Onobrychis* are discussed here. Accounts of the genera *Oxytropis* and *Astragalus* will be published elsewhere.

The recommendations of Lanjauw and Stafleu (1964) have been followed regarding the abbreviated names of the herbaria with the following addition: Karachi University Herbarium (KUH).

1. Dorycnium Vill.

The first record of the genus *Dorycnium* from West Pakistan is based on *D. calycinum* Stocks (Stocks, 1852). Boissier (1872) accepted this species in the genus *Dorycnium*, but not having seen enough material, he regarded it as an anomalous species. He thought it to be different from *Dorycnium* and probably *Lotus* and doubtfully indicated that it may belong to *Ononis*, Burkill (1909) also lists this species in the genus *Dorycnium*. In 1957 Sirjæev and Rechinger f. described a new species of *Astragalus*, *Astragalus mirus* Sirj. & Rech. f. (Rechinger, 1957), based on the material collected between Herat and Sauzak in Iran.

Comparision of the holotypes of *Dorycnium calycinum* Stocks and *Astragalus mirus* Sirj. & Rech. f. has revealed that the two are conspecific. Sirjæev & Rechinger f. (Rechinger, 1957) have indicated their dissatisfaction about accommodating this taxon in the genus *Astragalus* by questioning whether the taxon should be placed in a new genus.
Fig. 1. *Astragalus mirus* Sirj. & Rech. f.: A, Calyx; B, Keel; C, wing; D, vexillum; E, fruit.

A study of the floral parts seems necessary for proper understanding of the situation. One to two cm. long peduncle supports 5–10 flowered inflorescence. Each flower is subtended by 2 mm long villous bracts. The calyx, with 5 elongated lobes, is villous. Being longer than the corolla parts, it permanently encloses them. The upper parts of vexillum, wing and keel (Fig. 1) are also villous. Sirjaev & Rechinger f. (1957) have described the fruit as unilocular and uniovulate, though Stocks (1852) described the ovary as biovulate, but the fruit is one-seeded. This taxon certainly seems anomalous in the genus *Dorycnium*, however, pending further investigations, it is being retained in the genus *Astragalus*.

In 1919, Blatter and Hallberg, described *Dorycnium villosum*, from Makran. The type material, expected to be in the Blatter Herbarium, Bombay, is presently untraceable. However, judging from the study of the material collected from the Type locality, I have come to the conclusion that it is conspecific with *Lotus makranicus* Rech. f. and Esfand. Thus, it is obvious, that the genus *Dorycnium* does not occur in W. Pakistan.
2. **Lotus L.**


**Lectotypic:** In planitiae deserti prope Dscheddam, 14 et 28.1.1837, W. Schimper 844 (G-not seen; Iso, K.)


Distribution: W. Pakistan, Makran; Persian Coast; Arabia; Egypt; Sudan Republic, Eritrea and Socotra.

Flowering Period: March.

This species is being recorded for the first time from West Pakistan.


Baluchistan: About 10 miles from Turbat on way to Pasni, 25.4.1970, M. Qaiser, Asad Raza & Abzar Hussain 928 (KUH); 5 miles from Mund on way to Turbat, 10.4.1969, S.I. Ali, S.A. Faruqi & Sultanul Abedin 1618 (KUH); 7 miles from Hushab on way to Awaran, 23.4.1970, M. Qaiser, A. Raza & Abzar Husain 839 (KUH); 5 1/2 miles from Mund, Mund - Turbat Road, 13.2.1969, S.I. Ali, S.A. Faruqi & Sultanul Abedin 1006 (KUH); Makran: 20 Km W Hoshab, 26°00’ N, 62°50’E, 19.4.1965, K.H. Rechinger 28012 (W); Makran: in planitiae Balghathar inter Hoshab 26°00’ N, 62°50’ E, et Panjgur, 26°58’ N, 64°06’ E, 600m, 19.4.1965, K.H. Rechinger 28040 (W); Makran 60 Km S Panjgur, 26°58’N, 64°06’E, 800 – 850 m, 19.4.1965, K.H. Rechinger 28096 (W) Inter Awaran Turbat, 26°00’ N, 63°06’E, in alveo lapidoso, 100 – 200 m, 11.4.1965, K.H. Rechinger et 27755 (W); Panjgur, 900m, stony hills and wadis, G. Popov 126 (W).

Arabia: Oman, Foothills of Jebel Akhdhar, ±1000 ft. prostrate herb, flowers red and orange, common on hillsides, 2.5.57, G. Popov GP/57/65 (BM,W).

