

CONTRIBUTION TO ASTERACEAE FROM PAKISTAN  
AND ADJOINING AREAS—SOME NEW TAXA,  
COMBINATION AND NEW RECORDS

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Abstract

*Anaphalis chitralensis* M. Qaiser & Rubina Abid and a variety i.e., *Phagnalon schweinfurthii* Schultz Bip. ex Schweinf. var. *lamondae* M. Qaiser & H.W. Lack of the tribe *Gnaphalieae* and *Pluchea arguta* Boiss. subsp. *glabra* M. Qaiser of the tribe *Plucheeae* are described here as new to science. A combination in the tribe *Anthemideae* viz., *Tanacetum eriobasis* (Rech.f.) Kovalvsk subsp. *tricholepis* (Podlech) Qaiser is validated whereas, two taxa viz., *Pentanema nematolepis* Rech. f. and *Pulicaria glutinosa* (Boiss.) Jaub. & Spach of the tribe *Inuleae* are proved as new records from Pakistan.

During the preparation of an account of the family Asteraceae for the Flora of Pakistan the authors came across several interesting specimens, some of them could not be assigned to any known taxon which are described here as new taxa, whereas, some were proved to be new records to our area. All such cases are given below.

*Anaphalis chitralensis* M. Qaiser & Rubina Abid sp.nov., (Fig. 1)

*Anaphalis chitralensis* M. Qaiser & Rubina Abid sp.nov., similis *Anaphalis virgata* Thoms. ex C.B. Clarke, capitulis homogamis semper dioeciis, phyllariis 4-5- fariis eglandulosos et caule foliisque pilos in grigibus dispersis aggregatos ferentibus differt.

**Typus:** Chitral, 7 miles from Nishkoh on way to Trichmir, Kamal Akhtar Malik & Nazimuddin 15680 (KUH!).

Perennial, much branched shrublet, woody at base, 40-60 cm tall, branches covered with scattered clumps of white hairs, sparsely to moderately hairy in between the clumps. Leaves 7-22 x 1-2 mm, upper ones usually smaller, linear, linear-lanceolate, with a small mucro, greenish, margin recurved, more or less densely hairy on both the surfaces but more on the lower side, with clumps of hairs on both sides. Capitula arranged in terminal or axillary corymbs, whitish, 4-5 x 3-4 mm on densely hairy peduncles with clumps of hairs but not as pronounced as on branches and leaves. Phyllaries 4-5 seriate, whitish and scarious in the upper half and brown in the lower half, outer ones 3-4 x c. 1 mm, oblong, densely floccose to lanate in the middle and at the base, middle and inner ones 4-5 x 0.4-0.8 mm, more or less oblong-terete, densely floccose to lanate in the middle. Capitula strictly homogamous either with female florets or bisexual florets (functionally male). Corolla of female florets 3-3.5 mm long. Cypsela c. 0.5 mm long, papillose, pappus 3-3.5 (-4) mm long. Corolla of bisexual florets 2-4 mm long, pappus 2.5-4 mm long bristly, ovary more or less abortive, papillose.

