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Contribution to the genus *Astragalus* from West Pakistan

V. Further additions to the subgenera *Caprinus* and *Cercidothrix* *)

By

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With 3 Figures

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Subsequent to the publication of the revision of the genus *Astragalus* L. from West Pakistan and N. W. Himalayas (ALI 1961), the additions to the subgenera *Caprinus* and *Cercidothrix* have been published in a recent communication (ALI 1966) mainly based on the identification of the material collected by the British Museum Expedition to Chitral in 1958. In the meantime, the critical study of the material available in the British Herbaria, has revealed the existence of two new species, one new variety and two new records from West Pakistan. The present opportunity is being taken to give an account of these taxa. Only additional materials or taxa with revised circumscription have been cited. In every case information about the geographical distribution and flowering period is also given.

Enumeration of species

Subgenus *Caprinus*

1. *Astragalus (Myobroma) edelbergianus* ŠIRJAEV & RECHINGER fil. in RECHINGER 1957: 71—74.

Holotype: Afghanistan, Deh Kundip, Sar-i-Nil, 3000 ft., 7. 6. 1949, L. EDELBERG 1961 (W).

Representative Specimen: N. W. F. Province: Chitral, Pattioun,

*) Part I of this series "Contribution to the genus *Astragalus* from West Pakistan I. The subgenera *Pogonophace* and *Astragalus*" is published in Bot. Notiser 118 (1): 87—96. 1965, Part II "The subgenera *Caprinus* and *Cercidothrix*" is published in Phyton 11: 133—140. 1966, Part III "Subgenus *Tragacantha*" is published in Univ. Stud. Karachi 3 (3): 40—45, 1967, Part IV "Further additions to the Subgenera *Pogonophace* and *Astragalus*" is published in S. U. Sci. Res. J. 2 (2): 179—183. 1967.

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9000 ft., March, 1908, S. M. TOPPIN 171 (K). — Distribution: W. Pakistan, Chitral; Afghanistan. — Flowering Period: March—April.

This is the first record of this species from West Pakistan.

2. *Astragalus (Chronopus) albo-villosus* KITAMURA 1956: 137.

a) var. *albo-villosus*. — Distribution: Afghanistan.

