

# **Developing an Eco-Friendly Orchid Trail for Conservation of Wild Orchids in Makawanpur District, Nepal**



**Report submitted to San Diego County Orchid Society**

*By*

**Bhakta Bahadur Raskoti**

## Acknowledgements

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I also thank Map House, Kathmandu, Nepal for publishing this trail map. My special thanks go to the members of local communities, leaders of forest user groups, and representatives of local governments who provided their unconditional support throughout this project.

*Bhakta Bahadur Raskoti*

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*Pleione praecox*

# Developing an eco-friendly orchid trail for conservation of wild orchids in Makawanpur District, Nepal

## 1. Introduction

Nepal is globally recognized for its outstanding biodiversity, including over 500 known species of orchids—many of which are rare, endemic, or of ecological significance. Among Nepal's diverse landscapes, Makawanpur district, located in Bagmati Province, stands out as a national orchid hotspot due to its wide altitudinal range (400–2500 meters) and mix of tropical, subtropical, and lower temperate forest zones.

Despite its biological richness, wild orchid populations in Makawanpur are under increasing pressure from habitat degradation, deforestation, unsustainable harvesting for medicinal and ornamental purposes, and uncontrolled tourism. In many cases, tourists unintentionally damage orchids by picking flowers or trampling sensitive habitats due to lack of awareness and absence of visitor guidelines.

To address these growing threats, this project was initiated to develop an eco-friendly orchid trail, promote community-based conservation, and enhance sustainable eco-tourism. The approach combines scientific research, local engagement, environmental education, and habitat protection into an integrated conservation model.

## 2. Project rationale

The rationale behind this initiative is rooted in the unique biological, ecological, and social importance of orchids in the Makawanpur District:

- The district is home to many important species of orchids [White, K., & Sharma, B. (2000) *Wild orchids in Nepal: the guide to the Himalayan orchids of the Tribhuvan Rajpath and Chitwan jungle*], underscoring its national conservation value.
- Increasing anthropogenic pressures are causing habitat fragmentation, species decline, and local extinctions.
- Local communities often lack access to scientific knowledge or conservation tools, yet they play a critical role in protecting forest resources.
- The region holds untapped potential for eco-tourism that can both conserve biodiversity and support local livelihoods.

By developing an orchid trail based on science and community participation, the project demonstrates a sustainable model for in-situ conservation.

## 3. Objectives

**Overall Goal:** To conserve wild orchids in their natural habitats through research, awareness raising, and development of a sustainable eco-friendly orchid trail.

### Specific objectives:

1. To survey the species of orchids in different forests of Makawanpur district.
2. To raise awareness among community people about the conservation importance of orchids.

3. To develop an eco-friendly orchid trail with visitor guidelines in Makawanpur district.

## 4. Methodology

### 4.1 Orchid species survey

Field surveys were conducted across four seasons (spring, summer, autumn, and winter) to capture seasonal blooming patterns. Surveys followed standard floristic methods using horizontal transects at 100-meter intervals. In addition, orchids were also documented through random transect walks. Each orchid species was recorded with scientific name, growth form (terrestrial, epiphytic, lithophytic), habitat, host tree (if any), flowering time, elevation, and GPS coordinates.

**Note:** Terrestrial orchids bloomed predominantly in the monsoon/summer season, while most epiphytic species bloomed during spring and autumn.

### 4.2 Community engagement

Awareness programs were conducted in schools, and community forest groups. Sessions included education on orchid importance, conservation laws, and eco-tourism potential.

### 4.3 Orchid trail development

Based on field results, orchid-rich sites were mapped using GPS and GIS tools. Trail routes were selected to maximize species diversity, scenic beauty, cultural heritage and accessibility.

## 5. Findings and outputs

### Objective 1: Orchid species survey

#### Findings:

- 161 orchid species were recorded from the district, accounting for around 32% of all known orchids in Nepal.
- Species included terrestrial, epiphytic, and lithophytic orchids.
- Seasonal blooming patterns were observed: generally epiphytes bloomed in spring/autumn, terrestrials in the summer.

#### Outputs:

- A full checklist of 161 species (Appendix 1), including habitat, and flowering time.
- Identification of key orchid hotspots suitable for conservation and eco-tourism.



A view of survey sites in the orchid rich-area, Sim Bhanjyang



A scenic view from the orchid trail area of Daman

**Representative orchid species recorded from fieldwork in Makawanpur district.**



*Dendrobium transparens*



*Pleione humilis*



*Coelogyne cristata*



*Bulbophyllum careyanum*



Jewel orchid *Goodyera schlechtendaliana*



*Brachycorythis obcordata*



*Pleione praecox*



*Habenaria plantaginea*

## Objective 2: Community awareness

### Findings:

- Initial awareness about orchids was low in rural communities.
- Participants showed strong interest once informed of orchid importance and threats.
- Local groups expressed willingness to support conservation actions and reduce illegal trade.

