

## NOTES ON CICHOREAE (ASTERACEAE) FROM PAKISTAN AND KASHMIR: SOME ADDITIONS AND CORRECTIONS

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### Abstract

In this study, 9 new combinations, 6 at species level and 3 at varietal level in the tribe Cichoreae have been proposed from Pakistan and Kashmir. Of these, seven taxa, previously placed in *Cicerbita* Wallr. and one species of *Prenanthes* L. are now transferred to the genera viz., *Melanoseris* Decne and *Lactuca* L. A new combination, *Crepidiastrum afghanicum* (Podlech) A. Ghafoor & Qaiser comb. nov., is also proposed. This taxon is a new record for Pakistan. In order to validate the new combinations and records, basionym, complete reference and a key to differentiate all the four genera viz., *Lactuca*, *Cicerbita*, *Melanoseris* and *Prenanthes* is also given.

**Key words:** Cichoreae, Asteraceae, *Prenanthes*, *Cicerbita*, *Melanoseris*, *Lactuca*.

### Introduction

While preparing an account of the tribe Cichoreae (Asteraceae) for the Flora of Pakistan, the present authors came across several taxa which needed new combinations or new names as per nomenclature rules. Bano & Qaiser (2009, 2010) accepted the genera *Prenanthes* L. and *Cicerbita* Wallr. and described one new species under *Prenanthes* L. viz., *P. stewartii* Roohi Bano & Qaiser and three new species under *Cicerbita* Wallr. viz., *C. alii* Roohi Bano & Qaiser, *C. gilgitensis* Roohi Bano & Qaiser and *C. astorensis* Roohi Bano & Qaiser from Pakistan along with a previously described species belonging to *Cicerbita* Wallr. viz., *C. aitchinsoniana* Beauv. Since then lot of information has been gathered particularly based on molecular phylogeny. Wang *et al.* (2013) clearly demonstrated on the basis of phylogenetic studies that the genus

*Melanoseris* Decne represented a sister lineage within the subtribe Lactucinae and revealed its sister group relationship to *Lactuca* L. (s.str.) clearly indicating that the genus *Cicerbita* Wallr. was a heterogeneous taxon. Hence, on the basis of molecular and morphological evidences, it seems reasonable that most of the species of *Cicerbita* Wallr. and all the species of *Prenanthes* but one either be transferred to the genus *Melanoseris* Decne or *Lactuca* L. thus leaving *Prenanthes* as a monospecific genus (*P. purpurea* L., confined to Europe). Similarly the number of species in *Cicerbita* is also greatly reduced. Originally *Melanoseris* was considered to differ from *Cicerbita* (then under the name *Mulgedium* Cass.) because of its beaked cypselas and from *Lactuca* due to its biseriate pappus with an outer series of minute bristles. All the four genera viz., *Lactuca* L., *Melanoseris* Decne, *Cicerbita* Wallr., and *Prenanthes* L., can be identified by the following key characters:

- 1 + Stem and branches usually glabrous at least in upper half. Capitula always erect on thick peduncle. Involucre infundibuliform to cylindrical, glabrous and scarious. Cypselas always strongly compressed, obovoid to elliptic, apex with a slender or capillary-filliform beak (excluding *L. erostrata*: beak truncate); beak equaling or 1 ½ or 3 times longer than the body ..... *Lactuca*
  - Stems and branches glabrous, or hairy (hispid or hirsute); Capitula drooping on thin or flattened peduncle. Involucre narrowly cylindrical to broadly campanulate, densely hispid or laxly villous, not scarious. Cypselas weakly compressed, elliptic to oblong rarely cylindrical, apically truncate, attenuate or stout beak; beak smaller than the body ..... 2
- 2 + Leaves all cauline, auriculate-amplexicaul. Capitula narrow. Florests c. 5 per capitulum. Involucre 3-5 mm wide ..... *Prenanthes*
  - Leaves basal and cauline, amplexicaul. Capitula cylindrical-campanulate. Florets 6- > 30 (excluding *M. rapunculoides*). Involucre 7-12 mm wide ..... 3
- 3 + Herb tall with many – capitellate narrowly racemiform synflorescence to 50 cm. Involucre cylindric. Outer phyllary ½-¾ of inner ones. Inner phyllaries 6-10 (-12) mm long ..... *Cicerbita*
  - Herb tall, never with many – capitellate narrowly racemiform synflorescence to 50 cm. Involucre broadly cylindric to broadly campanulate. Outer phyllary c. ½ of inner ones. Inner phyllaries mostly exceeding 15 mm. Cypselas more than 5 mm long ..... *Melanoseris*

