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COMMUNITY INITIATIVE WEAVES NEW HOPE FOR ORCHID CONSERVATION

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ABSTRACT: Located in eastern Uttarakhand, Gori valley supports over 124 species of orchids out of 255 species reported from western Himalayas and may be regarded as an orchid hotspot in western Himalayas. Due to destruction of natural habitats, many orchid species found here are either rare or threatened. Acknowledging that, reigning threat over these orchids can be tackled better, if we overcome the lack of awareness amongst local communities, has helped to do good work in this stream since 2003. As a follow up of the conservation programme, local communities were involved in the *in-situ* restoration of orchids. Approximately 200 kilometers were traversed on foot through the valley. Two resourceful locals were selected for assistance during field survey. Villagers were interviewed through simple questionnaires. For awareness generation, simple posters, brochures, T-shirts etc. on orchids in local language (Hindi) were prepared. Series of awareness workshops were also conducted. Small orchid restoration house with 44 species was maintained in live condition, one in each of the two orchid rehabilitation centres in the valley. Mostly, relocation of 858 individuals in suitable host and habitat in the striking vicinity has definitely opened a positive conservation window.

Key words: Uttarakhand, Gori valley, Western Himalayas, Habitat, orchid, Hotspot

INTRODUCTION

Gori valley in Eastern Uttarakhand is regarded as orchid hotspot. The valley is situated at the junction of Western and Central Himalayas. Out of the 255 species of orchids so far recorded from western Himalaya, 121 species are recorded from the Gori valley alone (Seidenfaden and Arora, 1982; Balodi, 1987; Deva and Nathani, 1986; Murti *et al*., 2000; Singh, 2001; Jalal, 2005). Therefore, Gori valley symbolizes as an orchid hotspot in the Western Himalaya. Much of the Gori valley lies in the sub-tropical belt. It has a rich and moist riverine forest that is essential for the growth of orchids. Several botanists and conservationists have recognized Gori valley as orchid hotspot in the Western Himalayas and recommended that this valley should be declared as Orchid Sanctuary. However, the government of Uttarakhand is unlikely to declare this area as a sanctuary, mainly due to heavy use by local communities. Therefore, the only way to protect the riverine forests and orchids in the valley is through the community participation and awareness generation. During our survey, we came across a large number of epiphytic orchid species, which were detached and fallen from the host trees. A number of dead host trees fully loaded with epiphytic orchids can fall any time which will lead to the loss of these precious orchids. The communities in this area use these host species for their fuel wood. They get rid of the orchid species attached to the dead log without realizing their importance. Looking at the kind of degradation and destruction that such orchid colonies face, a strong approach is required not only for the restoration but also for long term benifit

of Mother Nature. Thus the main goals of the project were creation of awareness among the locals and to rehabilitate epiphytic orchids in the suitable habitat of Gori valley through *in-situ* and *ex-situ* approach. This community based orchid conservation attempt was the first of its kind in this region for.

MATERIALS AND METHODS

The Gori valley is located in the eastern Kumaun Himalaya Lat 29° 5'-30° 10'N and Long 79° 45'- 81°5'E in the state Uttarakhand.. The valley is bounded by the Tibetan plateau in the north and the kingdom of Nepal in the south-east, which is separated by river Kali. The Panchachuli group of peaks forms the north-eastern boundary. The total catchments area of Gori valley is 2230 sq. km. This is about 4% of the area of the State of Uttarakhand. The upper part of the valley falls under the Askot musk dear sanctuary. The vegetation in the area is mainly sub-tropical and temperate broadleaf (deciduous and semi-evergreen) and conifer types. There are 171 villages with population of 43,542 individuals (Anonymous 2003). The economy of the people largely depends on agriculture and animal husbandry.

For initiating a conservation approach, we have conducted a general survey of the valley. During the survey information on orchids, photographs of orchids and video clippings were done for photo documentation and preparation of posters and educational materials on orchid conservation. Simple posters and brochures on orchids in local language (Hindi) were prepared for the use of schoolteachers, students and local communities. Interaction programmes with villagers about orchid distribution and orchid-rich sites to identify specific orchid sites for future conservation programmes were conducted. A temporary small restoration house was constructed in the valley for keeping fallen and detached orchids during survey. Four voluntary groups with four members in each team were selected for conservation campaigning. A simple questionnaire was prepared and conducted in the beginning as well as after the fieldwork during the workshops and village level meetings.

RESULTS AND DISCUSSION

A total of 71 species of orchids including 21 terrestrial and 50 epiphytic were recorded in flowering and non-flowering conditions. We found that the epiphytic orchids were mainly concentrated in the lower part of the valley around the human settlement areas. Various host species were seen heavily loaded with epiphytic orchids in the riverine area and cultivated land. Host species like *Toona ciliata*, *Engelhadrtia spicata*, *Quercus leucotrichophora* and *Mangifera indica* are most favorable for epiphytic orchids.

Total 41 villages visited in the valley, a total 508 individuals were interviewed. Out of 508 persons interviewed, 55% were male and 45% were female, belonging to three different age groups [below 20 years (41), 20-40 years (240) & above 40 years (227)]. The questionnaire survey revealed that only 38 % including both male and female know about orchid in this area which they locally identify by the name "***Bhalu Ka Kela***" that means bear's banana or "***Harjojan***' which literally means bone jointer when translated. These vernacular names were probably derived from the external appearance of the orchids.

Two localities were selected for making orchid rehabilitation centres - one in the village of Bangapani and other in the village of Lumti. These centres or popularly called as ORC (Orchid Rehabilitation Center) houses were used to keep the entire detached epiphytic orchid. The Local community and the volunteers used these orchid rehabilitation centres as an orchid rescue centre. Two assistants were specifically trained for handling these orchids and were appointed in the restoration house so as to maintain these live specimens. A total of 44 species were maintained in live condition in the two orchid rehabilitation centres and about 858 individuals were relocated in the valley in the suitable host and habit in the vicinity. The restoration house was also used to conduct community-training programs such as plant identification workshops for locals where they were taught to recognise and identify what plants they were exactly dealing with. Several keen and enthusiastic persons visited these orchid rehabilitation centres and our O.R.C. houses were also successful in attracting some tourists passing by.

We selected a team of 20 villagers and educated volunteers. They belong to different age groups. Special capacity building workshops were conducted for these volunteers. This group which later on went on to be called TCV (Team of Conservation Volunteers) studied the following points during training programs: Identification of orchids, Identification of host trees, Visit to orchid rich localities and Restoration and rehabilitation training. With the help of these trained volunteers a conservation campaign was successfully carried out in different villages.

Though the orchids of Gori valley do not give any direct benefit to the local people, there is an opportunity in the future to develop horticulture and ecotourism, which can generate revenue for the local community. Orchids, which are already considered the key stone species, can be referred to as ecological smiles as their presence indicates a healthy ecosystem and a rich green family around us. In our journey to save this florid wealth, we had the pleasure of saving many other plants and animals as well as the opportunity to learn more about them in detail. This mission therefore feels extremely divine as it not only fulfils the task to save endangered plants but also ends up being a saving grace for all those poor Himalayan people who see a vision of a better future as they climb aboard our mission wagon.

Thanks to the superficial awareness about global warming, people have become conscious about plant and animal conservation. But most of us have our own definition of conservation and usually this includes either biological entities that we are familiar with and know their medicinal, culinary or aesthetic value or the ones we have been asked to blindly conserve by some biologically wise human. But unless people really understand our connection with the functioning of the massive environmental extinction drain and all the natural wealth that it flushes away every year, no common man will be ready to spare his time let alone his money to even think about conserving plants that he has never heard about.

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