

INTERESTING AND NEW LABIATAE AND CAPPARIDACEAE FROM AFGHANISTAN

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ABSTRACT. Two new species are described from Afghanistan: *Micromeria afghanica* Freitag and *Nepeta hedgei* Freitag. Some rarely collected species of Labiatae and Capparidaceae are discussed and interesting new, or extended, distributions listed.

In the course of naming the plant collections that I brought back from geobotanical excursions to different parts of Afghanistan between 1966 and 1969, several species have been recognised that were new to science, new to the country or previously were rarely collected. Those of the Labiatae and Capparidaceae are dealt with in this paper. Both families in Afghanistan have been written up by Hedge (1966, 1967, 1968) and Hedge & Lamond (1968, 1970) and the present note serves as a supplement to these publications.

In order to make the localities cited more readily traceable both the geographical divisions used by Koeie & Rechinger (1954) and the provinces are given.

The main set of my collections is deposited at Göttingen (GOET).

LABIATAE

Eremostachys persimilis Aitch. & Hemsl.

W, NW. Herat: Paropamisus range S of Gulran, near pass at Bara Koh, 1150 m, *F.* 5534; 12 km WNW around Ziarat Khwaja Mullahe Kohi, 1250 m, *F.* 5358; Paropamisus Range N of Herat, near pass to Turgundi, 1500 m, *F.* 5568.

This endemic species was known before only from the type and one Furse gathering, but it occurs scattered all over the Paropamisus, NW and N of Herat, at least between 1100 and 1500 m. It always grows on highly eroded slopes (loess, shales, etc.), with the roots spreading for several metres horizontally, and forms its own community together with *Rosa berberifolia*, *Cousinia rufidula* etc.; sometimes it is also in open *Agropyron pectiniforme* meadows.

E. vulnerans Rech. f. & Koeie

E. Kapisa: Nejrab, Darae Pota, 2200–2500 m, *F.* 3209.

Previously known only from the foothills of the Paghman Mts. in Kabul province. At the new locality, it was found in open *Pinus gerardiana* and *Pinus-Quercus baloot* forests.

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Leonurus turkestanicus V. Krecz. & Kuprian.

N. Baghlan: N Salang valley, 2850 m, *F.* 3186.

This species from the Pamir Alai is new for Afghanistan; probably, it also grows at similar altitudes and habitats in Talaqan and Badakhshan provinces. It is a typical component of the *Juniperus seravschanica*-*J. semiglobosa* woodland community with a rich ground layer of *Allium rosenbachianum*, *Valeriana ficariifolia* etc.

Leucas cephalotes Spreng.

E. Nangarhar: Jalalabad, 20 km SW at road near Sultanpur, 650 m, *F.* 7344.

New for Afghanistan; only a single specimen was collected. It was observed at a ditch border near irrigated fields and maybe was introduced from adjacent W Pakistan.

Nepeta hedgei Freitag, *sp. nov.*

Habitu et magnitudine calycis et corollae *N. denudatae* Benth. similis, praecipue differt annulo distincto, dentibus brevibus subaequaliter triangularibus.

Perennis, basi lignescens. *Caules* 35–60 cm alti, virgati e basi ramosi, glauci, glabri vel tomentelli, internodiis inferioribus mediisque 4–7 cm longi. *Folia* minuta, patido 1–4 mm longo, petiolo incluso usque 7 mm longa, 2.5 mm lata, anguste triangularia, margine serrata, utrinque glandulosa, subrugosa; folia floralia subsessilia, integerrima, minutissima. *Cymae* (1–) 2–3(–5)-florae, pedunculis 1 mm longis, remotae, inflorescentiam laxissimam formantes. *Bractee* anguste lineares vel subulatae, 1.5–2 mm longae. *Flores* medii pedicellatis, 1–1.2 mm longis. *Calyx* anguste tubulosus, supra nervis pilis albis laxè obsitus, intus infra faucem annulo villosus clausus; nervi medii et laterales aequales, sub dentium apice anastomosantes, ab dentium basi nervulis conjuncti; dentes subaequales triangulares acuti, 1–1.2 mm longi, margine ciliati. *Corolla* 12–14 mm longa, colore ignota, extra pilis glandulosis simplicibusque tecta, intus glabra; labium superum bilobatum; labium inferum lobo mediano 2.5 mm lato, laciniis lateralibus 1 mm longis latisque. *Stamina* inaequilongia, longiora breviter exserta, breviora subexserta vel in tubi fauce inclusa. *Stylus* 2 mm longe exsertus. *Stigma* bifidum. *Nuculae* 1.8 × 1 mm, brunneae, breviter tuberculatae.

