

# Medicinal and Aromatic Plants Diversity of Asteraceae in Uttarakhand

Vinod Kumar Bisht\*<sup>1</sup> & Vineet Purohit<sup>1</sup>

<sup>1</sup>Herbal Research & Development Institute, Gopeshwar - 246 401, Uttarakhand, India.

\*E-mail: [vksbisht@gmail.com](mailto:vksbisht@gmail.com); [vksbisht@rediffmail.com](mailto:vksbisht@rediffmail.com)

**Abstract:** Geographically Uttarakhand represents six eco-climatic regions from 300 m asl to 7817 m asl, and abode to a variety of medicinal and aromatic plants, and their products are being used by local communities from time immemorial. Asteraceae is the largest family of medicinal and aromatic plants in Uttarakhand. The species of the family are growing from low altitude of Tarai Bhabar to the alpine. There are annual, biennial or perennial herbs, under shrubs, shrubs. This paper includes the database on various aspects of medicinal plants of the family Asteraceae in the state. The database on various aspects includes species richness, genera richness, medicinal use and altitude for the different species of the family Asteraceae. "Nature and Science. 2010;8(3):121-128]. (ISSN: 1545-0740)".

**Key Words:** asteraceae, diversity, medicinal and aromatic plants

## Introduction

Uttarakhand lies between 28°53'24" and 31°27'50" N latitudes and 77°34'27" and 81°02'22" E longitude and covers an area of 53,483 Km<sup>2</sup>. The state is divisible into four major geological formations: Siwalik (outer) Himalaya, Lesser (lower) Himalaya, Greater (main) Himalaya and Trans Himalaya with six eco-climatic regions: Sub-tropical (<1500 m), warm temperate (1500-2500 m), cool temperate (2500-3000 m), sub-alpine (3000-3500 m), alpine (3500-5500 m) and nival (>5500 m). Due to its rich forest cover, the state has great potential to serve as a model for conservation and development of herbal plants. Medicinal and aromatic plant species are widely distributed due to a variety of climatic factors and altitudinal variations coupled with varied ecological habitats. These plant species are basic ingredient of the ethno-botanical and traditional health care system.

Asteraceae or Compositae family is also known as daisy family, sunflower family or thistle family. This is the largest family of the flowering plants with more than 24000 - 30000 species and 1600 - 1700 genera (Funk et. al, 2005) worldwide and inhabit almost every environment and continent except Antarctica. In India the family is represented by 900 species under 167 genera. Asteraceae taxa can assume almost every life-form viz. annual, biennial or perennial herbs, undershrubs, shrubs, a few trees, some scramblers and aquatics. Some are succulent, whereas others are spiny and some have milky sap. Many perennial species are adapted to survive the cold, dry winter season by underground storage organs and producing annual stems in spring. The name Asteraceae is derived from the term Aster means *composite* and refers to the characteristic inflorescence – have flower heads composed of many small flowers, called florets, and are surrounded by bracts (Moreira & Munoz, 2007). The largest genera are *Senecio* (1,500 species), *Vernonia* (1,000 species), *Cousinia* (600 species) and *Centaurea* (600 species). The circumscription of the genera is often problematic and some of these have been frequently divided into minor subgroups. Asteraceae are cosmopolitan, but most common in the temperate regions

and tropical mountains. Some of the plants in Asteraceae are medically important and are also commonly featured in medical and phytochemical journals. Many members of the family are grown as ornamental plants for their flowers.

Uttarakhand represents the reservoir of 85 species of the family Asteraceae, which are being used by the local people from time immemorial in traditional health care system. They have very vast and important knowledge about many plants and their uses in traditional system of medicine. However, the information about this valuable resource is scattered and even some of these resources are at the verge of extinction. Therefore, the present work is an effort towards the compilation and documentation of medicinal plants resources of Uttarakhand.

## Material and Method

Present study was carried out in the Uttarakhand state and based on extensive and intensive literature surveys, carried out in different universities, institutions and organizations, different Ph.D. thesis, Research papers, short communications, articles and flora providing information on medicinal and aromatic plants were studied thoroughly and available information was recorded. Attempts were made to collect all the possible data of the region, therefore, some recently introduced plants have also been included. The data present in the current paper is based on the compilation of collections made by other authors. Description of the species stated with correct name, author citation, synonym, habit, vernacular name (local dialect), Hindi, Sanskrit, English names, uses, altitudinal range, flowering and fruiting time and subsequent author citations. Although, inclusion of vernacular, Hindi names does not look proper but has a immense value to different users. The use of plants varies from place to place. Many plants which have no specific use is known are yet regarded as medicinal herb by different authors.

It is now well understood that appropriate knowledge about plants of a given region is essential for the proper and effective utilization of these resources. The main objective of the study was to create the database on various

aspects of medicinal and aromatic plants of Asteraceae family from Uttarakhand, so that it could provide necessary information about the present status of medicinal and aromatic plants of the family in the state.

### Results

In the present study a total of 85 species of medicinal and aromatic plants with 54 genera of Asteraceae from Uttarakhand were recorded. Among them *Anaphalis*, *Artemisia*, *Chrysanthemum* and *Saussurea* (5 spp.) are the largest genera. Whereas others dominating genera are *Aster*, *Scenecio* and *Sonchus* (3 species), *Echinops* (2 species). Most of the plant species (76 spp.) are herbs, some are shrubs (5 spp.) and few (4 spp.) are under shrubs. These plant species are useful in traditional and ethnomedicobotany to treat different ailments such as asthma, diarrhoea, dysentery, cough, cold, inflammation, arthritis, rheumatism etc. by local inhabitant of the state.

### Conclusion

Proper identification of the medicinal and aromatic plant has a vital role in the utilization of this natural wealth and conservation of biodiversity in the state. The future of this resource in Uttarakhand is at risk as they are often picked up from the wild, leaving little scope for their regeneration. Recently Rawat *et al.* (2001) listed 45 species (excluding Red Data Book) those need special attention for conservation. Undoubtedly, the resource needs to be harnessed for economic development, but simultaneously we have to conserve this resource for use on a sustainable basis.

In this context, it is of paramount importance that the herbal resource of Uttarakhand is scientifically identified, inventorised, documented and an exhaustive data base be prepared.

### Acknowledgement

The authors are thankful to Director of the Herbal Research and Development Institute, Gopeshwar for facilities and Global Environment Facility (GEF), Washington, USA, for their financial support.

### Correspondence to:

Vinod kumar Bisht  
Herbal Research & Development Institute,  
Gopeshwar -246 401, Uttarakhand, India  
Cellular Ph. +91-94124 09856  
E-mail: [vksbisht@gmail.com](mailto:vksbisht@gmail.com)

### Authors:

1. **Vinod Kumar Bisht**  
Project Scientist (Botany)  
Herbal Research & Development Institute,  
Gopeshwar, District – Chamoli – 246 401  
Uttarakhand, India  
E-mail: [vksbisht@gmail.com](mailto:vksbisht@gmail.com)  
Mob. No. +91-94124 09856

2. **Vineet Purohit**  
Research Scholar

Herbal Research & Development Institute,  
Gopeshwar, District – Chamoli – 246 401  
Uttarakhand, India  
E-mail: [vineetpt@rediffmail.com](mailto:vineetpt@rediffmail.com)