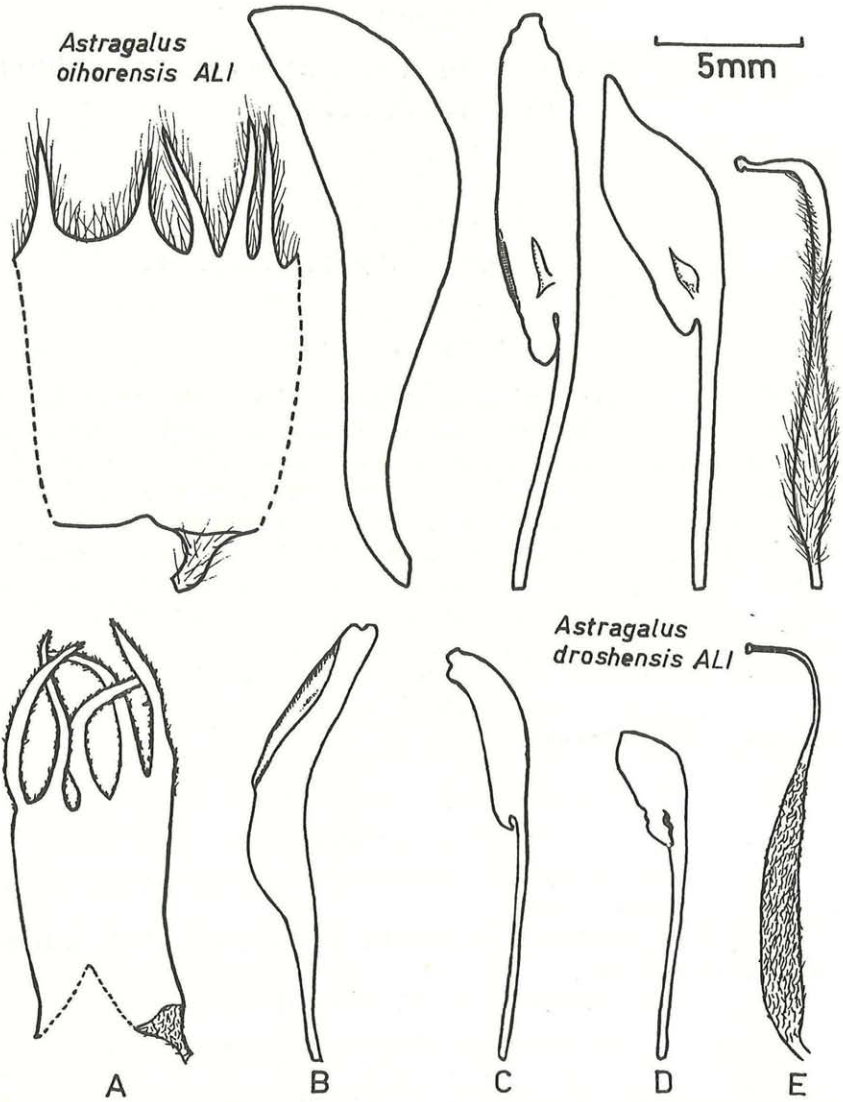

Fig. 3. Floral parts of — above — *Astragalus oihorensis* ALI from holotype BOWES LYON 816 (BM) and — below — *Astragalus droshensis* ALI from syntype HASSANUD DIN 283 (K); A = calyx, B = vexillum, C = wing, D = keel, E = ovary.

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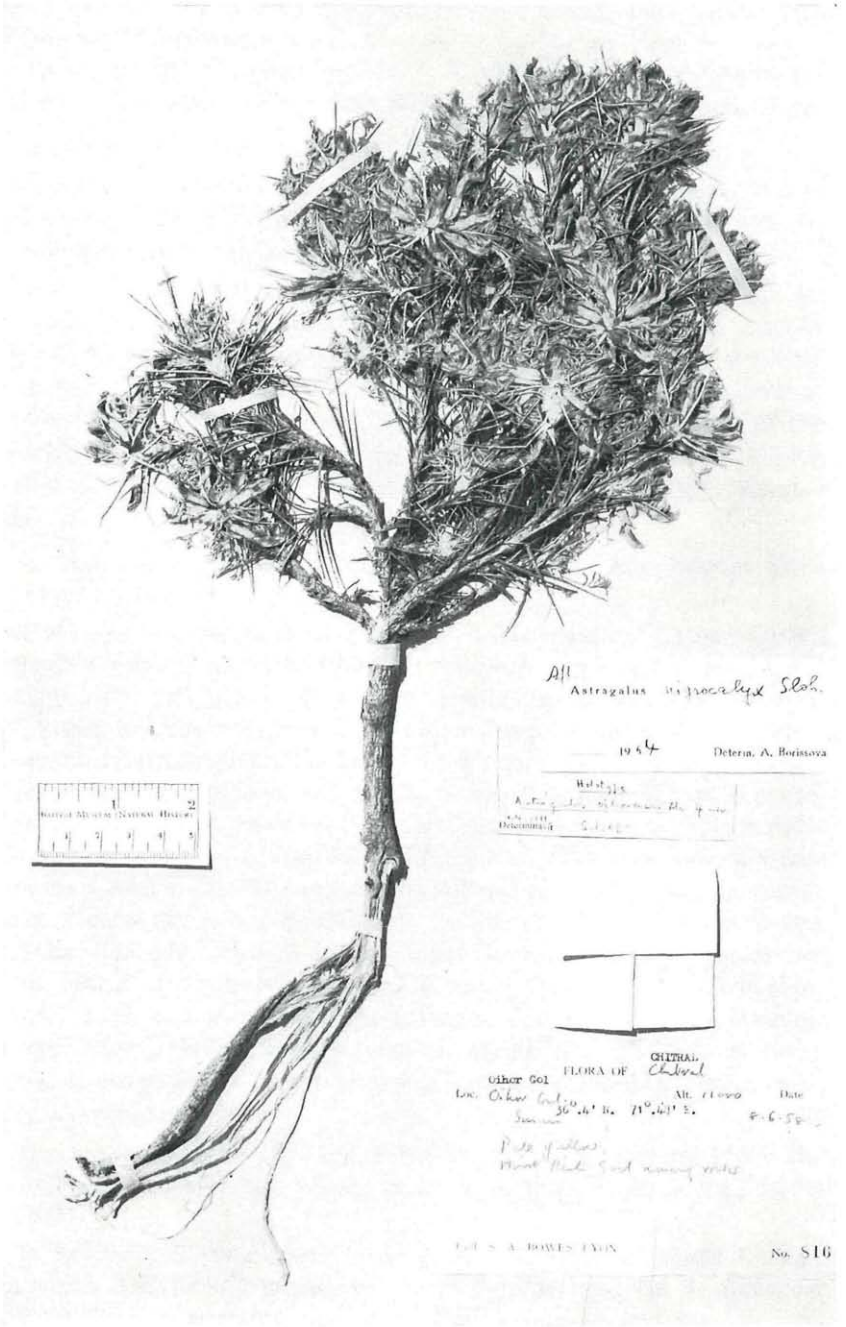