E Afghanistan. Parwan: Ghorband valley, side valley 2 km above Farinjal to Surkhe Parsa, 2070 m, 27 vi 1967, *F.* 1148 (holo. E; iso. GOET).

Habitat: *N. hedgei* grows on dry slopes, partly covered by debris, in open semi-desert vegetation, mainly formed of *Arthrophytum*, *Salsola montana* *Atriplex griffithii*, *Cousinia fraternella* etc.

According to the clearly divergent thecae of the two shorter stamens and the annulus near the mouth of the calyx the new species belongs to *Nepeta* sect. *Psilonepeta* Benth., species of which have been transferred to *Lophanthus* by Levin (1954). The closest relative of the new species seems to be *Nepeta denudata* Benth. with which it shares not only the habit but also the corolla

and calyx size. Comparison with specimens of that N Persian species kindly provided by the Botanisches Museum Berlin (B) and by the Conservatoire Botanique Genève, including the type, has shown that the calyx is quite different. In *N. denudata* the calyx teeth are 1.8–2.5 mm long and narrow triangular in shape. Furthermore, the inner surface of the calyx is covered throughout or at least in the whole upper half up to the tips of the teeth by a very loose indumentum of short and thin hairs, whereas in *N. hedgei*, other than the distinct narrow annulus, the inner surface is glabrous. The leaves of the lower internodes in *N. denudata* are larger and ovate to rounded and persist even in the fruiting stage. Geographically the nearest relative is *N. (Lophanthus) elegans* Lipsky from the southern Pamir Alai. It differs in the larger leaves (up to 15–20 × 10 mm), the longer pedicels (5–12 mm), linear lanceolate calyx teeth up to as long as the tube and the larger corollas (15–18 mm).

N. hedgei has been found only at one locality. Probably future collections will somewhat extend the range, but it seems to be an endemic of a very limited area, well adapted to the local extreme semi-desert condition. It is a pleasure to name this species after Ian Hedge of Edinburgh, who made the first comprehensive account of the Afghan Labiatae.

***Lophanthus lipskyanus* Ikonnikov-Galitzki & Nevski**

N. Samangan: Kohe Chungar, SW Samangan, 1900–2500 m, *F.* 6496.

Previously this Pamir-Alai species was only known from one gathering in Badakhshan. From its new locality and habitat, it is probable that the species occurs in suitable places all over N and NE Afghanistan; I have recently heard (Hedge in litt.) that it was locally abundant in the Khumbuk area, S of Qeshm, Badakhshan. At Kohe Chungar it was in a rich *Juniperus seravschanica* woodland community with *Codonocephalum grande*, *Thalictrum sultanabadense*, *Phlomis cashmeriana* etc.; at higher altitudes also on rocks with *Eremurus furseorum*, *Acantholimon* and *Ferula*.

***Micromeria afghanica* Freitag, sp. nov.**

Satureia popovii B. Fedtsch. & Gontsch. (= *Gontscharovia popovii* (Fedtsch. & Gontsch.) Boriss.) valde affinis, a qua differt calycibus intus prope faucem pilosis, calycis dentibus brevioribus, foliorum forma et magnitudine diversa; ab *Micromeria persica* Boiss. imprimis statura robustiora, indumento et foliis manifeste planis acutis nec subrevolutis obtusis differt.

Suffrutex pumilus, 20–30 cm altus, basi sat lignoso ramoso. *Rami* erecti fere 1 mm crassi, subsimplices, infuscati brevissime hirsuti, internodiis mediis 1 cm longis. *Folia* sessilia vel subsessilia, lanceolata, apice acuta, basi angustata, integerrima, plana, subtus tantum nervo primario distincte instructa, glandulis fuscis punctatis obsita, glabra, superiora brevissime hirsutiuscula, inferiora 8–12 × 2–4 mm, superiora gradatim minor. *Cymae* 1–6-florae, 0.5–2 mm longe pedunculatae. *Bractee* lineares vel subulatae, 2–4 mm longae. *Flores* in verticillastris axillaribus 0.5–1 mm longe pedicellati. *Calyx* campanulato-tubulosus 3.5–4 × 1.3 mm, subinaequaliter 5-dentatus

(3 dentibus 2 aliis, paulo brevioribus), scabrido-hirsutus, inter nervos glanduloso-punctatus, tubo usque ad medium 13-nervato; dentes longitudine tertiam partem calycis tubi, lineari-triangulares, apice acuti, intus prope basin pilis albis 0.5-0.7 mm longis annulum laxum formantibus provisi. *Corolla* 5-6 mm longa, verisimiliter flavida, tubo incluso, limbo laxo villosulo; labium inferum 3-lobatum, lobo mediano 2.2-2.5 \times 1 mm, lobis lateralibus 2 \times 1 mm. *Stamina* inaequilonga, longiorae corolla exserta, breviora subexserta vel non exserta. *Stylus* 5-6 mm longus. *Stigma* aequaliter bifidum. *Nuculae* brunneae, oblongae, 1.3 \times 0.7 mm, papillosae.