**Mob. No. +91-94125 31804**

### Reference:

1. Anonymous. *The Useful Plants of India* CSIR, New Delhi, 1986.
2. Anonymous. *Flora of India* (Sharma and Balakrishnan, eds.) 1993; Vol. 1. BSI, Howrah.
3. Atkinson ET. *The Himalayan Gazetteer* (Reprint 1973) New Delhi 1882.
4. Babu CR. *Herbaceous Flora of Dehradun* CSIR, New Delhi 1977.
5. Bisht MK, Bhatt KC, & Gaur RD. Folk Medicines of Arakot Valley in district Uttarkashi In : *Ind. Med. Pl.* (ed. P. Kaushik) 1985; pp. 157-165.
6. Champion HG, & Seth SK. *A Revised Survey of Forest Types of India*, Government of India Press, New Delhi 1968.
7. Clarke CB. *Illustrations of Cyperaceae*, London 1909.
8. Duthie JF. *Flora of the Upper Gangetic Plain and of the Adjacent Siwalik and Sub-Himalayan Tracts* 3 Vols. Calcutta 1903-1929.
9. Funk VA, Bayer RJ, Keeley S, Chan R, Watson L, Gemeinholzer B, Schilling E, Panero JL, Baldwin BG, Garcia- Jacas N, Susanna A, & Jansen RK. Everywhere but Antarctica: using a supertree to understand the diversity and distribution of the Compositae. *Biol. Skr.*, 2005, **55**: 343–374.
10. Gaur RD. Dynamics of Vegetation of Garhwal Himalaya. In: G. S. Paliwal (ed.) *The Vegetational Wealth of the Himalayas*. pp. 12-25. *Puja Publ.*, Delhi 1982.
11. Joshi HC, Arya SC & Samant SS. Diversity, distribution and indigenous uses of plant species in Pindari area of Nanda Devi Biosphere Reserve II. *Indian Journal of Forestry* 2001; **24(4)**: 514-536.
12. Kirtikar KR & Basu BD. *Indian Medicinal Plants* Vols I-IV, Bishan Singh Mahendra Pal Singh, Dehradun 1994.
13. Naithani BD. *Flora of Chamoli*. 2 Vols. BSI, Howrah 1984-1985.
14. Naithani HB & Tiwari SC. Flowering plant of Pauri. *Indian J. Forestry* 1982; **5**: 142-148.
15. Negi KS & Gaur RD. A contribution to the edible wild fruits of Uttar Pradesh, *Hills. Bull. Bot. Surv. India* 1991; **33**: 233-266.
16. Negi KS & Gaur RD. *Principal Wild Food Plants of W. Himalaya*, Uttar Pradesh, India. Higher Plants of Indian Subcontinent 1994; **3**: 1-147.
17. Osmaston AE. *A Forest Flora For Kumaon*. Govt. Press. Allahabad 1927.
18. Rawat DS, Bhandari BS & Nautiyal DC. *Garhwal: Vegetational Wealth* In: Kandari OP & Gusain OP (eds.) *An Introduction to Garhwal*. Himalayan Publ. Co., New Delhi 1999.

19. Rawat DS, Bahndari BS, and Gaur RD. Vegetational Wealth in *Garhwal Himalaya: Nature, Culture and Society* (Kandari, O. P. and O. P. Gusain, eds.). Transmedia, Srinagar Garhwal 2001.
20. Sharma MP & Gaur RD. Contribution to the Flora of Pokhri Block, Chamoli Garhwal. *Indian J. Forestry* 1983; **6**: 149-153; **7**: 57-62 and 323-327 (1984).
21. Sharma MP & Gaur RD. Contribution to the Flora of Pokhri Block, Chamoli Garhwal. *Indian J. Forestry*, **7**: 57-62 and 323-327 (1984).
22. Silas RA & Gaur RD. On the occurrence on some little known plant species from Garhwal *Himalaya*. *J. Bombay nat. Hist. Soc.* 1987; **84**: 489-492.
23. Silas RA. Taxonomic Studies of Plant Communities in Dudhatoli Region, Pauri Garhwal. *D. Phill. Thesis*, H. N. B. Garhwal Univ. Srinagar 1987.
24. Uniyal BP & Rao RR. Vegetation and Flora Rajaji Sanctuary in Uttar Pradesh, India. *J. Econ. Tax. Bot.* 1993; **17**: 1-30.

***Acanthespermum hispidium* DC.**

*Ht:* Herb, *V:* Gokhuru, *E:* Star-bur, *U:* Antimicrobial, Arthritis, Rheumatism, *A:* up to 1500 m, *Fl. & Fr.:* Jan. – Jun. 1836 – DC., *Prodr.* **5**: 522. 1977 – Babu, *Herb. Fl. D. Dun* 237. 1999 – Gaur, *Fl. Distt. Garh. N. W. Himal. (with ethnobotanical notes)* 553.

***Achillea millefolium* (L.)**

*Ht:* Herb, *V:* Milfoli, Gandrain, *H:* Gandan, *E:* Common Yarrow, Bloodwort, Sneezewort, Solider's Friend, *U:* Inflammation, headache, Influenza, excretory, *A:* 2000-3600 m, *Fl. & Fr.:* May – Oct. 1753 – Linnaeus, *Sp. Pl.* 899. 1881 – Hook. f., *Fl. Brit. India* **3**: 312. 1994 – Kirtikar & Basu, *Ind. Med. Plant* (second ed.) **2**: 1376. 1999 – Gaur, *Fl. Distt. Garh. N. W. Himal. (with ethnobotanical notes)* 554.

***Adenostemma lavenia* (L.) Kuntze**

*Syn:* *Verbesina lavenia* L., *Ht:* Herb, *V:* Soh – byrthit, *H:* Jangli Jeera, *E:* Clubwort, *U:* Extract of leaves applied on injuries, *A:* up to 1300 m, *Fl.:* Apr.- May; *Fr.:* May - Sept. 1753 – Linnaeus, *Sp. Pl.* 902. 1881– Hook. f., *Fl. Brit. India* **3**: 242. 1977 – Babu, *Herb. Fl. D. Dun* 237. 1999 – Gaur, *Fl. Distt. Garh. N. W. Himal. (with ethnobotanical notes)* 554.

***Ageratum conyzoides* L.**

*Ht:* Herb, *V:* Jangli Pudina, Gundrya, *H:* Jangli Pudina, *E:* Goat Weed, *U:* Pneumonia, Wounds and burns, *A:* up to 1500 m, *Fl. & Fr.:* Jan. – Dec. 1753 – Linnaeus, *Sp. Pl.* 839. 1881 – Hook. f., *Fl. Brit. India* **3**: 243. 1977 – Babu, *Herb. Fl. D. Dun* 238. 1984 – Naithani, *Fl. Chamoli* **1**: 304. 1994 – Kirtikar & Basu, *Ind. Med. Plant* (second ed.) **2**: 1330. 1999 – Gaur, *Fl. Distt. Garh. N. W. Himal. (with ethnobotanical notes)* 554.

***Ageratum houstonianum* Miller**

*Syn:* *Ageratum caeruleum* Hort., *Ageratum mexicanum* Sims., *Ht:* Herbs, *U:* Cuts and Wounds, *A:* up to 1200 m, *Fl. & Fr.:* Jan. – Dec. 1768 – Miller, *Gard. Dict. ed.* **8**: n. 2. 1977 – Babu, *Herb. Fl. D. Dun* 239. 1984 – Naithani, *Fl. Chamoli* **1**: 304. 1999 – Gaur, *Fl. Distt. Garh. N. W. Himal. (with ethnobotanical notes)* 555.

***Ainsliaea apetera* DC.**

*Syn:* *Liatris latifolia* D. Don, *A. pteropoda* DC., *Ht:* Herb (Perennial), *V:* Khad-Jari, Kauru, *H:* Karvi Booti, *U:* Colic, Intermittent fever, *A:* up to 1800 m, *Fl. Mar. –May; Fr.:* Sept. – Oct. 1838 – DC., *Prodr.* **7**: 14. 1881– Hook. f., *Fl. Brit. India* **3**: 388. 1884 – Naithani, *Fl. Chamoli* **1**: 304. 1999 – Gaur, *Fl. Distt. Garh. N. W. Himal. (with ethnobotanical notes)* 555. 2001 – Joshi *et al.* Diversity, Distribution & Indigenous

Uses of Plant Species in Pindari Area of Nanda Devi Biosphere Reserve II. in *Ind. J. For.* **24(4)**: 514-536. 2001 – Samant *et al.* from Valley of Flowers National Park in *Himal. Biosp. Reser.* **3(1&2)**: 5.

***Ainsliaea latifolia* (D. Don) Schults- Bipontinus**

*Syn:* *A. pteropoda* DC. & *Liatris latifolia* D. Don., *Ht:* Herb, *V:* Kauru, *U:* Colic, *Fl.:* Apr. – Jun.; *Fr.:* Jul. – Oct. 1825 – D. Don, *Prodr. Fl. Nep.* 169. 1881– Hook. f., *Fl. Brit. India* **3**: 388. 1984 – Naithani, *Fl. Chamoli* **1**: 305. 1999 – Gaur, *Fl. Distt. Garh. N. W. Himal. (with ethnobotanical notes)* 555. 2001 – Samant *et al.* from Valley of flowers National Park in *Himal. Biosp. Reser.* **3(1&2)**: 5.

***Anaphalis adnata* Wall. ex DC.**

*Syn:* *Gnaphalium adnata* Wall., *Ht:* Herb, *V:* Bugla, *U:* Cuts, Wounds, Boils, *Fl. & Fr.:* Aug. – Feb. 1831 – Wall., *Cat.* 101 n. 2948. 1881– Hook. f., *Fl. Brit. India* **3**: 282. 1984 – Naithani, *Fl. Chamoli* **1**: 306. 1999 – Gaur, *Fl. Distt. Garh. N. W. Himal. (with ethnobotanical notes)* 556.