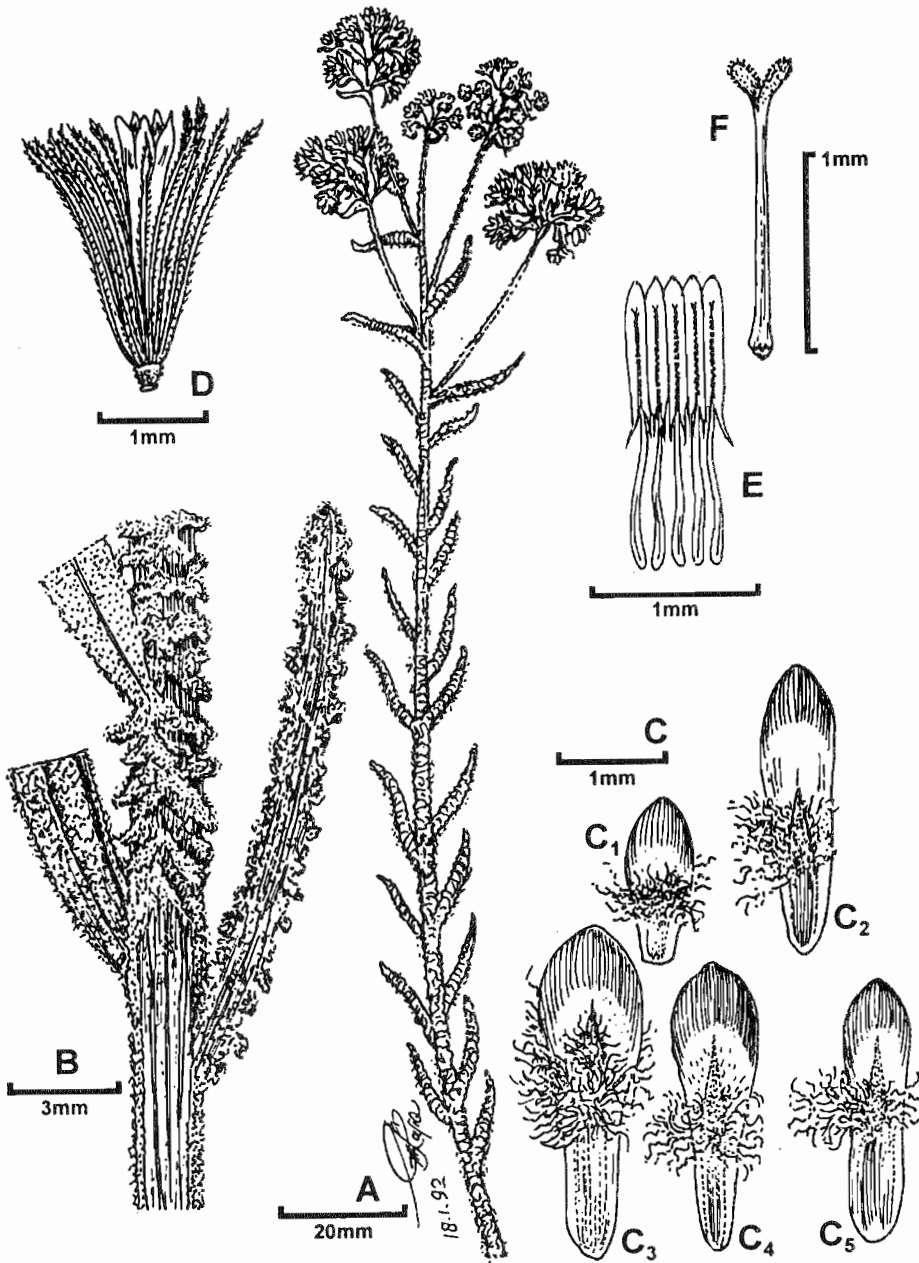


Fig. 1. *Anaphalis chitralensis*: A, Habit; B, Portion of twig; C(C<sub>1</sub> – C<sub>5</sub>), Involucre bracts (outer to inner); D, Hermaphrodite floret; E, Stamens; F, Stigma & Style.

**Specimens examined**

Nushkoh on way to Tirchmir, *Kamal Akhtar Malik, S. Nazimuddin & Gohar Khan* 1532 (KUH); Chatt, Chitral Gol, 3000 m, on slopes, 10.7.77, *Hakim Khan* s.n. (RAW); Jalku (?), 21.9.1934, *Sher Gul* 10467 & 10469 (RAW).

**Distribution:** Endemic to Chitral (Fig. 3).

*A. chitralensis* is closely related to *A. virgata* Thoms. ex C. B. Clarke in general habit, leaf shape, synflorescence but differs by having large and scattered clumps of hairs on the stem and leaves, strictly homogamous capitula and eglandular or epapillose phyllaries, whereas, in *A. virgata* scattered clumps of hairs are absent, capitula homogamous or heterogamous and phyllaries are either glandular or papillose.

*Pluchea arguta* Boiss. subsp. *glabra* M. Qaiser subsp. nov., (Fig. 2).

Differt a subspecies typica folia et caulis totus glabra.

**Type:** Salt range hills between village Kataha and Pail on Khoshab-Chakwal road, *A. Ghafoor & Tahir Ali* 3737 (KUH).

*Pluchea arguta* subsp. *glabra* Qaiser differs from the type subspecies by having totally glabrous leaves and branches whereas in the type subspecies the stem and the leaves are glandular pubescent. In the type subspecies the capitula are also somewhat larger, 8-12 in diameter whereas in subsp. *glabra* the capitula are 4-7 (-8) mm in diameter.

