ABSTRACT
The paper presents 141 species of 20 genera belonging to tribe Cichorieae of family Asteraceae. The most dominant genus of this tribe is Taraxacum which represents 76 species followed by Lactuca and Crepis representing 14 and 7 species respectively inhabiting in Kashmir Himalayas of Jammu and Kashmir State.

Keywords: Flora, Asteraceae, Cichorieae, J & K, India.

INTRODUCTION
Jammu and Kashmir State is located on North-West of India and lies between 32°, 17’ N to 36°, 58’ N latitude and 73°, 26’ E to 80°, 30’ E longitude. The climate varies with respect to the altitude which reflects marked difference of variation in the amount of precipitation. The State of Jammu and Kashmir is differentiated in three geographical regions: Jammu, Kashmir and Ladakh. Asteraceae is one of the highly advanced and specialized among Dicotyledons comprising of 1052 taxa representing 162 genera (Hajra et al. 1995). Majority of them are herbs, some shrubs and trees of rare occurrence. Tribe Cichorieae of Family Asteraceae is also known as Lactuceae Cass. but the name Cichorieae Lam. & DC. (1806) has the priority. Members of the tribe are characterized by very important uniform characteristics such as possession of latex, capitula homogamous and rays or ligules 5-dentate. Bremer (1994) provided the first cladistic analysis the tribe, based on morphological characters. Many members of this tribe of Family Asteraceae in the flora of Jammu and Kashmir state are of a great economic value and a significant source of nutrition and medicines. The tribe is represented by 83 genera and 428 taxa all over the world and by 21 genera and 180 species in India. Bhellum and Magotra (1996) have published a Contribution of Family Asteraceae of district Doda of Jammu and Kashmir State. The present paper deals with
investigation of taxonomic status of 20 genera representing 141 species of the tribe Cichorieae in the Kashmir Himalayan flora tribe Cichorieae of Jammu and Kashmir State which accounts for 78.33% of the Indian Asteraceae. Therefore, tribe Cichorieae is well represented in the flora of Kashmir Himalayan region of Jammu and Kashmir State.

MATERIAL AND METHODS
Plant explorations were carried out in different seasons of the year at some selected sites in Jammu and Kashmir. This paper is based on the collection of angiosperm flora in general and family Asteraceae in particular between 2003 and 2007. The forays of two different types were undertaken round the year, the collection trips to distant places were of the duration of 3-7 days. In between, brief trips of 1-2 days durations were executed along or in the company of one or more helpers. In this way, it was possible to raise the collections from the different parts of the state. In the first year the collections were massive and in the subsequent years they reduced to solitary specimen. While collecting the plant specimens field numbers were allotted and relevant data about the plant was recorded in the field book. The specimens were carried to the Laboratory in the polythene bags, rucksacks or in plant press depending upon the length of trip and distance of the place of collection. The plants collected were pressed in the in wooden press wrapped in blotters. These specimens are changed frequently to reduce the discoloration of foliage and flowers and to avoid rotting. The dried specimens were mounted on the Herbarium sheets. Printed labels were pasted and relevant data was entered. These specimens were identified with the help of taxonomic literature of family Asteraceae.

RESULTS
The state of Jammu and Kashmir has a quite rich vegetation and varied climate. The precipitation is mostly in the form of snow at higher elevation. Some district floras have been compiled from this region. Certain area in this state remains inaccessible. In past, the some pockets of the state remained untouched, still neither the flora of the state nor the flora of all districts has been compiled so far. In view of the above lacunae and fragmentary compilations in the existing knowledge, it appeared rewarding to organize floristic surveys to various parts of Jammu and Kashmir state. In all more than 70 trips were undertaken to different places in different season of the year for about 4 years in succession. As a consequence, the compilation of the past and present collections 141 species
representing 20 genera of the tribe Cichorieae have been compiled belonging to Asteraceae inhabiting to the present limits of Kashmir Himalayas of Jammu and Kashmir state, India.