***Anaphalis busua* (Buch.- Ham. ex D. Don) DC.**

*Syn:* *A. araneosa* DC. & *Gnaphalium busuum* Buch- Ham. ex D. Don, *Ht:* Herb, *V:* Bugla, Buglya, *U:* Bruises, Wounds, Cuts, *Fl. & Fr.:* Jan. – Dec. 1825 – Buch – Ham. ex D. Don, *Prodr. Fl. Nep.* 173. 1881 – Hook. f., *Fl. Brit. India* **2**: 283. 1977 – Babu, *Herb. Fl. D. Dun* 239. 1984 – Naithani, *Fl. Chamoli* **2**: 306. 1999 – Gaur, *Fl. Distt. Garh. N. W. Himal. (with ethnobotanical notes)* 556.

***Anaphalis contorta* (D. Don) Hook. f. Kuntze**

*Syn:* *Antennaria controta* D. Don, *A. tenella* DC., *Ht:* Herb, *V:* Bhglya, *U:* Diarrhoea, *A:* up to 1800 m, *Fl. & Fr.:* Jul. – Mar.

1821 – D. Don, *Bot. Reg.* **7**: t. 605. 1881 – Hook. f., *Fl. Brit. India* **3**: 284. 1984 – Naithani, *Fl. Chamoli* **1**: 306. 1999 – Gaur, *Fl. Distt. Garh. N. W. Himal. (with ethnobotanical notes)* 556. 2001 – Joshi *et al.* Diversity, Distribution & Indigenous Uses of Plant Species in Pindari Area of Nanda Devi Biosphere Reserve II. in *Ind. J. For.* **24(4)**: 514-536.

***Anaphalis margaritacea* (L.) Benth**

*Syn:* *A. cinnamome* C.B. Clarke, *Gnaphalium margaritaceum* L., *Ht:* Herb, *V:* Buglya, *E:* Cottonweed, *U:* Astringent, Sedative, Antiseptic, *A:* up to 1800 m, *Fl. & Fr.:* Aug. – Dec. 1753 – Linnaeus, *Sp. Pl.* 850. 1876 – C.B. Clarke in *Comp. Indicae* 104. 1881– Hook. f., *Fl. Brit. India* **3**: 279. 1984 – Naithani, *Fl. Chamoli* **1**: 307. 1999 – Gaur, *Fl. Distt. Garh. N. W. Himal. (with ethnobotanical notes)* 556.

***Anaphalis triplinervis* (Sims) C. B. Clarke**

*Syn:* *Antennaria triplinervis* Sims, *Ht:* Herb, *V:* Buglya, *U:* Diuretic, Tonsillitis, Edema, *A:* 1800 – 3200 m, *Fl. & Fr.:* Aug. – Oct.

1823 – Sims in *Bot. Mag.* **51**: t. 2468. 1876 – C.B. Clarke in *Comp. Indicae* 105. 1881 – Hook. f., *Fl. Brit. India* **3**: 281. 1984 – Naithani, *Fl. Chamoli* **1**: 307. 1999 – Gaur, *Fl. Distt. Garh. N. W. Himal. (with ethnobotanical notes)* 556. 2001 – Samant *et al.* from Valley of flowers National Park in *Himal. Biosp. Reser.* **3(1&2)**: 5. 2001 – Joshi *et al.* Diversity, Distribution & Indigenous Uses of Plant Species in Pindari Area of Nanda Devi Biosphere Reserve II. in *Ind. J. For.* **24(4)**: 514-536.

***Artemisia absinthium* L.**

*Ht:* Shrub, *V:* Dumaar, Vilayati Afsanthin, *S:* Afsanteen, *E:* Absinthe, *U:* Heart burn, Appetite, *Fl. & Fr.:* Jun. – Oct. 1753 – Linnaeus, *Sp. Pl.* 850. 1977 – Babu, *Herb. Fl. D. Dun* 241. 1994 – Kirtikar & Basu, *Ind. Med. Plant* (second ed.) **2**: 1394. 2001 – Samant *et al.* from Valley of Flowers National Park in *Himal. Biosp. Reser.* **3(1&2)**: 6.

***Artemisia cappillaris* Thunb.**

*Syn:* *A. scoparia* Waldstein & Kitaibel, *Ht:* Herb, *V:* Marwa, *Jhirun*, *E:* Wormwood, *U:* Dietary, *Colic*, *A:* 200-2000 m, *Fl. & Fr.:* Jul. – Nov.  
1784 – Thunb., *Fl. Jap.* 309. 1881 – Hook. f., *Fl. Brit. India* **3:** 323. 1977 – Babu, *Herb. Fl. D. Dun* 24. 1984 – Naithani, *Fl. Chamoli* **1:** 309. 1994 – Kirtikar & Basu, *Ind. Med. Plant* (second ed.) **2:** 1393. 1999 – Gaur, *Fl. Distt. Garh. N. W. Himal. (with ethnobotanical notes)* 557.

#### **Artemisia japonica Thunb.**

*Syn:* *A. parviflora* Roxb. ex D. Don, *Ht:* Herb, *V:* Pati, *Pamasi*, *U:* Antimalarial, *A:* 300-1500 m, *Fl. & Fr.:* Jul. – Nov.  
1784 – Thunb., *Fl. Jap.* 310. 1881 – Hook. f., *Fl. Brit. India* **3:** 322. 1977 – Babu, *Herb. Fl. D. Dun* 241. 1999 – Gaur, *Fl. Distt. Garh. N. W. Himal. (with ethnobotanical notes)* 558.

#### **Artemisia roxburghiana Wall. ex Besser**

*Ht:* Under Shrub, *V:* Kunjaa, *Chamur*, *E:* Indian Wormwood, *U:* Antipyretic, Tonic, Skin allergy, *Fl. & Fr.:* Sept. – Nov.  
1836 – Wall. ex Besser in *Bull. Soc. Imp. Nat. Mosc.* **9:** 57. 1881 – Hook. f., *Fl. Brit. India* **3:** 326. 1984 – Naithani, *Fl. Chamoli* **1:** 310. 1999 – Gaur, *Fl. Distt. Garh. N. W. Himal. (with ethnobotanical notes)* 558. 2001 – Samant *et al.* from Valley of flowers National Park in *Himal. Biosp. Reser.* **3(1&2):** 6.

#### **Artemisia vulgaris L.**

*Syn:* *A. nilagirica* var. *septentrionalis* (C.B. Clarke) Pampanini, *Ht:* Shrub, *V:* Kunjaa, *H:* Dona, *S:* Damnak, *E:* Mugwort, *U:* Ulcer, Ear trouble, *A:* up to 1500 m, *Fl. & Fr.:* Jul. – Dec.  
1881 – Hook. f., *Fl. Brit. India* **3:** 325. 1876 – C. B. Clarke, *Comp. Indicae* 162. 1977 – Babu, *Herb. Fl. D. Dun* 241. 1984 – Naithani, *Fl. Chamoli* **1:** 310. 1994 – Kirtikar & Basu, *Ind. Med. Plant* (second ed.) **2:** 1394. 1999 – Gaur, *Fl. Distt. Garh. N. W. Himal. (with ethnobotanical notes)* 558.

#### **Aster ericoides L.**

*Ht:* Herb (Annual), *E:* Aster, *U:* Cough, pulmonary affection, Antimalarial, *Fl. & Fr.:* Aug. – Oct.  
1753 – Linnaeus, *Sp. Pl.* 875. 1999 – Gaur, *Fl. Distt. Garh. N. W. Himal. (with ethnobotanical notes)* 596.

#### **Aster peduncularis Wall. ex Nees**

*Syn:* *Amphirhaphis peduncularis* DC., *Ht:* Herb, *V:* Phulyan, *U:* Stomachic, *A:* up to 1800 m  
1826 – DC., *Prodr.* **5:** 344. 1881 – Hook. f., *Fl. Brit. India* **3:** 252. 1999 – Gaur, *Fl. Distt. Garh. N. W. Himal. (with ethnobotanical notes)* 559. 2001 – Samant *et al.* from Valley of Flowers National Park in *Himal. Biosp. Reserv.* **3(1&2):** 6.

#### **Aster thomsonii C. B. Clarke**

*Syn:* *Callimeris flexuosus* Royle ex DC., *Ht:* Herb, *V:* Phulari, *E:* Thomson Aster, *U:* Indigestion, *Fl. & Fr.:* Aug. – Oct.  
1876 – C. B. Clarke in *Comp. Indicae* 48. 1881 – Hook. f., *Fl. Brit. India* **3:** 252. 1984 – Naithani, *Fl. Chamoli* **1:** 312. 1999 – Gaur, *Fl. Distt. Garh. N. W. Himal. (with ethnobotanical notes)* 559. 2001 – Samant *et al.* from Vallley of Flowers National Park in *Himal. Biosp. Reser.* **3(1&2):** 6.