E Afghanistan. Nangarhar: northern foothills of Safed Koh above Achin, SE Jalalabad, 1300 m, 16 xii 1969, *F.* 7405 (holo. E; iso. GOET).

Habitat: open places in evergreen *Reptonia buxifolia*-*Olea ferruginea* woodland between *Sageretia brandrethiana*, *Gymnosporia royleana*, *Pennisetum orientale* etc.

This distinct new species has been found at one locality only. Probably its range extends at least into the adjacent regions of W Pakistan. It has been seen neither at the northern margin of the Jalalabad basin nor in the Khost region of Paktia province, where the same community is widespread. The closest relative seems to be *Satureia popovii* B. Fedtsch. & Gontsch. from the southern Pamir-Alai (Fedtschenko & Gontscharow, 1929), but according to the descriptions and figures (see Borissova 1953, 1954), besides the different leaf shape and 15-veined calyx, that species lacks the annulus and therefore has been placed in the monotypic genus *Gontscharovia* by Borissova. Hedge & Lamond (1968) identified, with some reserve, two gatherings from Chitral and Kashmir as *Gontscharovia popovii*, but perhaps they also belong to *Micromeria afghanica*.

Nepeta bellevii Prain

E. Ghazni: Moqur, 20 km SW above Agodhjan, 2500 m, *F.* 3437. SE. Kandahar: Surkhbed pass at road Kandahar-Tirin, 1950 m, *F.* 860. Farah: N of Gulestan, 2100 m, *Hedge & Ekberg*, *W.* 7294.

This peculiar endemic was previously only known from the type locality and two other places in the southern part of central Afghanistan. The new records give a better idea of the range, wherein the species evidently is very scattered.

Where I saw it it was in open woodlands of *Pistacia atlantica* and *Amygdalus kuramica* and in seral shrub and dwarf shrub communities (*Astragalus mokurensis* etc.).

N. erecta (Benth.) Benth.

E. Paktia: Kotgai, 12 km S near Fort Susurung, 2750 m, *F.* 1744; *ibid.* near Peiwar pass, 2500-2600 m, *F.* 6908. Nangarhar: Dare Nur N of Jalalabad, above 2750 m, *F.* 6003.

Previously only known from Nishei (Nuristan); the new finds extend the area further to the west and southwest. It is a typical component of mesophilous *Quercus semecarpifolia* and *Picea smithiana*-*Abies spectabilis* forests between 2500 and 2800 m, usually growing gregariously.

N. saccharata Bge.

NW. Herat: Paropamisus N of Herat, 3 km N of Khush Robot, 1450 m, F. 5562.

New for Afghanistan; like some species associated with it in the same community on eroded shales, such as *Salvia ceratophylla*, *Gundelia tournefortii*, *Rosa berberifolia*, *Agropyron pectiniforme* etc., *Nepeta saccharata* reaches the eastern border of its range in NW Afghanistan.

Phlomis stewartii Hook. f.

E. Paktia: Mangal, 10 km N of Yakubi, 1380 m, F. 1905.

New for Afghanistan; the find of this shrubby *Phlomis* from the Eastern Suleiman ranges confirms the conjecture of Hedge & Lamond (1968) that it should also grow on the Afghan side near to W Pakistan. It was in open evergreen *Olea ferruginea* woodland with *Dodonaea viscosa* and *Nanorrhops ritchieana* on shallow soil.

P. trineura Rech. f.

N. Samangan: Kohe Chungar, SE Samangan, 2100–2200 m, F. 6524. Jawzjan: Sangcharak, 30 km SSW at road to Damardan, 1900 m, F. 6590.

Known only from the type locality before, the new finds extend the range considerably to the west and east. It occurs in open *Juniperus seravschanica* woodland and seral meadows with a certain affinity to influenced habitats, especially along footpaths.

Salvia maymanica Hedge

N. Fariab: Maimana, 45 km S at Sare Hawdz, 1600 m, F. 6707.

The first gathering beside the type locality, it grew on eroded, steep, S-exposed slopes with *Salvia leriifolia*, *Reseda bracteata*, *Matthiola farinosa*, *Nepeta xylorrhiza* etc.

S. pterocalyx Hedge

N. Baghlan: N-Salang valley, 2100 m. Kohe Chungar 20 km WNW Pule Khumri, above 1000 m, F. 3068. Rabotak pass between Samangan and Pule Khumri, 1400 m, Tonchev in F. 2183.