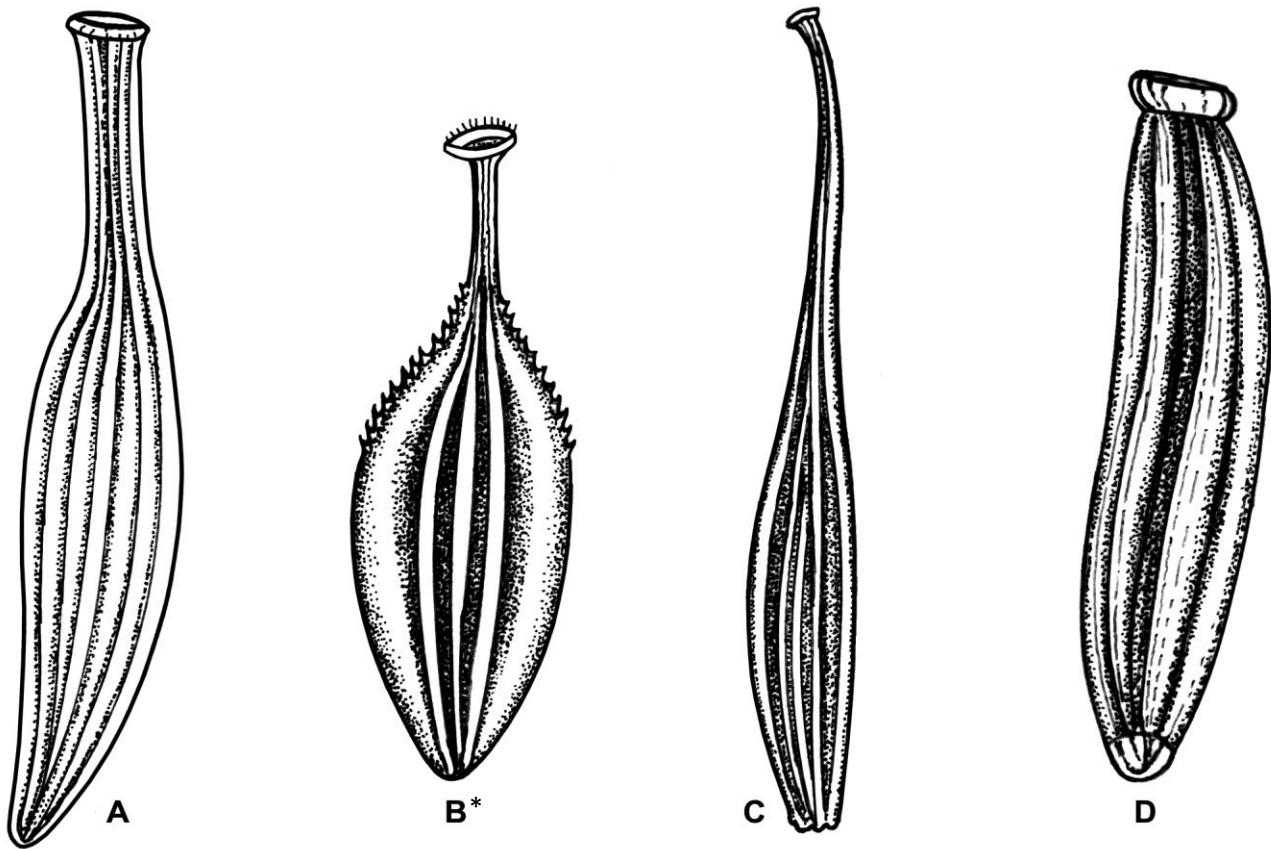


Fig. 1. Cypselae of *Lactuca* Alliance **A.** *Melanoseris lessertiana*, **B.** *Cicerbita roborowskii*, **C.** *Lactuca viminea*, **D.** *Prenanthes purpurea*.  
\*Adapted from Flora of China illustrations vol. 20-21: 207.

Following new combinations are proposed:

**1. *Melanoseris astorensis*** (Roohi Bano & Qaiser) A. Ghafoor, Qaiser & Roohi Bano

*Cicerbita astorensis* Roohi Bano & Qaiser in Pak. J. Bot. (S. I. Ali Festschrift) 42:37. Fig. 1. 2010.

**Holotype:** Pakistan: Astor Dist.: Shaban top above Dombabho, 11.9.2006, *Ali Nooret al.*, 584 (KUH!)

**Note:** Wang *et al.* (2015) reduced *M. astorensis* (Roohi Bano & Qaiser) A. Ghafoor, Roohi Bano & Qaiser (*Cicerbita astorensis* Roohi Bano & Qaiser) to the synonymy *M. lessertiana* (DC.) Decne. No doubt *M. astorensis* is quite similar to *M. lessertiana* (DC.) Decne, in general appearance. Both the species have more or less sympatric distribution but it can be distinguished from *M. lessertiana* (DC.) Decne by having stem less habit and solitary capitulum. Where as in *M. lessertiana* (DC.) Decne, the stem is well-developed and the capitula are in fascicles. Similarly, the pollen morphology of both the species is also different. In the former species, the pollen have 7.5  $\mu$ m long spines and 7.5  $\mu$ m thick exine including echinae while in the later species, spines are 6.25  $\mu$ m long and exine is up to 8.75  $\mu$ m thick including echinae. Thus on the basis of above said characters the present authors accepted *M. astorensis* as an independent species.