#### **Bidens biternata (Lour.) Merrill & Sherff.**

*Syn:* *Coreopsis biternata* Lour., *Ht:* Herb, *V:* Mangrinya, *H:* Chirchitta, *E:* Blackjack, *U:* Ear and Eye disorder, *Fl. & Fr.:* Mar. – Oct.  
1790 – Lour., *Fl. Cochinch.* 508. 1881 – Hook. f., *Fl. Brit. India* **3:** 309. 1977 – Babu, *Herb. Fl. D. Dun* 242. 1999 – Gaur, *Fl. Distt. Garh. N. W. Himal. (with ethnobotanical notes)* 560.

#### **Bidens pilosa L.**

*Syn:* *B. chinensis acut. non* Willd., *Ht:* Herb, *V:* Kuree, *H:* Kumar, *Kumra*, *Kurei*, *E:* Bur – Marigold, *U:* Acute and Chronic Hepatitis, *Eczima*, *Itching*, *Ulcers*, *A:* up to 1500 m, *Fl. & Fr.:* Mar. – Aug.  
1753 – Linnaeus, *Sp. Pl.* 832. 1881 – Hook. f., *Fl. Brit. India* **3:** 309. 1984 – Naithani, *Fl. Chamoli* **1:** 313. 1994 – Kirtikar & Basu, *Ind.*

*Med. Plant* (second ed.) **2:** 1373. 1999 – Gaur, *Fl. Distt. Garh. N. W. Himal. (with ethnobotanical notes)* 560. 1999 – Joshi *et al.* Diversity, Distribution and Indigenous use of Medicinal and Edible Plants of Nanda Devi Biosphere Reserve **I** in *Himal. Biosp. Reser.* **1(1&2):** 49-65.

#### **Blumea lacera (Burm.f.) DC.**

*Syn:* *Conyza lacera* Burm. f., *Ht:* Herb, *V:* Kakranda, *Kukurdara*, *H:* Jangli Mulli, *S:* Kukuradru, *U:* Cough, Bronchitis, Rhinitis, Dysentery, *Fl. & Fr.:* Jan. – Dec.  
1768 – Burm. f., *Fl. Indica* 180.t.59. 1881 – Hook. f., *Fl. Brit. India* **3:** 263. 1977 – Babu, *Herb. Fl. D. Dun* 245. 1994 – Kirtikar & Basu, *Ind. Med. Plant* (second ed.) **2:** 1341. 1999 – Gaur, *Fl. Distt. Garh. N. W. Himal. (with ethnobotanical notes)* 562.

#### **Blumea lanceolaria (Roxb.) Druce**

*Syn:* *Conyza lanceolaria* Roxb., *Ht:* Shrub, *U:* Wounds, Cuts, *Fl. & Fr.:* Feb. – May  
1832 – Roxb., *Fl. Indica* **2,3:** 432. 1881 – Hook. f., *Fl. Brit. India* **3:** 269. 1977 – Babu, *Herb. Fl. D. Dun* 246. 1999 – Gaur, *Fl. Distt. Garh. N. W. Himal. (with ethnobotanical notes)* 562.

#### **Calendula officinalis L.**

*Ht:* Herb (Annual), *E:* Pot marigold, Scotch marigold, *U:* Anti-viral, Anti-septic, Astringent, Anti-inflammatory, *A:* 300-2200 m, *Fl. & Fr.:* 1753 – Linnaeus, *Sp. Pl.* 921. 1881 – Hook. f. in *Fl. Brit. India* **3:** 357. 1999 – Gaur, *Fl. Distt. Garh. N. W. Himal. (with ethnobotanical notes)* 596.

#### **Carpesium abrotanoides L.**

*Syn:* *C. racemosum* Wall., *Ht:* Herb, *V:* Kuleo, *U:* Antiplasmodial, Laxative, Diuretic, Anthelmintic, *A:* up to 2100 m, *Fl. & Fr.:* Aug. – Nov.  
1753 – Linnaeus, *Sp. Pl.* 860. 1881 – Hook. f., *Fl. Brit. India* **3:** 301. 1984 – Naithani, *Fl. Chamoli* **1:** 317. 1999 – Gaur, *Fl. Distt. Garh. N. W. Himal. (with ethnobotanical notes)* 565.

#### **Carthamus tinctorius L.**

*Ht:* Herb (Annual), *V:* Kusumb, *H:* Kusum, *S:* Kusumba, *E:* Saf flower, *U:* Chronic disorder, Blood Purifier, Laxative, Diaphoretic, *A:* 300-1500 m,  
1753 – Linnaeus, *Sp. Pl.* 830. 1881 – 1753 – Linnaeus, *Sp. Pl.* 830. 1881 – Hook. f. in *Fl. Brit. India* **3:** 386. 1999 – Gaur, *Fl. Distt. Garh. N. W. Himal. (with ethnobotanical notes)* 596.

#### **Centaurea cyanus L.**

*Syn:* *C. lanata* Roxb., *Ht:* Herb (Annual), *E:* Corn flower, Blue bottle, *U:* Conjunctivitis,  
1753 – Linnaeus, *Sp. Pl.* 875. 1832 – Roxb., *Fl. Indica* **2,3:** 644. 1999 1753 – Linnaeus, *Sp. Pl.* 875. – Gaur, *Fl. Distt. Garh. N. W. Himal. (with ethnobotanical notes)* 596.

#### **Centipeda minima (L.) A. Braun & Ascherson**

*Syn:* *Astimisia minima* L., *Ht:* Herb, *V:* Nakh-Chhikni, *S:* Chikkika, *E:* Sneez Weed, *U:* Dipurative, Diuretic, *A:* up to 800 m, *Fl. & Fr.:* Jan. – Dec.  
1723 – Linnaeus, *Sp. Pl.* 849. 1881 – Hook. f., *Fl. Brit. India* **3:** 317. 1977 – Babu, *Herb. Fl. D. Dun* 251. 1999 – Gaur, *Fl. Distt. Garh. N. W. Himal. (with ethnobotanical notes)* 565.

#### **Centratherum anthelminticum (Willd) Kuntze**

*Syn:* *Vernonia anthelmintica* (L.) Willd., *Ht:* Herb, *V:* Kalijeeri, Dhorajeeri, Ghranjiri, *H:* Somraji, *S:* Agnibija, Kshudrapatra, *E:* Purple Fleabane, *U:* Analgesic, Antipyretic, *Fl. & Fr.:* Aug. – Nov.  
1763 – Linnaeus, *Sp. Pl. ed. 2:* 1207. 1881 – Hook. f., *Fl. Brit. India* **3:** 236. 1977 – Babu, *Herb. Fl. D. Dun* 251. 1994 – Kirtikar & Basu, *Ind. Med. Plant* (second ed.) **2:** 1325. 1999 – Gaur, *Fl. Distt. Garh. N. W. Himal. (with ethnobotanical notes)* 594.

#### **Chrysanthemum cinerariaefolium Vis.**

*Ht:* Herb, *V:* Pyrethrum, *H:* Guldawali, *E:* Daisy, *U:* Insecticide, *A:* 350-2500 m,

1847- Vis., *Fi. Dalmat.* **11**:88. 1974 – Brewer, *Euphytica* 19: 121-124. 1999 – Gaur, *Fl. Distt. Garh. N. W. Himal. (with ethnobotanical notes)* 596.

***Chrysanthmum carinatum* Schousbe.**

*Ht:* Herb (Annual), *E:* Tricolour Daisy, *U:* Anti-viral, Anti-septic, Anti-Inflammatory, *A:* 300-600 m, 1801 – Schousbe., *Vextr. Maroklo.* 198. 1999 – Gaur, *Fl. Distt. Garh. N. W. Himal. (with ethnobotanical notes)* 596.

***Chrysanthmum cononarium* L.**

*Ht:* Herb (Perennial), *H:* Akurkurra, *S:* Chanramallika, *E:* Crown Daisy, *U:* Gonorrhoea, Conjunction, 1753 – Linnaeus, *Sp. Pl.* 1254. 1999 – Gaur, *Fl. Distt. Garh. N. W. Himal. (with ethnobotanical notes)* 596.

***Chrysanthmum indicum* L.**

*Ht:* Herb (Perennial), *H:* Guldauli, *S:* Bahupatrika, Bringhesta, *E:* Pyrethrum, *U:* Diuretic, Carminative, Blood purifier, Stomachic, 1753 – Linnaeus, *Sp. Pl.* 889. 1994 – Kirtikar & Basu, *Ind. Med. Plant* (second ed.) **2**: 1380. 1999 – Gaur, *Fl. Distt. Garh. N. W. Himal. (with ethnobotanical notes)* 596.