**Specimens examined**

Arid hill between Bannu and Kohat, *R.N. Parkar* 3310 (K); Jhelum Dist.: Hirnpur, 1937, *K.L. Malhotra* 15848 (KUH, RAW); Salt range hills, between village Kataha & Pail, on Khoshab Chakwal Road, 1.10.1988, *A. Ghafoor & Tahir Ali* 3737(KUH); Rawalpindi Dist.: Dhamyal, 21.11.39, *Rajkumar Agarwal* s.n. (RAW); Lasbella Dist.: 29 miles from Jhul Jao on way to Bela, 19.10.78, *Kamal & Nazim* 1162 (KUH); Rakhlehri near Sibi, 500', *J.H. Lace* 3440 (K); Thana Bulla Khan, 25° 33' N, 67° 51' E ersus Kotri 25° 22' N, 68° 18' E, *K.H. Rechinger* 28661 (K); Makran Dist.: Turbat, shop of Imam Baksh Mashoohi herbalist, 12.3.1990, *A. Ghafoor & Steve M. Goodman* 4527 (KUH); Dadu Dist.: Thana Bulla Khan, 25.3.1973, *S. Abedin & M. Qaiser* 9823 (KUH); Karachi Dist.: Cape Monze near Gaza Mazar, 4.4.1965, *P.B. Farooqi* (KUH); Clifton, Karachi 25.8.1986, *Abrar Hussain & M. Ahmed* s.n. (KUH); Hyderabad Dsit.: 5 miles from T.B. Khan on way to Hyderabad, 14.10.77, *Kamal Akhtar & S. Nazimuddin* 725 (KUH).

**Distribution:** Pakistan and Iran (?).

*P. arguta* subsp. *glabra* is more widely distributed than the type variety. The type variety seems to be localized in Baluchistan, Sindh and Gujrat (India) and does not reach to Punjab whereas subsp. *glabra* is distributed from Baluchistan, Sindh, Punjab and Northwest Frontier Province. Both the subspecies are sympatric in Sindh and Baluchistan (Fig. 3).