Distribution: W. Pakistan, Makran; Persia, Persian Makran; Arabia

Flowering Period: March—April.

It is a new record for W. Pakistan and Arabia.
3. Hippocrepis L.

_Hippocrepis constricta_ Kunze in Linnaea 16: 320. 1842.
Syntypes: 'Djedda in arenosis ad mare', 4.3.1836, W. Schimper 939 (K); 'ad pedem collis prope mare Jeddac', 1837, S. Fischer 82 (K).

Baluchistan: 10 miles from Turbat, on way to Awaran, dried river bed, sandy clay, 9.4.1969, S. I. Ali, S.A. Faruqi & Sultanul Abedin 1549 (KUH); 33 miles from Mund, on way to Tecrandezak, 11.4.1969, S.I. Ali, S.A. Faruqi & Sultanul Abedin 1772 (KUH): Makran, west of Hoshab, sandy plain, 11.4.1965, Jennifer Lamond 360 (E); Hoshab to Panjgur, north of Balgather plain, sandy roadside plain, c. 850 m, 19.4.1965, Jennifer Lamond 556 (E); Makran: 60 Km S Panjgur, 26°38'N, 64°06'E, 800-850 m, 19.4.1965, K.H. Rechinger 28095 (W); Inter Pasni, 25°13'N, 63°30'E, et Kappar, 25°18'N, 62°42'E, 14.4.1965, K.H. Rechinger 27858 (W); 8-25 Km W Awaran versus Turbat, 26°00'N, 63°06'E, 11.4.1965, K.H. Rechinger 27710 (W); Suntsar, 25°31'N, 62°02'E, versus Kikki, 25°42'N, 62°36'E, 17.4.1965, K.H. Rechinger 27976 (W).

Distribution: W. Pakistan, Makran; S. Arabia; Egypt.

This is the first record of this genus from W. Pakistan.


_Atylosia mollis_ Benth. in Miq. Pl. Jungh. 243. 1852.
Holotype: Napalicia, Wallich 5574 (ex Herb. Benthamianum-K).

Prain (1897) has pointed out that under _A. mollis_ Benth., Baker (1876) had admitted two distinct species. He has defined the two species and retained the name _A. mollis_ Benth, for the Himalayan plants and the other taxon, widely distributed from India to Philippines, has been described by him as _A. crassa_ Prain. Merrill (1918) has stated that _A. crassa_ Prain is the same as _Cantharospermum volubilis_ (Blanco) Merrill [= _A. volubilis_ (Blanco) Gamble], but so far as the taxonomy is concerned most of the subsequent authors regarded the two entities as quite separate. However, Parker (1924) has not been able to maintain _A. mollis_ Benth, and _A. crassa_ Prain as distinct species and Stewart (1958) likewise does the same.

Having examined the material available at British and Pakistani Herbaria, I find that the two species are quite distinct, though all the characters enumerated by Prain (1897) are not useful. For instance the characters of the indumentum of leaflets, the length breadth ratio of the terminal leaflet, the angle of orientation of transverse constrictions of the fruit break down and the character of the seed can only be verified in a few
specimens. However, using the following characters the two taxa may be differentiated objectively.

Flowers $>2$ cm (2.3-2.7 cm.) long, pod
$<1$ cm (7-9 mm.) broad, 7-10 seeded
$<2$ cm (1.5-2 cm.) long, pod
c. 1-1.1 cm. broad, 3-6 seeded.

*Colaea mollis* Grab. in Wall. Cat. 5574.1828. (nom. nud.)

**Representative Specimens:**


Distribution: W. Pakistan, Punjab; Kashmir; India, N. Punjab, Kumaon, Garhwal, Nepal; Sikkim.

5. *Tephrosia* L.

*Tephrosia shanmii* Ali, species nova (Fig. 2 & 3)

Herba perennis, c. 45 cm alta, lignosa. Radix lignosa. Caulis ramosus; rami vetustiores cortice albo scabro vestiti; rami juveniles virides pilis albis ornat. Folia akerma, imparipinnata vel raro paripinnata; stipulae laterales, c. 3-5 mm longae. Rhachis c. 6-17 mm longa; petiolum c. 5-13 mm longum. Foliola 1-5, petiolulis $<1$ mm, pilosis instructa; lamina c. 6-21 mm longa, c. 2.5-5.0 mm lata, supra glabra, infra albi-pilosa, elliptica, margin integrata, apice acuta. Inflorescentia racemosa. Flores caeruleo-albi; pedicellis c. 2.5-3.0 mm longis, albo-pilosis instructis. Calyx c. 5 mm longus, ciusdem dentibus duobus superioribus c. 2.5 mm longis, 3 inferioribus c. 3 mm longis. Vexillum c. 9-10 mm longum, c. 7 mm latum, supra pilosum; alae c. 8 mm longae, c. 4.5 mm latae, ungui c. 1.5-2 mm longo instructae. Carina c. 7.5 mm longa, ungui c. 2.5 mm longo instructa. Stamina diadelphia, 9 + 1, filamentis c. 7 mm longis. Ovarium 5-5.5 mm longum, pilosum; stylus c. 3 mm longus, in angulo recto curvatus; stigma penicillatum. Fructus non visus.