***Chrysanthmum leucanthemum* L.**

*Syn:* *Leucanthemum vulgare*, *Ht:* Herb (Perennial), *E:* Oxeye Daisy, *U:* Bronchitis, Diuretic, Astringent, Stomach Ulcer, *A:* 1500-2400 m, 1753 – Linnaeus, *Sp. Pl.* 888. 1999 – Gaur, *Fl. Distt. Garh. N. W. Himal. (with ethnobotanical notes)* 596.

***Cichorium endivia* L.**

*Ht:* Herb (Annual), *H:* Kashini, *E:* Garden Endive, *U:* Febrifuge, Fever, Tonic, Demulcent, *A:* 300-1500 m, 1753 – Linnaeus, *Sp. Pl.* 813. 1994 – Kirtikar & Basu, *Ind. Med. Plant* (second ed.) **2**: 1435. 1999 – Gaur, *Fl. Distt. Garh. N. W. Himal. (with ethnobotanical notes)* 596.

***Cnicus verutum* (D. Don) Spreng.**

*Syn:* *Cnicus verutus* D. Don, *Ht:* Herb, *V:* Kandaru, Kardra, *E:* Indian Thistle, *U:* Fever, Constipation, *Fl. & Fr.:* Aug. – Dec. 1825 – D. Don, *Prodr. Fl. Nep.* 167. 1881 – Hook. f., *Fl. Brit. India* **3**: 362. 1999 – Gaur, *Fl. Distt. Garh. N. W. Himal. (with ethnobotanical notes)* 567.

***Cirsium Wallichii* DC.**

*Syn:* *Cnicus Wallii* (DC.) C. B. Clarke, *Ht:* Herb, *V:* Burunse, Kendeiya, *H:* Kandra, *E:* Indian Thistle, *U:* Dysentery, *A:* 1300-3000 m, *Fl. & Fr.:* Jul. – Nov. 1838 – DC., *Prodr.* **6**: 643. 1881 – Hook. f., *Fl. Brit. India* **3**: 236. 1977 – Babu, *Herb. Fl. D. Dun* 254. 1984 – Naithani, *Fl. Chamoli* **1**: 319. 1999 – Gaur, *Fl. Distt. Garh. N. W. Himal. (with ethnobotanical notes)* 567. 2001 – Samant *et al.* from Valley of Flowers National Park in *Himal. Biosp. Reser.* **3(1&2)**: 6.

***Cosmos bipinnata* Cav.**

*Ht:* Herb (Annual), *E:* Spanish needle, *U:* Anti-viral, Anti-septic, Blood Tonic, Jaundice, *A:* 300-1800 m, *Fl. & Fr.:* May – Sept. 1791 – Cav., *Icon.* **1**:10. 1999 – Gaur, *Fl. Distt. Garh. N. W. Himal. (with ethnobotanical notes)* 596.

***Dahlia imperialis* Roezl ex Ortigies**

*Syn:* *D. rosea* Cav., *Ht:* Herb, *E:* Imparialis Dahlia, *U:* Urinary disorder, Epilepsy, *A:* 300-1800 m, *Fl. & Fr.:* Aug. – Oct. 1863 – Roezl ex Ortigies in *Gart. Fl.* 243. 1794 – Cav., *Icon.* **3**: 37. 1999 – Gaur, *Fl. Distt. Garh. N. W. Himal. (with ethnobotanical notes)* 596.

***Echinops cornigerus* DC.**

*Ht:* Herb, *V:* Kantela, Kandara, *H:* Utakanta, *S:* Kantalu, Utati, Kantaphala, *E:* Globe- Thistle, *U:* Fever, Urinary Trouble, *A:* 1000-2000 m, *Fl. & Fr.:* Jul. – Oct.

1838 – DC., *Prodr.* **6**: 525. 1881 – Hook. f., *Fl. Brit. India* **3**: 358. 1977 – Babu, *Herb. Fl. D. Dun* 260. 1999 – Gaur, *Fl. Distt. Garh. N. W. Himal. (with ethnobotanical notes)* 571.

***Echinops echinatus* Roxb.**

*Ht:* Herb, *V:* Kantela, Kandara, *H:* Gokhru, *S:* Kantalu, Kantphala, *E:* Globe – Thistle, *U:* Malarial fever, Kidney pain, *A:* 1200-2000 m, *Fl. & Fr.:* Feb. – Aug. 1832 – Roxb., *Fl. Indica.* **2.3**: 447. 1881 – Hook. f., *Fl. Brit. India* **3**: 358. 1994 – Kirtikar & Basu, *Ind. Med. Plant* (second ed.) **2**: 1414. 1999 – Gaur, *Fl. Distt. Garh. N. W. Himal. (with ethnobotanical notes)* 572.

***Eclipta alba* (L.) Hassk.**

*Syn:* *Eclipta prostrata* (L.) L., *Ht:* Herb, *V:* Bhangru, *H:* Bhangru, Bhangri, *S:* Bhringraj, Kesharaj, Suparna, *E:* False Daisy, *U:* Liver Tonic, Rejuvenative, Dermatitis, *A:* up to 2000 m, *Fl. & Fr.:* Jan. – Dec. 1753 – Linnaeus, *Sp. Pl.* 902. 1881 – Hook. f., *Fl. Brit. India* **3**: 304. 1977 – Babu, *Herb. Fl. D. Dun* 260. 1999 – Gaur, *Fl. Distt. Garh. N. W. Himal. (with ethnobotanical notes)* 572.

***Elephantopus scaber* L.**

*Ht:* Herb, *V:* Mayurjati, Adhomukha, *H:* Mayurjata, Gobhi, *S:* Anadujivha, Darvika, *E:* Prickly-leaved Elephant's Foot, *U:* Anaemia, Hepatitis, Cough and Cold, *Fl. & Fr.:* Aug. – Dec. 1753 – Linnaeus, *Sp. Pl.* 814. 1881 – Hook. f., *Fl. Brit. India* **3**: 242. 1977 – Babu, *Herb. Fl. D. Dun* 261. 1994 – Kirtikar & Basu, *Ind. Med. Plant* (second ed.) **2**: 1328. 1999 – Gaur, *Fl. Distt. Garh. N. W. Himal. (with ethnobotanical notes)* 572.

***Emilia sonchifolia* (L.) DC.**

*Syn:* *Cacalia sonchifolia* L., *Ht:* Herb, *V:* Hirankuri, Dudhi, *H:* Kirankari, *S:* Dravanti, *U:* Conjunctivities, Ulcer, Worm Infection, *A:* up to 2000 m, *Fl. & Fr.:* Feb. – Jun. 1753 – Linnaeus, *Sp. Pl.* 835. 1881 – Hook. f., *Fl. Brit. India* **3**: 336. 1984 – Naithani, *Fl. Chamoli* **1**: 224. 1999 – Gaur, *Fl. Distt. Garh. N. W. Himal. (with ethnobotanical notes)* 573.

***Eupatorium adenophorum* Spreng.**

*Syn:* *Ageratina adenophora* (Spreng.) King & Robinson, *Ht:* Shrub, *V:* Kharna, Bakura, *E:* Hemp Agrimony, *U:* Dyspnea, Wound, Cough, *Fl. & Fr.:* Oct. – Mar. 1826 – Sprengel, *Syst. Veg.* **3**: 420. 1977 – Babu, *Herb. Fl. D. Dun* 264. 1999 – Gaur, *Fl. Distt. Garh. N. W. Himal. (with ethnobotanical notes)* 574.

***Galinsoga parviflora* Cav.**

*Ht:* Herb (Annual), *V:* Marchya, Banmara, *E:* Gallant Soldier, *U:* Diarrhoea, Vomiting, *A:* up to 2000 m, *Fl. & Fr.:* Apr. – Oct. 1795 – Cav., *Icon. Descr. Pl.* **3**: 41.t.281. 1881 – Hook. f., *Fl. Brit. India* **3**: 311. 1977 – Babu, *Herb. Fl. D. Dun* 267. 1984 – Naithani, *Fl. Chamoli* **1**: 326. 1999 – Gaur, *Fl. Distt. Garh. N. W. Himal. (with ethnobotanical notes)* 575. 2001 – Joshi *et al.* Diversity, Distribution & Indigenous Uses of Plant Species in Pindari Area of Nanda Devi Biosphere Reserve II. in *Ind. J. For.* **24(4)**: 514-536.