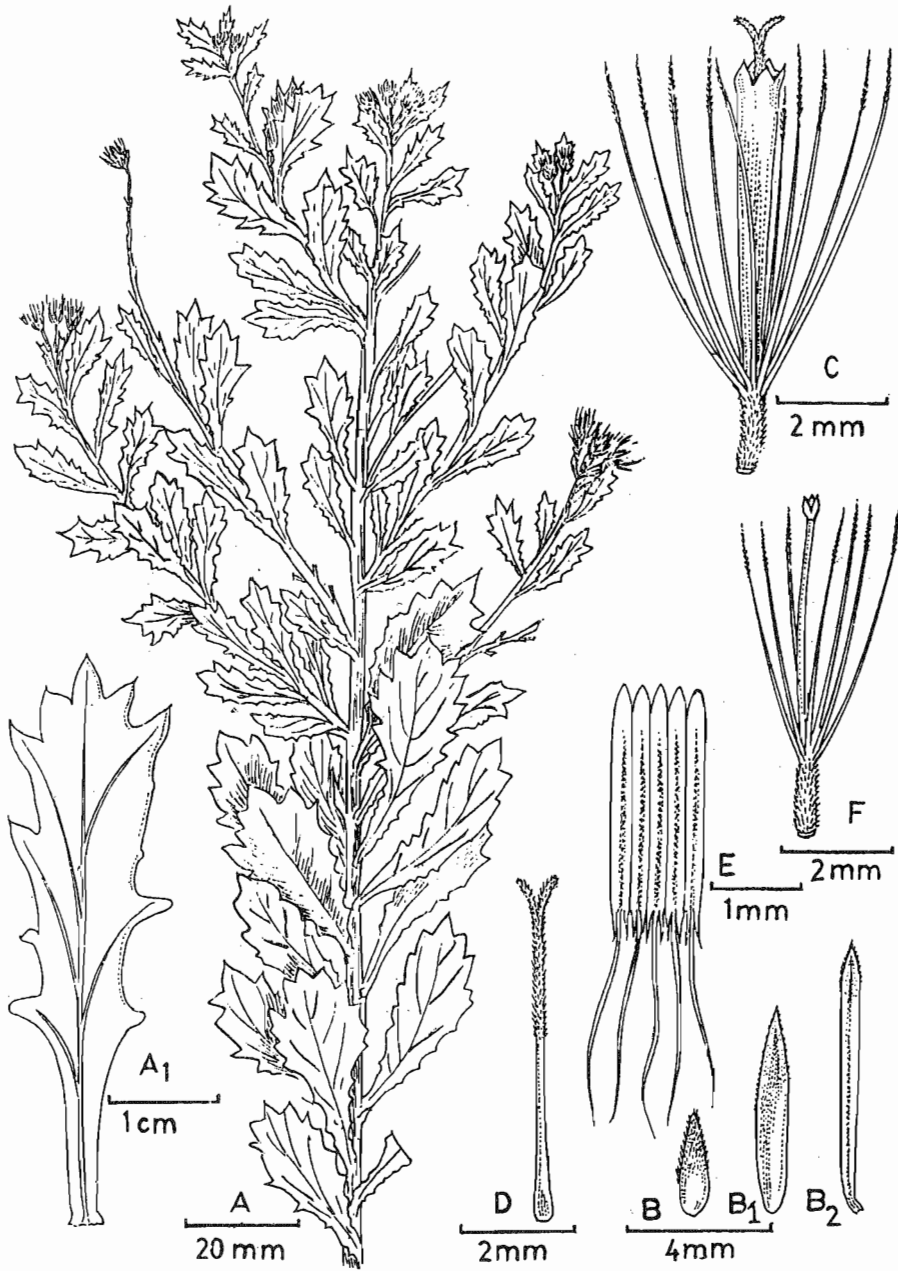


Fig. 2. *Pluchea arguta* subsp. *glabra*: A, Habit; A<sub>1</sub>, Upper side of the leaf; B-B<sub>2</sub>, Involucral bracts (outer to inner); C, Hermaphrodite floret; D, Style and stigma; E, Stamens; F, Female floret.

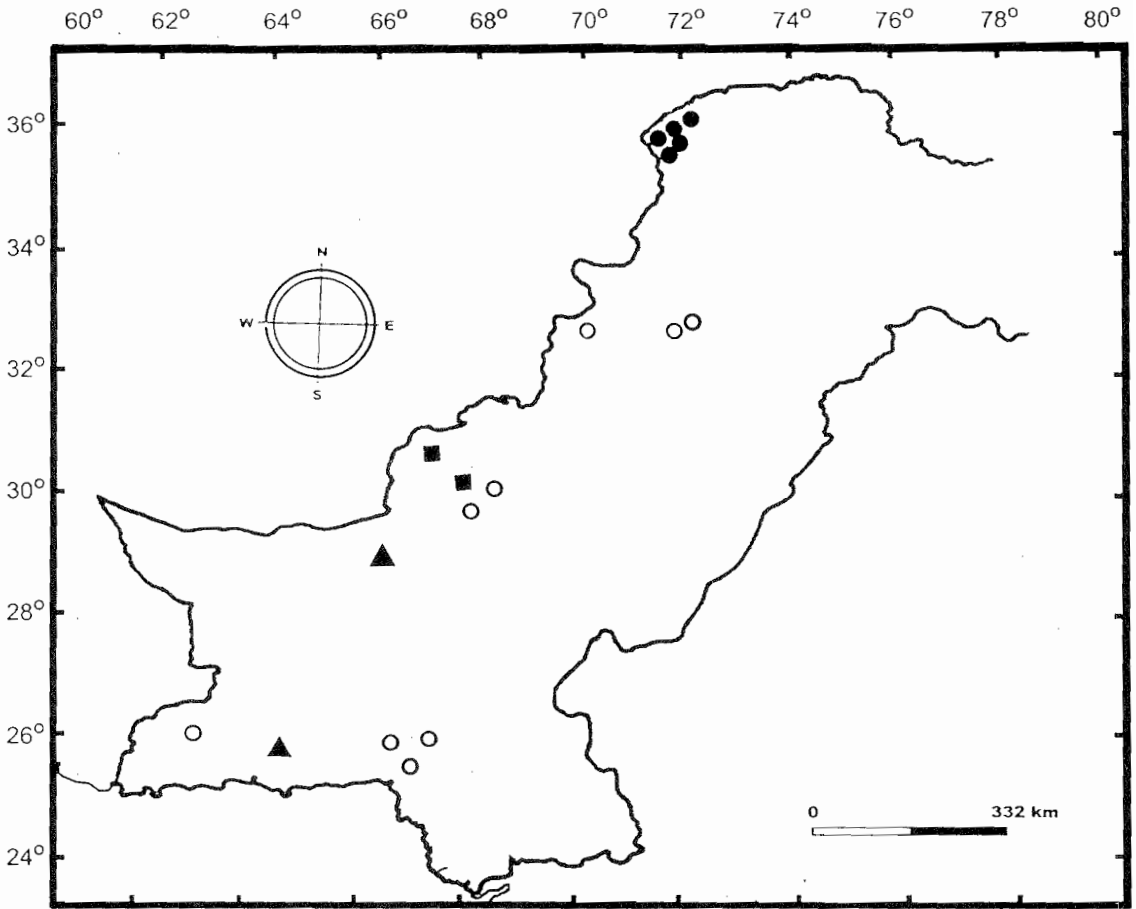


Fig. 3. Map showing the distribution of *Anaphalis chitralensis* (●); *Pluchea arguta* subsp. *glabra* (○) *Phagnalon schweinfurthii* var. *lamondae* (▲) and *Pentanema nematolepis* (■).