Fig. 1. Holotype of *Astragalus oihorensis* ALI.

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b) var. *nigrescens* ALI, var. nov. — A var. *albo-villosus* pilis albis vel nigris differt.

Holotype: Baluchistan, Torshor, 9. 5. 1956, W. A. DICK-PEDDIE 147 B (RAW). — Distribution: Baluchistan. — Flowering Period: June.

3. *Astragalus (Aegacantha) lasiosemius* BOISSIER 1849: 96.

Holotype: Afghanistan, GRIFFITH 1049, Herb. Hookerianum (K). — Synonymy: *Astragalus genistoides* BOISSIER 1849: 97, syn. nov. — *A. psilopterus* BUNGE 1868: 49; 1869: 71.

It was pointed out earlier by ALI 1958 that though BOISSIER described the wing and keel as glabrous in *A. genistoides* BOISS., a study of the Type specimen at Kew Herbarium shows that the wing and keel are in fact minutely pilose. The comparison of the Type Specimens of *A. genistoides* BOISS. and *A. lasiosemius* BOISS. has revealed that the two taxa are conspecific. — Distribution: W. Pakistan, Chitral; Afghanistan; Russia, Tien Shan, Pamir Alai. — Flowering Period: April—June.

4. *Astragalus (Acanthophace) oihorensis* ALI, species nova (Fig. 1 and 3, above).

Herba lignosa perennis c. 18 cm alta. Radix crassa et lignosa. Caulis internodiis stipulis persistentibus et foliorum basibus obtectis. Folia imparipinnata, stipulis c. 7—8 mm longis, membranaceis. Petiolus c. 5—8 mm longus; rhachide c. 2—2.5 cm longa. Foliola 16—18, petiolulo quam 1 mm longiore, lamina c. 5—8 mm longa, c. 1—2 mm lata, oblanceolata, supra glabra, infra pilosa, margine integra, apice acuto. Inflorescentia 3-flora, racemosa, pedunculo c. 1.5 cm longo. Flores pedicellis c. 2 mm longis, nigropilosis; bracteis c. 4—5 mm longis, membranaceis. Calyx c. 13—14 mm longus, dentibus c. 4—5 mm longis, nigropilosis. Corolla (in sicco) flavi-pallida, vexillo c. 20 mm longo, c. 9 mm lato; alis c. 19 mm longis, c. 2.5 mm latis, clave c. 2.0 mm longa; carina 18 mm longa, c. 4 mm lata, clave c. 9 mm longa. Stamina diadelphia, (5 + 4) 1, filamentis c. 15—16 mm longis. Ovarium c. 6 mm longum, c. 1 mm latum, flavipilosum, biloculare; stylus c. 9 mm longus, infra pilosus, supra glaber, c. 2 mm ab apice superne curvatus; stigma capitatum. Fructus non vidi.