***Gerbera gossypina* (Royle) G. Beauv.**

*Syn:* *Chaptalia gossypina* Royle, *Ht:* Herb, *V:* Kapasee, Kapsalu, *U:* Manstrual disorder, Blood Pressure, Gastric, *A:* up to 2800 m, *Fl. & Fr.:* Mar. – Aug. 1835 – Royle, *Illus. Bot. Himal.* 251.t.59.f.2. 1881 – Hook. f., *Fl. Brit. India* **3**: 390. 1977 – Babu, *Herb. Fl. D. Dun* 267. 1984 – Naithani, *Fl. Chamoli* **1**: 326. 1999 – Gaur, *Fl. Distt. Garh. N. W. Himal. (with ethnobotanical notes)* 576. 2001 – Joshi *et al.* Diversity, Distribution & Indigenous Uses of Plant Species in Pindari Area of Nanda Devi Biosphere Reserve II. in *Ind. J. For.* **24(4)**: 514-536.

***Gnaphalium hypoleucum* DC.**

*Ht:* Herb, *V:* Buglya, Buglu, *E:* Cud weed, *U:* Cough, Backache, *A:* 1500-2400 m, *Fl. & Fr.:* Mar. – Oct.

1834 – DC. in Wight, *Contrib. Bot. India* 21. 1881 – Hook. f., *Fl. Brit. India* 3: 288. 1984 – Naithani, *Fl. Chamoli* 1: 327. 1999 – Gaur, *Fl. Distt. Garh. N. W. Himal. (with ethnobotanical notes)* 577.

**Helianthus annuus L.**

*Ht:* Herb, *V:* Suraj mukhi, *H:* Suraj Mukhi, *S:* Suryavarta, *E:* Sun Flower, *U:* Kidney and Pulmonary troubles, Spider medicine, *Fl. & Fr.:* Apr. – Oct. 1753 – Linnaeus, *Sp. Pl.* 904. 1977 – Babu, *Herb. Fl. D. Dun* 270. 1994 – Kirtikar & Basu, *Ind. Med. Plant* (second ed.) 2:1370. 1999 – Gaur, *Fl. Distt. Garh. N. W. Himal. (with ethnobotanical notes)* 578.

**Helianthus tuberosus L.**

*Ht:* Herb, *E:* Jerusalem Artichoke, *U:* Diabetes, Cough, Cold, A: 300-7500 m, *Fl. & Fr.:* Aug. – Nov. 1753 – Linnaeus, *Sp. Pl.* 905. 1999 – Gaur, *Fl. Distt. Garh. N. W. Himal. (with ethnobotanical notes)* 596.

**Helichrysum bracteatum (Ventenat) Andrews**

*Ht:* Herb (Annual), *E:* Paper Daisy, Everlasting Daisy, *U:* Diuretic, Cough, Cold, Aphrodisiac, *Fl. & Fr.:* May – Sept. 1805 – (Ventenat) Andrews, *Bot. Repos. Sub. t.* 428. 1999 – Gaur, *Fl. Distt. Garh. N. W. Himal. (with ethnobotanical notes)* 597.

**Inula cappa (Buch. – Ham. ex D. Don) DC.**

*Syn:* *Conyza cappa* Buch.- Ham. ex D. Don, *Ht:* Undershrub, *V:* Athhu, Tamagari, Anodyne, Carminative, Depurative, *E:* Sheep's Ear *U:* A: 1000-2400 m, *Fl. & Fr.:* 1825 – Buch.- Ham. ex D. Don, *Prodr. Fl. Nep.* 176. 1881 – Hook. f., *Fl. Brit. India* 3: 295. 1977 – Babu, *Herb. Fl. D. Dun* 271. 1984 – Naithani, *Fl. Chamoli* 1: 329. 1999 – Gaur, *Fl. Distt. Garh. N. W. Himal. (with ethnobotanical notes)* 579.

**Inula cuspidata (DC.) C. B. Clarke**

*Syn:* *Amphiraphis cuspidata* DC., *Ht:* Shrub, *V:* Jhuri, Pushkar, *U:* Dyspepsia, Colic, A: up to 2000 m, *Fl. & Fr.:* Sept. – Dec.

1836 – DC., *Prodr.* 5: 343. 1881 – Hook. f., *Fl. Brit. India* 3: 296. 1977 – Babu, *Herb. Fl. D. Dun* 271. 1984 – Naithani, *Fl. Chamoli* 1: 329. 1999 – Gaur, *Fl. Distt. Garh. N. W. Himal. (with ethnobotanical notes)* 579.

**Jurinea macrocephala Benth**

*Ht:* Herb, *V:* Gugal, Jari-Dhhp, *U:* Antimalarial, Eruption, Decoction, Colic, A: 3000-4000 m, *Fl. & Fr.:* Jul. – Sep. 1873 – Benth, Benth and Hook. *Gen. Pl. II*, 474. 1999 – Gaur, *Fl. Distt. Garh. N. W. Himal. (with ethnobotanical notes)* 595.

**Lactuca sativa L.**

*Syn:* *L. scariola* var. *sativa* Boiss., *Ht:* Herb (Annual), *V:* Salad, *H:* Kahu, *E:* Lettuce, *U:* Demulcent, Sedative, Diuretic, Leucoderma, 1753 – Linnaeus, *Sp. Pl.* 795. 1875 – Boissier, *Fl. Or.* 3:809. 1881 – Hook. f. in *Fl. Brit. India* 3:404. 1999 – Gaur, *Fl. Distt. Garh. N. W. Himal. (with ethnobotanical notes)* 597.

**Laggera alata (D. Don) Schultz-Bipon. ex Oliver**

*Syn:* *Bluma alata* (D. Don) DC., *Ht:* Herb, *V:* Lumra, *U:* Anti-inflammatory, Psychomedicine *Fl. & Fr.:* Aug. – Nov. 1825 – D. Don, *Prodr. Fl. Nep.* 171. 1881 – Hook. f., *Fl. Brit. India* 3: 271. 1984 – Naithani, *Fl. Chamoli* 1:332. 1999 – Gaur, *Fl. Distt. Garh. N. W. Himal. (with ethnobotanical notes)* 581.

**Launaea aspleniifolia (Willd.) Hook. f.**

*Syn:* *Prenanthes aspleniifolia* Willd., *Ht:* Herb, *V:* Dudhliya, *H:* Musakani, *U:* diarrhoea, A: up to 1000 m, *Fl. & Fr.:* mar. – Oct.

1803 – Willd., *Sp. Pl.* 3: 1540. 1881 – Hook. f., *Fl. Brit. India* 3: 415. 1977 – Babu, *Herb. Fl. D. Dun* 274. 1994 – Kirtikar & Basu, *Ind. Med. Plant* (second ed.) 2:1370. 1999 – Gaur, *Fl. Distt. Garh. N. W. Himal. (with ethnobotanical notes)* 578.

**Metricaria chamomilla L.**

*Syn:* *Chamomilla chamomilla* (L.) Rydb., *Ht:* Herb, *H:* Chamomile, *E:* German Chamomile, *U:* Copugh, Cold, Cosmatic, A: 350-2500 m, *Fl. & Fr.:* Jun. – Sept. 1753 – Linnaeus, *Sp. Pl.* 862.

**Prenanthes violaeifolia Decne.**

*Syn:* *Cicerbita violaeifolia* (Decne.) G. Beauv., *Ht:* Perennial Herb, *V:* Pitlya, *U:* Dismenorrhoea, *Fl. & Fr.:* Aug. – Oct. 1844 – Decne., *Jacquem. Voy.* 4(Bot.): 100.t.108. 1881 – Hook. f., *Fl. Brit. India* 3: 412. 1984 – Naithani, *Fl. Chamoli* 1: 337. 1999 – Gaur, *Fl. Distt. Garh. N. W. Himal. (with ethnobotanical notes)* 585.

**Saussurea albescens (DC.) Schultz-Bipon.**

*Syn:* *Aplotaxis albescens* DC., *Ht:* Herb (Perennial), *V:* Pirya, *U:* Bronchitis, *Fl. & Fr.:* Sept. – Nov. 1838 – DC., *Prodr.* 6: 540. 1881 – Hook. f., *Fl. Brit. India* 3: 374. 1977 – Babu, *Herb. Fl. D. Dun* 277. 1984 – Naithani, *Fl. Chamoli* 1: 339. 1999 – Gaur, *Fl. Distt. Garh. N. W. Himal. (with ethnobotanical notes)* 586.

**Saussurea candicans (DC.) Schultz-Bipon.**

*Syn:* *S. heteromalla* (D. Don) Hand. – Mazz., *Ht:* Herb (Annual), *V:* Murang, *U:* Carminative, Antibacterial, *Fl. & Fr.:* Aug. – Oct.

1838 – DC., *Prodr.* 6: 540. 1881 – Hook. f., *Fl. Brit. India* 3: 373. 1994 – Kirtikar & Basu, *Ind. Med. Plant* (second ed.) 2:1419. 1999 – Gaur, *Fl. Distt. Garh. N. W. Himal. (with ethnobotanical notes)* 586.