### Outputs:

- Discussed with local government representatives, officials, and community leaders and forest user groups.
- Awareness programs conducted in schools and community centers.
- Posters, flyers, and guidelines developed and distributed.



Community awareness program at the community center

Objective 3: Orchid trail development

Findings:

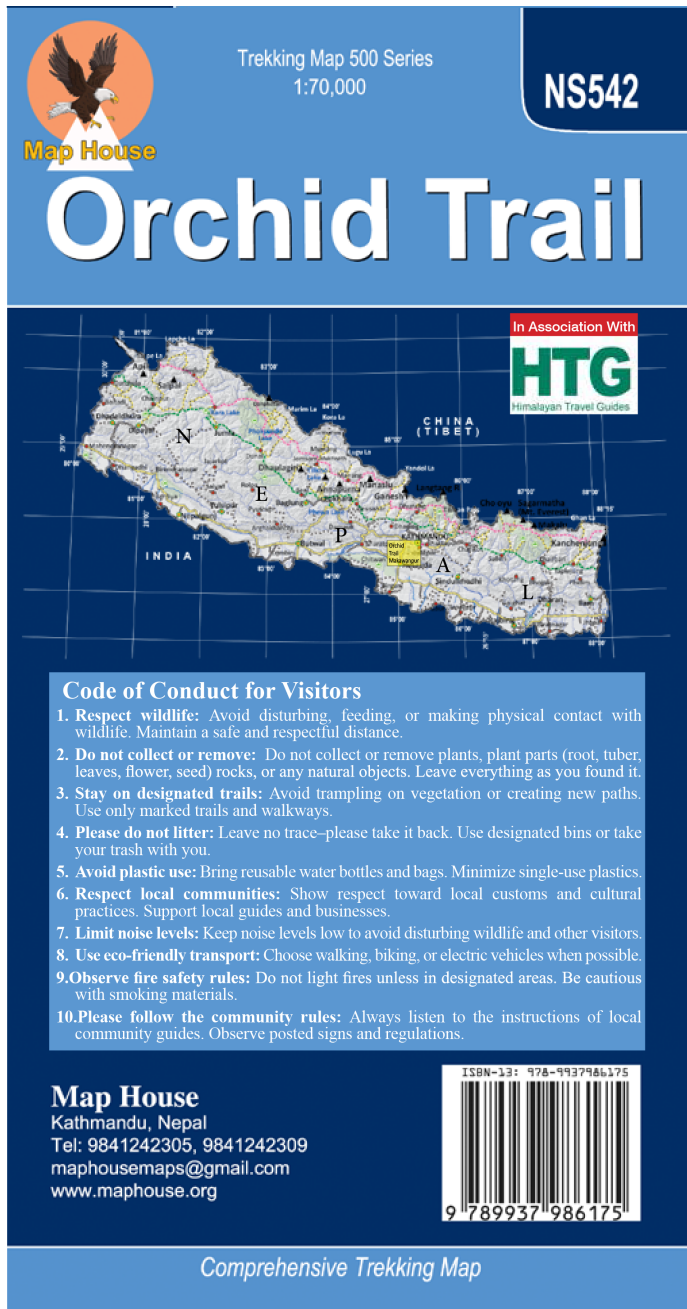
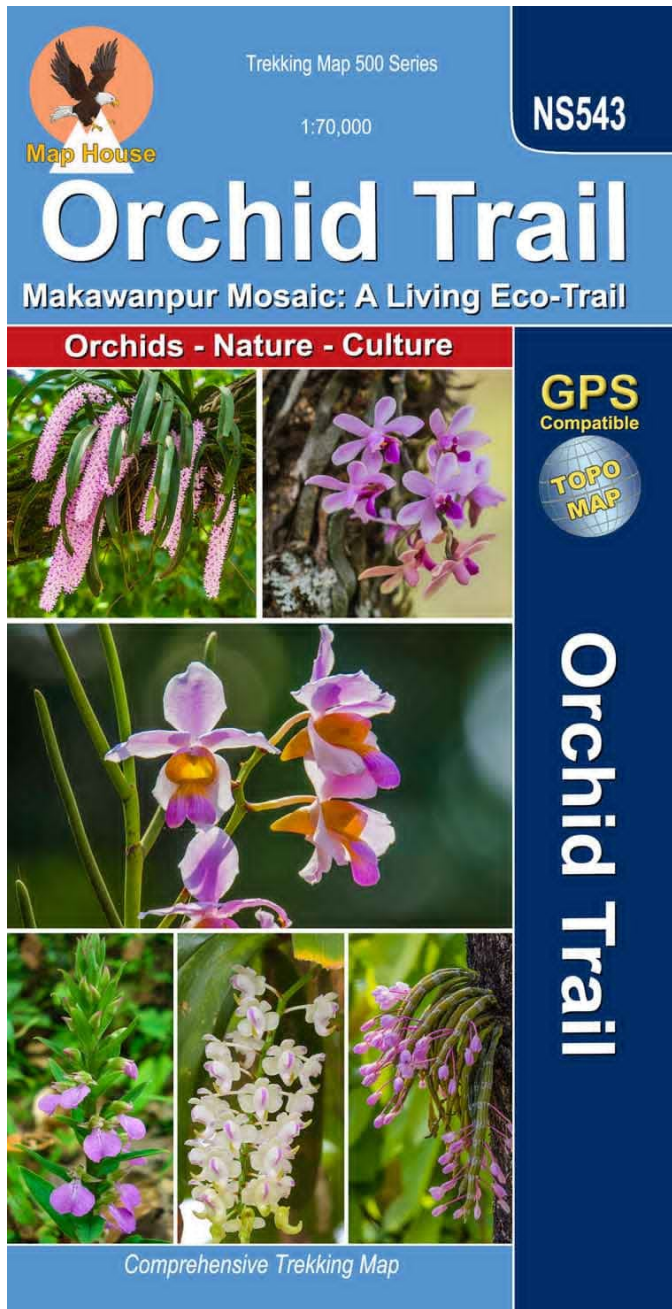
- Forest trails with high orchid population density, and species diversity were identified.
- Trails with scenic views and cultural traditions were marked.