Holotype: Chitral, Oihor Gol, 36° 4′ N, 71° 48′ E, Surum, 11000 ft., pale yellow, moist rich soil among rocks, 8. 6. 1958, S. A. BOWES LYON 816 (BM).

In having unilocular ovary it comes nearest to *A. diopogon* BUNGE, from which it differs in having 16—18 leaflets per leaf (in *A. diopogon* 6—12 leaflets are present) and in having 3-flowered inflorescence (in *A. diopogon* BUNGE 5—7-flowered inflorescence is present).

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Subgenus ***Cercidothrix***

5. *Astragalus (Xiphidium) droshenis* ALI, species nova (Fig. 2 and 3, below).

Radix Crassa. Caulis reductus, c. 6—8 cm longus (inflorescentia excepta). Folia imparipinnata; rhachide quam 5.5 cm longa (petiolo incluso). Foliola c. 9—12 —(22) mm longa, c. 1.5—3 mm lata, supra vel infra albi-pilosa, margine integra, apice acuto. Inflorescentia c. 11—40 cm longa, racemosa. Bracteis c. 3 mm longis, linearibus, albipilosis. Flores pedicellis c. 2—2.5 mm longis, albi vel nigro-pilosis. Calyx c. 14 mm longus, pilosus, dentibus c. 6—6.5 mm longis. Corolla (in sicco) pallida, vexillo c. 15 mm longo, c. 4.5—5.0 mm lato; alis c. 14 mm longis, c. 2 mm latis, clave c. 8 mm longa. Carina c. 11 mm longa, c. 1.5 mm lata, clave c. 7.5 mm longa. Stamina diadelphia, (5 + 4) 1, filamentis c. 12—13 mm longis. Ovarium stipitatum (stipite c. 1 mm longo), c. 8—9 mm longum, c. 1.5 mm latum; stylus glaber, stigma globosum. Legumen sessile, c. 3—3.2 cm longum, c. 2.5 mm latum, albi-pilosum, apice acuminato; biloculare.

Holotype: Chitral, Drosh, 25. 6. 1953, M. A. SIDDIQI 25446 (BM). — Syntypes: Chitral, Birmoghlasht, 2. 8. 1954, M. A. SIDDIQUI 26882 (RAW; BM); Chitral, Drosh, HASSANUD DIN 283 (K). — Distribution: Chitral. — Flowering Period: June—August.

This species is related to *A. variegatus* FRANCHET 1883 in the character of fruit which is pressed inward along one suture, but they differ in the character of leaflets and calyx teeth. In *A. variegatus* FRANCHET the leaflets are ovate-obovate, obtuse, c. 3—4 mm broad; whereas in this species, the leaflets are oblanceolate, acute, c. 1.5—3 mm broad. The calyx teeth in *A. variegatus* FRANCHET are c. 2.5 mm long (calyx cup. c. 9 mm long); in this species, the calyx teeth are c. 6—6.5 mm long (cup. c. 8 mm long).

6. *Astragalus (Erioceras) alitschuri* O. FEDTSCHENKO 1903: 28.

Type: In the valley of the river Alitschur, on stony slopes from Chatyr-tash to the lake Sassyk, 17. 7. 1901, B. A. and O. A. FEDTSCHENKO (L — not seen).

Representative Specimens: Kashmir: Ishashm Bullahshan, Gilgit Expedition, GILES 156 (K). — Distribution: Kashmir; Russia, Pamir Alai (GONTSCHAROV & BORISSOVA 1946). — Flowering Period: July.