**Saussurea gossypiphora D. Don.**

*Ht:* Herb, *V:* Bherghandha, *H:* Kasturi Kamal, *S:* Phenkamal, *U:* Cuts and Wounds, Check bleeding, A: 4300-5600 m, *Fl. & Fr.:* 2001 – Samant *et al.* Valley of Flower National Park *Himal Biosp. Reser.* 3(1&2): 6.

**Saussurea costus (Falc.) Lepsch.**

*Syn:* *Saussurea lappa* Clarke, *Ht:* Herb (Perennial), *V:* Kuth, *H:* Kuth, *S:* Kusth, *E:* Costus, *U:* Antiseptic, Anthelmintic, Cholera, A: 2200-3500 m, *Fl. & Fr.:* May. – Oct. Clarke, *Comp. Ind.* 233. 1994 – Kirtikar & Basu, *Ind. Med. Plant* (second ed.) 2:1420.

**Saussurea hypoleuca Spreng. ex DC.**

*Syn:* *S. auriculata* (Spreng. ex DC.) Schultz- Bipon., *Ht:* Herb (Perennial), *V:* Thimra, Nurya, *S:* Kustha, *U:* Antiseptic, Anthelmintic, Cholera, A: 2200-3500 m, *Fl. & Fr.:* Jul. – Aug.

1838 – Spreng. ex DC., *Prodr.* 6: 541. 1881 – Hook. f., *Fl. Brit. India* 3: 374. 1984 – Naithani, *Fl. Chamoli* 1: 340. 1994 – Kirtikar & Basu, *Ind. Med. Plant* (second ed.) 2:1420. 1999 – Gaur, *Fl. Distt. Garh. N. W. Himal. (with ethnobotanical notes)* 586.

**Saussurea obvallata (DC.) Edgew.**

*Ht:* Herb (Perennial), *V:* Kounl, Brahmkamal, *H:* Brahmakamal, *S:* Sthalpadam, *U:* Paralysis of limbs, A: Around 4000 m, *Fl. & Fr.:* 1999 – Joshi *et al.* from Nanda Devi Biosphere Reserve in *Himal. Biosp. Reser.* 1(1&2): 49-65. 1994 – Kirtikar & Basu, *Ind. Med. Plant* (second ed.) 2:1419. 2001 – Samant *et al.* from Valley of Flower National Park in *Himal Biosp. Reser.* 3(1&2): 6.

**Senecio graciliflorus D C.**

*Ht:* Herb (Perennial), *V:* Luchee, Kikret, *E:* Groundsel, *U:* Insect bite, Ringworm diseases, A: 3000-4000 m, *Fl. & Fr.:* May – Oct. 1838 – DC., *Prodr.* 6: 365. 1881 – Hook. f., *Fl. Brit. India* 3: 338. 1984 – Naithani, *Fl. Chamoli* 1: 345. 1999 – Gaur, *Fl. Distt. Garh. N. W. Himal. (with ethnobotanical notes)* 587. 2001 – Samant *et al.* from Valley of Flower National Park in *Himal. Biosp. Reser.* 3(1&2): 7.

**Senecio laetus Edgew.**

*Syn:* *S. chrysanthemoides* DC., *Ht:* Herb, *V:* Kalya di Jar, *U:* Asthma, Respiratory problems

*Fl. & Fr.*: Jun. – Nov.

1846 – Edgew in *Trans. Linnaeus Soc. Bot.* **20**: 74. 1881 – Hook. f., *Fl. Brit. India* **3**: 339. 1984 – Naithani, *Fl. Chamoli* **1**: 345. 1995 – Mathur in Hajra *et al.*, *Fl. India* **13**: 263. 1999 – Gaur, *Fl. Distt. Garh. N. W. Himal. (with ethnobotanical notes)* 587. 2001 – Samant *et al.* from Valley of Flower National Park in *Himal. Biosp. Reser.* **3(1&2)**: 7.

**Senecio nudicaulis Wall. ex DC.**

*Ht*: Herb (Perennial), *V*: Galpatiya, Kakrata, *H*: Neelkanthi, *U*: Fever, Colic, *A*: up to 1500 m

*Fl. & Fr.*: Mar. – Oct.

1825 – Buch.- Ham. ex D. Don, *Prodr. Fl. Nep.* 178. 1881 – Hook. f., *Fl. Brit. India* **3**: 340. 1977 – Babu, *Herb. Fl. D. Dun* 278. 1984 – Naithani, *Fl. Chamoli* **1**: 346. 1999 – Gaur, *Fl. Distt. Garh. N. W. Himal. (with ethnobotanical notes)* 587. 2001 – Samant *et al.* from Valley of Flower National Park in *Himal. Biosp. Reser.* **3(1&2)**: 7.

**Siegesbeckia orientalis L.**

*Ht*: Herb (Annual), *V*: Liskura, Gobariya, *U*: Anodyne, Blood Tonic, *A*: up to 2000 m

*Fl. & Fr.*: Jul. – Nov.

1753 – Linnaeus, *Sp. Pl.* 900. 1881 – Hook. f., *Fl. Brit. India* **3**: 304. 1977 – Babu, *Herb. Fl. D. Dun* 279. 1984 – Naithani, *Fl. Chamoli* **1**: 347. 1994 – Kirtikar & Basu, *Ind. Med. Plant* (second ed.) **2**:1358. 1999 – Gaur, *Fl. Distt. Garh. N. W. Himal. (with ethnobotanical notes)* 588.

**Silybum marianum (L.) Gaertn.**

*Syn*: *Cardoos marinus* L., *Ht*: Herb, *V*: Silybum, *H*: Silybum, *E*: Milk Thistle, *U*: Liver tonic, Diuretic, Astringent, *A*: 350-1000 m, *Fl. & Fr.*: Jul. – Oct.

1791 - Gaertn., *Fruct. Sem. Pl.* 2:378.

**Solidago virgaurea L.**

*Ht*: Herb, *V*:Pinja-phool, Sonali, *H*: *S*: *E*: Common Golden Rod, Aaron's-rod, *U*: Kidney tonic, Inflammation, Irritation, Digestion, *A*: up to 3000 m, *Fl. & Fr.*: Jul. – Oct.

1753 – Linnaeus, *Sp. Pl.* 880. 1881 – Hook. f., *Fl. Brit. India* **3**: 245. 1977 – Babu, *Herb. Fl. D. Dun* 280. 1984 – Naithani, *Fl. Chamoli* **1**: 337. 1994 – Kirtikar & Basu, *Ind. Med. Plant* (second ed.) **2**:1335. 1999 – Gaur, *Fl. Distt. Garh. N. W. Himal. (with ethnobotanical notes)* 589. 2001 – Samant *et al.* from Valley of Flower National Park in *Himal. Biosp. Reser.* **3(1&2)**: 7.

**Sonchus asper (L.) Hill.**

*Syn*: *S. oleraceus* var. *asper* L., *Ht*: Herb (Annual), *V*: Choupali, Pili dudhi, *E*: Rough Sow Thistle, Milk Thistle, *U*: Tonic, Diuretic, Jaundice, *A*: up to 3000 m, *Fl. & Fr.*: Mar.- Sept.

1753 – Linnaeus, *Sp. Pl.* 794. 1881 – Hook. f., *Fl. Brit. India* **3**: 414. 1977 – Babu, *Herb. Fl. D. Dun* 181. 1994 – Kirtikar & Basu, *Ind. Med. Plant* (second ed.) **2**:1442. 1999 – Gaur, *Fl. Distt. Garh. N. W. Himal. (with ethnobotanical notes)* 589.

**Sonchus brachyotus DC.**

*Syn*: *S. arvensis* L., *Ht*: Herb (Perennial), *V*: Karatu, *H*: Sahadevi, *E*: Corn Sow Thistle, *U*: Dermatitis, Ulcer, Stomach problem, *A*: up to 2500 m, *Fl. & Fr.*: Apr.- Oct.

1753 – Linnaeus *Sp. Pl.* 793. 1838 – DC., *Prodr.* **7**: 186. 1881 – Hook. f., *Fl. Brit. India* **3**: 414. 1977 – Babu, *Herb. Fl. D. Dun* 282. 1984 – Naithani, *Fl. Chamoli* **1**: 348. 1999 – Gaur, *Fl. Distt. Garh. N. W. Himal. (with ethnobotanical notes)* 590.

**Sonchus oleraceus L.**

*Ht*: Herb, *V*: Dudiya, Dudhkani, *H*: Dudhi, *E*: Milk Thistle, *U*: Anticancerous, Febrifuge, Fever, Stimulate menstrual flow, Liver tonic, *A*: up to 2200 m, *Fl. & Fr.*: Mar. – Nov.

