

**List of Students accompanied Educational Trip to Manali  
16-03-23 to 20-03-2023**

| List of Students accompanying Trip to Manali<br>16-03-23 to 20-03-2023 |                  |                  |
|--|------------------|------------------|
| M.Sc. (Botany)- II   |                  |                  |
| S. No.   | College Roll No. | Names            |
| 1  | 4901             | Anjali Dhiman    |
| 2  | 4902             | Apurva Ahlawat   |
| 3  | 4903             | Harleen Kaur     |
| 4  | 4904             | Harsimran Kaur   |
| 5  | 4905             | Inderpreet Kaur  |
| 6  | 4906             | Jaskiran Kaur    |
| 7  | 4907             | Jaspreet Kaur    |
| 8  | 4908             | Jyoti            |
| 9  | 4909             | Kajal            |
| 10   | 4911             | Mandeep Kaur     |
| 11   | 4912             | Manjul Chhikara  |
| 12   | 4913             | Minakshi         |
| 13   | 4914             | Nidhi            |
| 14   | 4915             | Palvi Gian Singh |
| 15   | 4917             | Ritu             |
| 16   | 4918             | Sehejpreet Kaur  |
| 17   | 4919             | Shabnam          |
| M.Sc. (Botany)- I  |                  |                  |
| 18   | 4810             | Jasanpreet Kaur  |
| 19   | 4812             | Palwinder Kaur   |
| B.Sc. (Medical)- III   |                  |                  |
| 20   | 401              | Aaisha           |
| 21   | 404              | Amanpreet Kaur   |
| 22   | 405              | Anika            |
| 23   | 407              | Anjali Rana      |
| 24   | 408              | Anshika Kalia    |
| 25   | 409              | Anureet Kaur     |
| 26   | 410              | Arshdeep Kaur    |
| 27   | 414              | Avnish Kaur      |
| 28   | 419              | Divya            |
| 29   | 422              | Gunika           |
| 30   | 424              | Gurleen Kaur     |
| 31   | 426              | Harleen Kaur     |
| 32   | 427              | Harshleen Kaur   |
| 33   | 429              | Harsimran Kaur   |
| 34   | 430              | Harvinder Kaur   |
| 35   | 432              | Japneet Kaur     |
| 36   | 437              | Kanika Garg      |
| 37   | 441              | Krishma Kaushal  |
| 38   | 443              | Mandeep Kaur     |
| 39   | 445              | Mehakdeep        |
| 40   | 446              | Nandini          |
| 41   | 454              | Raina Rani       |
| 42   | 461              | Rupinder Kaur    |
| 43   | 464              | Simran           |
| 44   | 469              | Khushi Arora     |
| 45   | 470              | Sonia Thakur     |
| 46   | 1074             | Neha             |

*BT d*  
Course Incharge

*Ramajit Bhatn*  
HOD (Botany)

*Principal*

Principal  
Govt. College for Girls  
Ludhiana



# Government College for Girls

Rakh Bagh, Ludhiana, Punjab 141001

NAAC Accredited 'A' Grade

Date...16 - Mar - 2023...

PG Department of Botany is organizing evaluative educational field trip to Manali and adjoining areas from 16<sup>th</sup> March, 2023 (Evening) to 20<sup>th</sup> March, 2023 (Morning), as part of the curriculum of M.Sc. (Botany) programme, as per the following itinerary:

|                       |   |
|-----------------------|---|
| 16-03-2023 (Thursday) | Starting from GCG, Ludhiana at 6:00 PM and travelling overnight |
| 17-03-2023 (Friday)   | Reaching Manali in morning                                      |
| 18-03-2023 (Saturday) | Stay at Manali  |
| 19-03-2023 (Sunday)   | Starting Return Journey after Lunch                             |
|                       | Reaching GCG, Ludhiana by early morning of 20-03-2023 (Monday)  |

The following staff of college is accompanying the students for the trip:

1. Dr. Ramanjit Bhatti
2. Dr. Tarunpreet Singh Thind
3. Ms. Sandhya Choudhary
4. Mr. Jasvir Singh (Lab Attendant)

There will be 46 students accompanying the trip. *The list of the students, accompanying the trip, is enclosed alongwith.*

*Ramanjit Bhatti*  
Head  
PG Department of Botany

*Jasvir Singh*  
16/3/23  
Principal  
Govt. College for Girls  
Ludhiana



## Field Trip to Manali & Adjoining Areas

### Objectives:

The purpose of the field trip for the M.Sc. (Botany) students is to offer them the opportunity to engage in hands-on and interactive learning experiences that go beyond reading textbooks and listening to lectures. Field trip to Manali and adjoining areas was planned to enhance students understanding and knowledge of the flora of Kullu Valley by exposing them to real-world and also understanding applications of the subject of botany.