This is the first record of this species from Kashmir.

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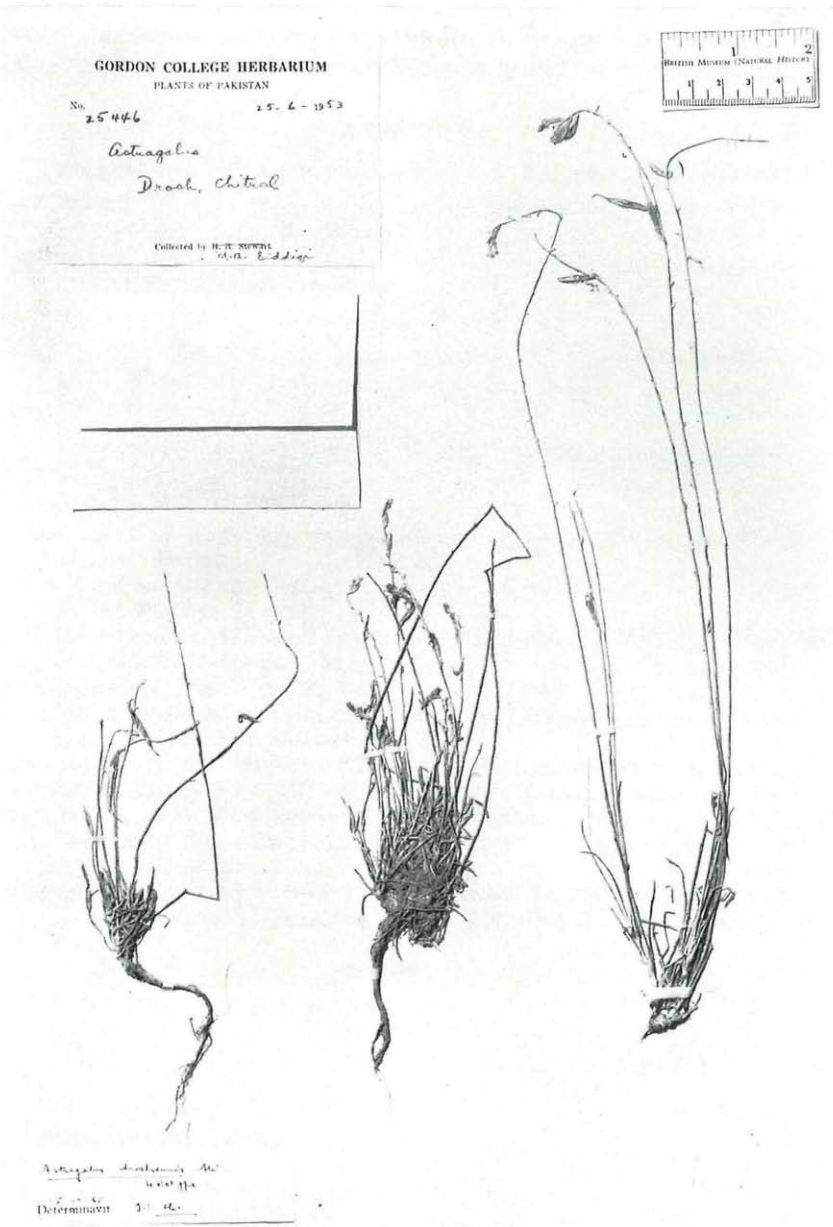

Fig. 2. Holotype of *Astragalus droshensis* ALI.

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Summary

Two new species, *Astragalus oihorensis* ALI and *A. droshensis* ALI and one new variety, *A. albo-villosus* var. *nigrescens* ALI are described. *A. edelbergianus* SIRJ. & RECH. f. in RECHINGER and *A. alitschuri* O. FEDTSCH. are recorded for the first time from West Pakistan.

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