1753 – Linnaeus, *Sp. Pl.* 794. 1881 – Hook. f., *Fl. Brit. India* **3**: 414. 1977 – Babu, *Herb. fl. D. Dun* 282. 1984 – Naithani, *Fl. Chamoli* **1**: 249. 1994 – Kirtikar & Basu, *Ind. Med. Plant* (second ed.) **2**:1442. 1999 – Gaur, *Fl. Distt. Garh. N. W. Himal. (with ethnobotanical*

*notes)* 589. 2001 – Joshi *et al.* Diversity, Distribution & Indigenous Uses of Plant Species in Pindari Area of Nanda Devi Biosphere Reserve II. in *Ind. J. For.* **4(4)**: 514-536.

**Sphaeranthus indicus L.**

*Syn*: *S. senegalensis* DC., *Ht*: Herb, *V*: Gorkhmundi, *H*: Gorakh – Mundi, Mundi, *S*: Mundi, Bhikshugparivraji, Aruna, *E*: East Indian Globe Thistle, *A*: up to 1000 m, *Fl. & Fr.*: Mar.- Jun.

1753 – Linnaeus, *Sp. Pl.* 794. 1881 – Hook. f., *Fl. Brit. India* **3**: 275. 1977 – Babu, *Herb. Fl. D. Dun* 283. 1994 – Kirtikar & Basu, *Ind. Med. Plant* (second ed.) **2**:1347. 1999 – Gaur, *Fl. Distt. Garh. N. W. Himal. (with ethnobotanical notes)* 590.

**Stevia rebaudiana (Bertoni) Hemsl.**

*Ht*: Herb, *V*: Madhukari, *H*: Madhukari, *E*: Stevia, *U*: Contraceptives, cholesterol

suppressing, antitumour activity, Calorie free sweetener, *A*: 300-1600 m, *Fl. & Fr.*: Aug. –Nov.

Author Citation:.

**Synotis alatus (Wall. ex DC.) C. Jeff. & Y.L.Chen**

*Syn*: *Senecio alatus* Wall ex. DC., *Ht*: Herb (Perennial), *V*: Galpatiya, *U*: Fever, *Fl. & Fr.*: Aug. – Oct.

1838 – Wall. ex DC., *Prodr.* **6**: 368. 1881 – Hook. f., *Fl. Brit. India* **3**: 353. 1984 – Naithani, *Fl. Chamoli* **1**: 344. 1999 – Gaur, *Fl. Distt. Garh. N. W. Himal. (with ethnobotanical notes)* 591.

**Tagetes erecta L.**

*Ht*: Herb, *V*: Genda, *H*: Genda, *S*: Jhandu, *E*: Merigold, *U*: Wounds, Otagia, *A*: up to 1800 m

*Fl. & Fr.*: Jan. – Dec.

1753 – Linnaeus, *Sp. Pl.* 807. 1977 – Babu, *Herb. Fl. D. Dun* 284. 1994 – Kirtikar & Basu, *Ind. Med. Plant* (second ed.) **2**:1385. 1999 – Gaur, *Fl. Distt. Garh. N. W. Himal. (with ethnobotanical notes)* 592.

**Tanacetum longifolium Wall.**

*Syn*: *T. dolichophyllum* (Kitamura) Kitamura, *Ht*: Herb (Perennial), *V*:Guggal, Dhoop, *E*: Long leaved Tansy, *U*: Headache, Body ache, *A*: up to 3500 m, *Fl. & Fr.*: Aug. – Nov.

1838 – Wall. ex DC., *Prodr.* **6**: 130. 1881 – Hook. f., *Fl. Brit. India* **3**: 320. 1984 – Naithani, *Fl. Chamoli* **1**: 349. 1985 – Bisht *et al.*, Folk Medicines of Arakot Valley in Distt. Uttarkashi in : *Ind. Med. Pl.*(ed. P. Kaushik) 157-165. 1999 – Gaur, *Fl. Distt. Garh. N. W. Himal. (with ethnobotanical notes)* 592. 2001 – Samant *et al.* from Valley of Flower National Park in *Himal. Biosp. Reser.* **3(1&2)**: 7.

**Taraxacum officinale Weber.**

*Syn*: *Ht*: Herb (Perennial), *V*: Dudhi, Karata, Kanphuliya, *H*: Barau, Dugdheni, *S*: Dugdheni, *E*: Common Dandleon, Bitterwort, *U*: Migrains, Hepatitis, Headache, *Fl. & Fr.*: Feb. – Oct.

1780 – Weber in Wiggers, *Prim. Fl. Holsat.* 56. 1881 – Hook. f., *Fl. Brit. India* **3**: 401. 1977 – Babu, *Herb. Fl. D. Dun* 285. 1984 – Naithani, *Fl. Chamoli* **1**: 350. 1994 – Kirtikar & Basu, *Ind. Med. Plant* (second ed.) **2**:1436. 1999 – Gaur, *Fl. Distt. Garh. N. W. Himal. (with ethnobotanical notes)* 593. 1999 – Joshi *et al.* from Nanda Devi Biosphere Reserve in *Himal. Biosp. Reser.* **1(1&2)**: 49-65. 2001 – Samant *et al.* from Valley of Flower National Park in *Himal. Biosp. Reser.* **3(1&2)**:7.

**Tragopogon gracilis D. Don.**

*Ht*: Herb (Perennial), *V*: Gualsi, Induli, *U*: Wounds, *A*: up to 1800 m, *Fl. & Fr.*: Mar. – Sept.

1821 – D. Don in *Mem. Verm. Nat. Hist. Soc.* **3**: 414. 1881 – Hook. f., *Fl. Brit. India* **3**: 417. 1984 – Naithani, *Fl. Chamoli* **1**: 350. 1999 – Gaur, *Fl. Distt. Garh. N. W. Himal. (with ethnobotanical notes)* 593. 2001 – Samant *et al.* from Valley of Flower National Park in *Himal. Biosp. Reser.* **3(1&2)**: 7.

**Tridax procumbens L.**

*Ht*: Herb, *V*: Akalkohrhi, Kumra, Kanphuli, *E*: Maxican daisy, wild daisy, Coat button, *U*: Wounds, *A*: up to 1000 m, *U*: Anti-diabetic, Immuno-modulation, *Fl. & Fr.*: Jan. – Dec.

1753 – Linnaeus, *Sp. Pl.* 900. 1881 – Hook. f., *Fl. Brit. India* **3**: 311. 1977 – Babu, *Herb. Fl. D. Dun* 286. 1984 – Naithani, *Fl. Chamoli* **1**: 351. 1999 – Gaur, *Fl. Distt. Garh. N. W. Himal. (with ethnobotanical notes)* 594.

***Vernonia cinerea* (L.) Lessing**

*Syn: Conyza cinerea* L., *Ht:* Herb, *V:* Kalgira, Kaljiri, *H:* Sahadevi, *S:* Sadodi, *U:* Dysentry, Cough, Cold, *A:* up to 1500 m, *Fl. & Fr.:* Jan. – Dec.

1753 – Linnaeus, *Sp. Pl.* 862. 1881 – Hook. f., *Fl. Brit. India* **3**: 233. 1977 – Babu, *Herb Fl. D. Dun* 287. 1984 – Naithani, *Fl. Chamoli* **1**: 351. 1999 – Gaur, *Fl. Distt. Garh. N. W. Himal. (with ethnobotanical notes)* 594.

***Xanthium indicum* Koenig**

1/12/2010

*Syn: X. strumarium* L., *Ht:* Herb (Annual), *V:* Kuroo., Bhangra, Gokhuriya, *H:* Gokhru, Burchita, *S:* Arishta, *E:* Cocklebur, *A:* up to 1800 m, *Fl. & Fr.:* Jul. – Dec. 1832 – Koenig in Roxb., *Fl. Indica* **2.3**: 601. 1881 – Hook. f., *Fl. Brit. India* **3**: 303. 1977 – Babu, *Herb. Fl. D. Dun* 290. 1984 – Naithani, *Fl. Chamoli* **1**: 353. 1995 – Chowdhery in Hajra *et al.*, *Fl. India* **12**: 427. 1994 – Kirtikar & Basu, *Ind. Med. Plant* (second ed.) **2**:1356. 1999 – Gaur, *Fl. Distt. Garh. N. W. Himal. (with ethnobotanical notes)* 595.

**Common Abbreviation:**

asl- Above sea level, Ht - Height, H - Hindi name, Syn - Synonym, V - Vernacular name, S - Sanskrit name, U - Uses, A - Altitude, Fl - Flowering, Fr - Fruiting.