**Key to the species**

1. Pappus absent -----------------------------------------------11. *Lapsana*
2. Pappus present ---------------------------------------------2
3. Pappus of numerous simple hair (capillary) bristle ---------------3
4. Pappus of numerous plumose bristles ------------------------18
5. Achenes flattened or compressed ---------------------------4
6. Achenes cylindrical fusiform or terete, not flattened -------------------9
7. Achenes not beaked, not enlarged at the tip --------------------------16. *Sonchus*
8. Achenes beaked or unbeaked but not constricted below -----------------------18
9. Achenes toothed below the beak --------------------------------1. *Chondrilla*
10. Achenes not toothed below the beak ---------------------------6
11. Involucral bracts black bristly -----------------------------7
12. Involucral bracts not as above ------------------------------8
13. Involucral bracts 2-3 seriate; achenes --------------------------5. *Dubyaea*
14. Radical leaves long petioled -------------------------------8. *Ixeris*
15. Radical leaves sessile -----------------------------------------10. *Lactuca*
16. Achenes compressed ----------------------------------------17. *Sonchus*
17. Achenes narrow truncate at both the ends ------------------------11
18. Achenes 4-5 ribbed; inner involucral bracts scarious margined -------------------12. *Launaea*
19. Achenes 10-20 ribbed; inner involucral bracts not scarious margined 20. *Youngia*
20. Plants scapose, achenes beaked or tapering ----------------------18. *Taraxacum*
21. Plants with branched or unbranched stem leafy or subscapose, phyllaries uni- or biseriate ------------------13
22. Annual or biennial with well developed usually pinnatifid leaves heads campanulate, yellow, phyllaries uniseriate --------------------------14
23. Perennials, cauline leaves lanceolate, towards heads white, phyllaries biseriate ------------------16
14. Coarse, hispid herbs with straight or hooked hair, pappus feathery

15. Picris

14. Glabrous or hairy herbs without spines, pappus simple

--------------------------- 15

15. Stem dwarf, usually subterranean; phyllaries 1-3 seriate

17. Soroseris

15. Stem tall; 1-seriate

------------------- 4. Crepis

16. Perennials, cauline leaves lanceolate, towards heads white, phyllaries biseriate

16. Annual or biennial; leaves not lanceolate; heads not white; phyllaries not as above

16. Plants somewhat tomentose, not glandular pubescent, pappus pale yellow to red brown

------------------------------------------------------------------------------------------------------------- 18. Prenanthes

16. Plants glandular pubescent, pappus tomentose

---------------------------------------------- 7. Hieracium

17. Pappus of Plumose (feathery) bristles only

17. Pappus of ring of numerous minute scale or bristle

3. Cichorium

18. Plants of leafy stems branched; cauline leaves grass-like

19. Plants simple or branched, leaves not grass-like

--------------------------------------------------------------------------------------------------------------- 19. Scorzonera

19. Involucral bracts narrowly cylindrical, more than 3-seriate

19. Involucral bracts broadly campanulate, 1-seriate; achenes with long beak

--------------------------------------------------------------------------------------------------------------- 19. Tragopogon

20. Erect herbs; achenes 6-12 mm long, smooth

6. Garhadiolus

20. Erect or decumbent herbs; achenes 13-15 mm long, spiny

--------------------------------------------------------------------------------------------------------------- 9. Koelpinia

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Table 1. List of genera of tribe Cichorieae indicating number of species in Kashmir Himalayas.

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Name of the genus</th>
<th>Number of species in India</th>
<th>Number of species in J &amp; K State</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Chondrilla L.</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>2.</td>
<td>Cicerbita Wall.</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>3.</td>
<td>Cichorium L.</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>4.</td>
<td>Crepis L.</td>
<td>9</td>
<td>7</td>
</tr>
<tr>
<td>5.</td>
<td>Dubyaea DC.</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>6.</td>
<td>Garhadiolus Jaub.</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>7.</td>
<td>Hieracium L.</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>8.</td>
<td>Ixeris Cass.</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>9.</td>
<td>Koelpinia Pallas</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>10.</td>
<td>Lactuca L.</td>
<td>20</td>
<td>14</td>
</tr>
<tr>
<td>11.</td>
<td>Lapsana L.</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>12.</td>
<td>Launaea Cass.</td>
<td>9</td>
<td>7</td>
</tr>
</tbody>
</table>
Table 2. Bar graph showing the % age of Indian species of tribe Cichorieae in Kashmir Himalayas.
Table 3. Bar graph showing comparison number of species in Kashmir Himalayas, India of tribe Cichorieae of Asteraceae

DISCUSSION
The present study has been conducted on tribe Cichorieae of family Asteraceae in Kashmir Himalayas of Jammu and Kashmir State between 2000 – 2007. The species of this tribe has been distinguished from each other on the basis of morphological variations of the plants, florets and cypselae. In this group the significant features of the stem and leaf morphology; Phyllaries, number of series; achene morphology, shape, size, length of beak; presence or absence of pappus, simple or barbed. As many as 6 genera namely Cichorium, Dubyaea, Garhadiolus, Lapsana, Picris and Soroseris are represented by a single species in the state. The most dominant genus of this state of this tribe is Taraxacum having 76 species. The total number of species studied under the present investigation are 141 in comparison to 180 species of this tribe in India which represent 78.3 % of the species in India. Therefore the tribe is quite rich in this state in comparison to the other groups angiosperms.
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REFERENCES