Outputs:

- Orchid trail mapped using GIS, incorporating elevation, orchid hotspots, scenic viewpoints, and cultural settlements.



Map of the orchid trail



Front cover of the trail map

Back cover of the trail map

# Orchid Trail

**Makawapuri Moasi: A Trail of Overlooking, Nature and Cultural Heritage**

'Makawapuri Moasi' offers a mesmerizing journey through one of the central Nepal's most historically rich and scenic regions, with a special emphasis on the Dhaulagiri and Annapurna mountain ranges. This journey is a blend of natural beauty, cultural heritage, and historical significance, from the verdant Dhaulagiri and Annapurna mountain ranges to the high-altitude Himalayan peaks. The trail is a journey of discovery, offering a unique perspective on the region's natural and cultural heritage. The trail is a journey of discovery, offering a unique perspective on the region's natural and cultural heritage. The trail is a journey of discovery, offering a unique perspective on the region's natural and cultural heritage.

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**Publisher's Note:** In May, Harne, the only registered map publishing company in Nepal and a member of the International Map Trade Association, has published the first edition of the *Trail Series Maps in Nepal*, updated to reflect the latest information regarding route changes and facilities available.

**e-mail:** [maphousemag@gmail.com](mailto:maphousemag@gmail.com), [prawnmaky@yahoo.com](mailto:prawnmaky@yahoo.com)  
[www.maphouse.org](http://www.maphouse.org)  
Phone: 9841 242309  
Kannur, Kerala

Discover Orchids in Makawanpur district

Makawanpur district is a remarkable hotspot for orchid diversity, home to nearly 32% of all orchid species recorded in Nepal. This rich botanical treasure becomes possible due to the district's wide elevation range—from subtropical valleys to temperate hill forests—which provides ideal habitats for a wide variety of orchid types. Along your trekking route, you may notice orchids growing gracefully on tree trunks, moss-covered rocks, and shaded forest floors. Terrestrial orchids typically bloom during the summer monsoon season, while epiphytic orchids put on their colorful displays in spring and autumn, offering a changing floral spectacle throughout the year for nature lovers, photographers, and researchers. Whether you're walking through dense forest or climbing toward misty hills, the chance to encounter wild orchids in their natural setting is one of the quiet joys of trekking in Makawanpur.

Orchids here are not just beautiful—they are also culturally and ecologically significant. Many have traditional uses in medicine, while others are admired purely for their ornamental value. Unfortunately, some species face threats from over-collection and habitat loss. As you explore this region, we encourage you to observe these wild orchids with care and avoid picking or disturbing them. By doing so, you help protect a vital part of Makawanpur's natural heritage and support efforts to conserve Nepal's unique biodiversity.