This grows in the middle and upper *Pistacia vera* belt and lower *Juniperus seravschanica* belt in open woodlands with a dense ground cover of *Codonoccephalum grande*, *Lepidolopsis turkestanica*, *Helichrysum plicatum* etc.

Stachyopsis oblongata (Schrenk) M. Pop. & Vved.

E. Logar: W side of Shutur Gardan pass, 2950 m, F. 5735. Parwan: S Salang valley, 3000 m, F. 3630.

These records link the only previously known Afghan locality (at Sikaram) with the main area in the mountain tracts of Middle Asia (see also Notes R.B.G. Edinb. 31: 342, 1972). It is a tall herb of mesophytic habitats in the

subalpine belt; in the Hindukush (granite areas) in dense mats with *Polygonum bucharicum*, *Euphorbia megalocarpa*, *Leucopoa karatavica* etc.; in the Logar mountains (limestone) in *Juniperus communis* ssp. *nana* thickets.

***Teucrium stocksianum* Boiss. var. *glandulosum* Freitag, var. nov.**

Varietas nova ab aliis varietatibus tota planta densissime glandulosa itaque colore olivacea bene distincta.

E Afghanistan. Nangarhar: Dare Nur, N of Jalalabad, 1300 m, 6 vii 1969, F. 6067 (holo. E; iso GOET).

Besides the scattered simple hairs, all parts of the plant are densely covered with short glandular hairs. It was growing in open evergreen woodland of *Olea ferruginea* with *Dodonaea viscosa* and in seral pasture communities.

***Thuspeinantha persica* (Benth.) Briq.**

SW. Farah: between Farah and Anardara, Dashte Bebas, 750 m, F. 4387.

The record of this seldom collected species in Afghanistan indicates a scattered occurrence in the southwestern semideserts. It was in open semidesert (limestone area) covered by a thin sand layer, with *Ephedra scoparia*, *Salsola arbuscula*, *Zygophyllum tetrapterum* etc.

***Thymus koeianus* Ronn.**

NW. Badghis: Sabzak pass between Herat and Qalae Naw, 2300–2500 m, F. 6791. Jawzjan: Sangcharak, 40 km SSW, in mountains S of Damardan, 1800–2200 m, F. 6603.

The second locality is more than 300 km ENE of the type locality. Probably it is scattered in all higher mountain areas of the northwest region. It is a typical plant of the middle and upper *Juniperus* belt; on limestone rocks with *Dionysia hedgei*, *Scutellaria leptosiphon*, *Sageretia laetevirens* etc., in *Juniperus excelsa* woodland on shallow soil with *Salvia rhytidea*, *Onobrychis cornuta* etc.

CAPPARIDACEAE

***Cleome dolichostyla* Jafri**

SW. Farah: Farah 20 km E near Khairabad, 690 m, F. 3774; Farah, 35 km E near Khuramlik, 680 m, F. 3778.

New for Afghanistan, *C. dolichostyla* is an endemic of the southern fringe of the Irano-Turanian semideserts and shows a pattern of distribution similar to *Reaumuria stocksii*, *Fortuynia bungei*, *Cleome oxypetala*, *Stocksia brahuica*, etc. It is a typical component of the *Stocksia brahuica* community in sandy dry river beds with *Pteropryum olivieri*, *Pergularia tomentosa*, *Scorzonera ramosissima*, *Fortuynia bungei*, *Launaea acanthodes* etc.

C. heratensis Bge. & Bien. ex Boiss.

SE. Kandahar: Kandahar, 25 km W, 1000 m, *F.* 2036; Gereshk, 20 km NE near road to Kajaki, 900 m.

This is the second record from Afghanistan and quite distant from the type locality in NW Herat. The species seems to be not rare in the region between Kandahar, Kushke Nachud and Kajaki, but no localities west of the Hilmand have been seen. Perhaps this is due to the irregular occurrence of the species in different years. The only find of a population in full flower was made in October 1967. In subsequent years in the same region it was observed only once and in the withered state of the previous year. It was in the *Stocksia brahuica*-*Pteropyrum olivieri* community of dry river beds and also in the *Salvia santolinifolia* semidesert with *Gaillonia bruguieri* and numerous annuals.

C. turkmena Bobrov

NW. Fariab: Maimana, 30 km SSE at road to Sare Hawzd, 1200 m, *F.* 6702.

The first record for Afghanistan of this distinct species known only from the foothills of the Western Kopet Dag. It was growing on extremely eroded gypsaceous marl slopes in very open Halimocnemis-community. The Afghan specimens do not agree in all aspects with Bobrov's description (1939), but until type material has been seen they are best called *C. turkmena*. The very wide distributional gap between W Kopet Dag and NW Afghanistan might indicate the possibility of a new taxon.

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