### Outcomes:

1. **Experiential learning:** Field trip to Manali helped students to deepen their understanding of various concepts of Taxonomy and Embryology of angiosperms. They also studied various species of pteridophytes and gymnosperms in detail.
2. **Application of knowledge:** The trip allowed students to see how the theories and concepts of various topics of plant sciences, they learnt in the classroom, are applied in practical settings. This helped bridge the gap between theoretical knowledge and its real-world application, thus making the learning more meaningful and relevant.
3. **Observation and exploration:** Field trip provided students with the chance to observe and explore different sites around Manali like Solang Valley, Babeli Natural Park, van Vihar etc. This firsthand exposure helped stimulate curiosity, critical thinking, and observation skills.

  
Principal,  
Govt. College for Girls  
LUDHIANA

  
Course In charge





# SPECIMENS COLLECTED





## SPECIMENS IDENTIFIED



## FERNS

### LEPTOSPORANGIATE FERN

The **Polypodiidae**, commonly called **leptosporangiate ferns**, formerly **Leptosporangiatae**, are one of four subclasses of ferns, and the largest of these, being the largest group of living ferns, including some 11,000 species worldwide.

These ferns are called *leptosporangiate* because their sporangia arise from a single epidermal cell and not from a group of cells as in eusporangiate ferns.



### EAGLE FERN

*Pteridium aquilinum* (**bracken**, **brake** or **common bracken**), also known as **eagle fern**, is a species of fern occurring in temperate and subtropical regions in both hemispheres. Originally native to Eurasia and North America, the extreme lightness of its spores has led to it achieving a cosmopolitan distribution. Common bracken is an herbaceous perennial plant, deciduous in winter. The large, roughly triangular fronds are produced singly, arising upwards from an underground rhizome, and



grow to 0.3–1 m tall; the main stem, or stripe, is up to 1 cm diameter at the base. It dies back to ground level in autumn.



### ***Davallia fejeensis***

***Davallia*** is a genus of about 40 species of fern. In the Pteridophyte Phylogeny Group classification of 2016 (PPG I), it is the only genus in the family Davalliaceae, which is placed in the suborder Polypodiineae, order Polypodiales. Alternatively, the family may be placed in a very broadly defined family Polypodiaceae *sensu lato* as the subfamily Davallioideae.



## **MOSS**

### **MOSS BALL**

**Marimo** (also known as **Cladophora ball**, **moss ball**, **moss ball pet**, or **Lake Ball**) is a rare growth form of ***Aegagropila linnaei*** (a species of filamentous green algae) in which the algae grow into large green balls with a velvety appearance.

The species can be found in a number of lakes and rivers in Japan and Northern Europe. Colonies of marimo balls are known to form in Japan and Iceland.



## ***Funaria hygrometrica***

***Funaria*** is a genus of approximately 210 species of moss. ***Funaria hygrometrica*** is the most common species. ***Funaria hygrometrica*** is called "cord moss" because of the twisted seta which is very hygroscopic and untwists when moist. These are primitive multicellular, autotrophic, shade loving, amphibious plants. They reproduce by spore formation. They have no vascular system. Root like structures called rhizoids are present. They show alternation of generation i.e. the gametophytic stage alternates with the sporophytic stage.



## **LICHENS**

### ***Punctelia rudecta***

***Punctelia*** is a genus of foliose lichens belonging to the large family Parmeliaceae. This genus contains about 50 species. Characteristics that define ***Punctelia*** include the presence of hook-like to thread-like conidia (asexual spores), simple rhizines (root-like structures that attach the lichen thallus to its substrate), and point-like pseudocyphellae (tiny pores on the thallus surface that facilitate gas exchange). It is this last feature that is alluded to in the vernacular names **speckled shield lichens** or **speckle back lichens**. ***Punctelia*** lichens grow on bark, wood, and rocks. The genus is cosmopolitan, occurring on all continents but Antarctica. Species are found in temperate to subtropical locations.



## **PLANTAGO**

***Plantago*** is a genus of about 200 species of flowering plants in the family Plantaginaceae, commonly called **plantains** or **fleaworts**. The common name plantain is shared with the unrelated cooking plantain. Most are herbaceous plants, though a few are sub shrubs growing to 60 centimetres tall.





## STONECROP



*Petrosedum sediforme*



*Sedum oregonum*

Sedum is a large genus of flowering plants in the family Crassulaceae, members of which are commonly known as stonecrops.

## CONES



**Araucaria male cone**



**Black Alder cone**



**Pinus female cone**



**Deodara female cone**