_Holotype_: About 20 miles from Sibi on way to Quetta, 8.9.1970, S.A. Faruqi & M. Quaiser 2247 (KUH).

_Distribution_: Presently known only from Type locality.
Fig. 2. Holotype of *Tephrosia Shamimii* Ali.
In view of its penicillate stigma, it seems to be related to *T. uniflora* Pers. and *T. rechingeri* Ali. However, it differs from *T. uniflora* Pers. in having an elongated raceme and from *T. rechingeri* Ali in having straight (not curved) vexillum and wings.

*Tephrosia rechingeri* Ali, Species nova (Fig. 4 & 5)

Herba perennis. Caulis erectus, ramosus; rami juveniles pilis albis ornati. Folia alterna, imparipinnata; stipulae laterales, c.2-3.5 mm longae; pilosae. Rhachis c. (7) -25-40 mm longa; petiolum c. 10-20 mm longum. Foliola 3-7, petiolulif l.1 mm; lamina c. 13-45 mm longa, c.1.5-3.5 mm lata, utrinque pilosa, margine integra, apice acuta. Inflorescentia racemosa, c.15-35 cm longa. Pedicellis c. 4 mm longis, pilosis. Calyx c. 4-5 mm longis, dentibus subaequilibus c. 2-3 mm longis. Vexillum c. 7 mm longum, supra pilosum; alae 8-8.5 mm longae, ungui c. 2-2.5 mm longo instructa. Carina c. 5.5 mm longa, ungui 2.5 mm longo instructa. Stamina diadelphia, 9 + 1. Ovarium c. 4-4.5 mm longum, villosum; stylus c. 2.5-3.0 mm longus, glaber, in angulo recto curvatus; stigma penicillatum. Fructus non visus.

Holotype: W. Pakistan, Quetta: In parte inferiore faucium Torkhan supra Harnai, 30°5'N, 68°00'E, substr. calc. 900 m, 14-15.5.1965, K.H. Rechinger (KUH); Cotyple (W).

Distribution: Presently known only from Type locality.
Fig. 4. Holotype of *Tephrosia reshingeri* Ali.
Fig. 5. *Tephrosia rehingeri* Ali: A, vexillum; B, wing; C, keel; D, androecium; E, calyx with gynaeicum.

In having penicillate stigma this species is related to *T. uniflora* Pers. and *T. shamimum* Ali. However it differs from both in having curved vexillum and wing. From *T. uniflora* Pers. it differs further in having an elongated inflorescence.

6. **Onobrychis** Mill.

*O. obrychis laxiflora* Baker in J. Linn. Soc. (Bot.) 19: 159. 1882. (a) var. *laxiflora*

Holotype: Hariab District, on the artificially raised hillocks around the margins of field, 7500 ft., very common, 1880, J.E.T. Aitchison (K).

Representative Specimen: Kashmir, Astor Kamrinala, Shunkargarh, 9.7.1901, Inayat (K).

Distribution: Afghanistan; Kashmir.

b. var. *schugnanica* (B. Fedtsch.) Ali. stat. nov.

Type: Stony slopes between towns of Rivak and Vankala, 9000 ft., 22.7., Alekshenkó (*L*—not seen).

Synonymy:


Representative Specimens:

Chitrál, Mastuj-Baroghil Track, Wasam, 9000 ft. on the stony ground, corolla pale yellow marked with pink, leaf grey green, 20.7.58, J.D.A. Stainton 2940 (BM).

Baluchistan: Quetta, 6.5.1956, W.A. Dick-Peddie 148 (RAW,K); Gustoi, 25.5.1957, Harsukh 20514 (K); Quetta, 14.5.1956, W.A. Dick-Peddie 109 (RAW).

Punjab: Gureckote, Hupora, 1852, Winterbottom (K)


Distribution: W. Pakistan, Baluchistan, Punjab, N.W.F. Province; Kashmir; Afghanistan, Central Asia, Pamir Alai (Grossheim, 1948).

Flowering Period: May.

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References