*Phagnalon schweinfurthii* Schultz Bip. ex Schweinfurth. var. *lamondae* M. Qaiser & H.W. Lack var.nov.

Differt a varietate typica et var. *androssovii* folia 1 mm lata. Phylla media 1 mm lata, ± brunneolus ad apicem. Flores hermaphroditae 20-25 (-30).

**Holotype:** Pakistan Quetta-Sibi, Bolan Pass, Steep rocky gorge, limetstone, alt. 1500 m, 23.4.1965, *Lamond* 721 (E!).

Baluchistan – Kalat; inter Kolper 1800m, et Mach, 29°52' N, 67°20' E, 900m, 23.4.1965, *Rechinger* (B,C,G,GSU,M,W); Hoshab-Turbat Road, 17 miles before Hoshab, 19.4.1965, Kazmi 1149 (RAW).

**Distribution:** Endemic to Pakistan (Baluchistan) (Fig. 3).

Qaiser & Lack (1985) recognized two varieties of *Phagnalon schweinfurthii* i.e. var. *schweinfurthii* and var. *androssovii* (B. Fedtch.) Qaiser & Lack. The type variety is restricted to Ethiopia (?) Sudan and Egypt (Qaiser & Lack, 1986), whereas, *Phagnalon schweinfurthii* var. *androssovii* is widely distributed from Arabia to Turkamania through Pakistan and Afghanistan (Qaiser & Lack, 1986; Chaudhary, 2000). A third variety i.e., var. *lamondae* is also described here.

Both the varieties i.e. var. *androssovii* and var. *lamondae* differ from the type variety by having shorter 6-15 x 1-3 (-4) mm leaves which are usually subentire to remotely denticulate with revolute margins. In the type variety leaves are 20-26 x 3-5mm, which are usually entire with flat margins.

A key of all the three varieties is given below:

- 1 + Leaves usually entire with flat margins, 20-26 mm long .....  
 ..... *Phagnalon schweinfurthii* var. *schweinfurthii*  
 – Leaves usually subentire to remotely denticulate with revolute margins, 6-15 mm  
 long ..... 2
- 2 + Leaves (1-) 2-3 (-4) mm broad. Middle phyllaries 1.5-2 mm broad, ± purplish-  
 silvery white tipped. Bisexual florets 35-50 .....  
 ..... *Phagnalon schweinfurthii* var. *androssovii*  
 – Leaves 1 mm broad. Middle phyllaries 1 mm broad, ± brownish tipped. Bisexual  
 florets 20-25 (-30) ..... *Phagnalon schweinfurthii* var. *lamondae*

#### New combination

Qaiser (2002) proposed a new combination viz., *Tanacetopsis eriobasis* (Rech.f.) Kovalvsk subsp. *tricholepis* (Podlech) Qaiser in Flora of Pakistan, Asteraceae-I (Anthemideae). However, complete reference was not given. In order to validate the new combination, basionym and complete reference is given below. This subspecies occurs in Afghanistan, while the type subspecies occurs in Pakistan and Afghanistan.

*Tanacetopsis eriobasis* (Rech.f.) Kovalvsk subsp. *tricholepis* (Podlech) Qaiser comb.nov.

Basionym: *Tanacetum eriobasis* (Rech.f.) Kovalvsk subsp. *tricholepis* Podlech in Rech.f., Fl. Iran. Comp. IV. 158: 129. 1986.

#### New Records

*Pentanema nematolepis* Rech. f., Fl. Iran. 145: 105.1980

Quetta Dist.: Urak, Zargham, 7000 ft., on dryish soil, very common on rocky corners, *H. Crookshenk* 407(K!); Ziarat Dist.: Ziarat, 8500ft. May 1890, *J.H. Lace* 3995(K!) (Fig. 3).

This species was previously recorded from Kandhar, Southern Afghanistan only. The actual distribution is now Pakistan (Balochistan) and Afghanistan.

*Pulicaria glutinosa* (Boiss.) Jaub. & Spach, Illus. Pl. Or. 4:77,t. 348. 1853.

*Pterochaete glutinosa* Boiss. Diagn. Pl. Orient. Nov. Ser. 1,6:77. 1845.  
Baluchistan coast, 11.8., *Pierce* s.n. (K!)

This species was previously reported from Mascat, United Arab Emirates and Saudi Arabia.

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