**2. *Melanoseris aitchisoniana*** (Beauv.) A. Ghafoor, Qaiser & Roohi Bano, **comb.nov.**

*Cicerbita aitchisoniana* Beauverd in Bull. Soc. Bot. Gen. 2 (2): 137. 1910

**Type:** - *Aitchison* 997-1, (G).

**3. *Melanoseris gilgitensis*** (Roohi Bano & Qaiser) A. Ghafoor, Qaiser & Roohi Bano **comb. nov.**

*Cicerbita gilgitensis* Roohi Bano & Qaiser in Pak. J. Bot. (S. I. Ali Festschrift) 42: 40. Fig.4. 2010.

**Holotype:** Gilgit: Rai-juth between Khaltarow and Jutialnullah, Haramosh, 20.8.2004, *Sherwali Khan & Shabbir Hassan* 666 (KUH!)

**4. *Melanoseris stewartii*** (Roohi Bano & Qaiser) A. Ghafoor, Qaiser & Roohi Bano **comb. nov.**

*Prenanthes stewartii* Roohi Bano & Qaiser in Pak. J. Bot. 41(5):2087. Fig. 1. 2009.

**Holotype:** Kashmir: Rampur, Jhelum Valley Road, Kashmir, c.1200 m, 3.7.1931, *R.R. Stewart* 12147 (RAW!)

**5. *Melanoseris lessertiana* var. *lyrata*** (Decne.) A. Ghafoor, Qaiser & Roohi Bano **comb. & stat. nov.**

*Melanoseris lyrata* Decne. in jacquemont, Voy. Bot. Ind. 4: 101. t. 109. 1844.

**Type:** “In herbosishumidis ad praedium Gombour ad reg. Cachemiret Thibeabt 3450m circeter”

**6. *Melanoseris decipiens* var. *multifida*** (C.B. Clarke) A. Ghafoor, Qaiser & Roohi Bano, **comb.nov.**

*Lactuca decipiens* C.B. Clarke var. *multifida* Hook.f., Fl. Bri. Ind. 3: 407.1881.

**Syntypes:** Kashmir, Thomson s.n. (K!), C.B. Clarke (K!).

**7. *Melanoseris decipiens* var. *pakistanica*** (Roohi Bano & Qaiser) A. Ghafoor, Qaiser & Roohi Bano, **comb.nov.**

*Cicerbita decipiens* (C.B. Clarke) Beauv. var. *pakistanica* Roohi Bano & Qaiser in Pak. J. Bot. (S. I. Ali Festschrift) 42:51. 2010.

**Holotype:** Astor: Rama on way to Rama Lake on hill slopes, 3200 m, 27.7.2007, Ali Noor 792 a (KUH!)

**8. *Lactuca chitralensis*** (Tuisl.) A. Ghafoor, Qaiser & Roohi Bano **comb. nov.**

*Cephalorrhynchus chitralensis* Tuisl., Ann. Nat. Mus. Wien 722: 616. 1968.

*Cicerbita chitralensis* (Tuisl.) Roohi Bano & Qaiser in Pak. J. Bot. (S. I. Ali Festschrift) 42:51. 2010.

**Type:** Pakistan: “Chitral, Israr to Turikho River, 24-5-1958, 2100 m”, J.D.A. Stainton, 2506 (W).

**9. *Crepidiastrum afghanicum*** (Podlech) A. Ghafoor & Qaiser **comb. nov.**

*Youngia afghanica* Podlech in Bot. Staatssaml. München 8:186. Fig.14.1970.

*Crepidifolium afghanicum* (Podlech) Sennikov in Komarovia 5 (2):100 Fig.9. 2008.

**Holotype:** North-eastern Afghanistan “Badakshan: obere Anjuman-Tal Steiles Seintal SÜdlich von Anjuman, 3400 m, Granit, 15.8.1965 leg. D. Podlech 12396 (M).

*Crepidiastrum afghanicum* (= *Youngia afghanica* Podlech) was mistakenly reduced to synonym of *Crepis flexuosus* by Rechinger (1977), although Podlech (1970) clearly mentioned its affinities with the genus *Youngia* a close ally of *Crepidiastrum*. Now it is correctly placed in *Crepidiastrum*. This is a new record for Pakistan.

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