ORCHID TRAIL

Trail Data and Photographs: Bhakta Bahadur Raskoti



*Picione prismata*



*Picione humilis*



*Phalaenopsis tatarialis*



*Cymbidium undulatum*



*Arundina graminifolia*



*Aerides odorata*



*Aerides multiflora*



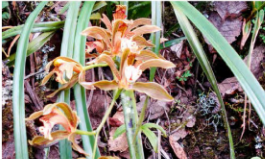
*Spiranthes sinensis*



*Vanda cristata*



*Colanthe plantaginosa*



*Cymbidium erythraeum*



*Bulbophyllum raskoti*



*Liparis deflexa*



*Sphegodesmia tibetica*



*Rhyconchelys retusa*



*Satyrium nepalense*



*Habenaria plantaginosa*



*Pecteilis gigantea*



*Habenaria dentata*



*Pelatantheris insectifera*



*Dendrobium crispulatum*



*Dendrobium formosum*



*Dendrobium fimbriatum*



*Dendrobium multiflorum*



*Dendrobium bicameratum*



*Dendrobium amicum*



*Dendrobium longicornu*



*Dendrobium transparens*



*Dendrobium transparens*



*Cymbidium aloefolium*



*Coelogyne nitida*



*Coelogyne cristata*



*Coelogyne articulata*



*Coelogyne uniflora*



*Coelogyne frutescens*



*Dendrobium ampum*



*Bulbophyllum griffithi*



*Vanda tessellata*



*Papilionanthe virens*

Back page of the trail map

6. Conclusion

The project has made significant progress in documenting orchid diversity, building local awareness, and preparing for eco-friendly orchid-based tourism. Makawanpur district holds promise as a flagship site for community-driven orchid conservation. With continued support and monitoring, this model can be scaled to other orchid-rich regions of Nepal.

7. Recommendations

- **Long-term monitoring:** Establish a seasonal monitoring system to track changes in orchid populations, flowering trends, and human impact along the trail. This should also include community-based surveillance to detect and discourage collection and trade of wild orchids, which remains a serious threat to many species in the district.
- **Integration into local plans:** Local government (rural municipalities as well as Province) needs to integrate conservation into eco-tourism in short and long-term conservation plans.
- **Capacity building:** Provide ongoing training to community members and local youth in orchid identification; trail guiding, and sustainable tourism practices.
- **Infrastructure and promotion:** Install signage, and other basic visitor facilities along the trail. Promote the orchid trail in eco-tourism platforms and regional tour packages.
- **Research partnerships:** Partner with universities and botanical institutions for continued orchid research, species monitoring, and student involvement.

Appendix 1

Table 1: The list of orchid species, habitat, and their flowering time.

| Scientific name                                               | Habitat             | Flowering time     |
|---------------------------------------------------------------|---------------------|--------------------|
| <i>Acampe praemorsa</i> (Roxb.) Blatt. & McCann               | Epiphyte            | September-November |
| <i>Acampe rigida</i> (Buch.-Ham. ex Sm.) P.F.Hunt             | Epiphyte            | September-October  |
| <i>Aerides multiflora</i> Roxb.                               | Epiphyte            | May-June           |
| <i>Aerides odorata</i> Lour.                                  | Epiphyte            | June-July          |
| <i>Agrostophyllum callosum</i> Rchb.f.                        | Epiphyte            | June               |
| <i>Anthogonium gracile</i> Wall. ex Lindl.                    | Terrestrial         | August-September   |
| <i>Arundina graminifolia</i> (D.Don) Hochr.                   | Terrestrial         | March-November     |
| <i>Brachycorythis obcordata</i> (Lindl.) Summerh.             | Terrestrial         | July-Aug           |
| <i>Bulbophyllum affine</i> Lindl.                             | Epiphyte            | June               |
| <i>Bulbophyllum careyanum</i> (Hook.) Spreng.                 | Epiphyte            | October-November   |
| <i>Bulbophyllum cirrhatum</i> (Lindl.) Hook.f.                | Epiphyte            | October-November   |
| <i>Bulbophyllum griffithii</i> (Lindl.) Rchb.f.               | Epiphyte            | September          |
| <i>Bulbophyllum guttulatum</i> (Hook.f.) N.P.Balacr.          | Epiphyte            | September-October  |
| <i>Bulbophyllum helenae</i> (Kuntze) J.J.Sm.                  | Epiphyte            | August             |
| <i>Bulbophyllum hirtum</i> (Sm.) Lindl. ex Wall.              | Epiphyte            | Janauray           |
| <i>Bulbophyllum leopardinum</i> (Wall.) Lindl.                | Epiphyte/Lithophyte | June-July          |
| <i>Bulbophyllum muscicola</i> Rchb. f.                        | Epiphyte            | September-November |
| <i>Bulbophyllum polyrhizum</i> Lindl.                         | Epiphyte            | April              |
| <i>Bulbophyllum raskotii</i> J.J.Verm., Schuit. & de Vogel    | Epiphyte            | April              |
| <i>Bulbophyllum reptans</i> (Lindl.) Lindl. ex Wall.          | Epiphyte            | November-March     |
| <i>Bulbophyllum roseopictum</i> J.J.Verm., Schuit. & de Vogel | Epiphyte            | October-November   |
| <i>Bulbophyllum secundum</i> Hook.f.                          | Epiphyte            | June-July          |
| <i>Bulbophyllum sunipia</i> J.J.Verm., Schuit. & de Vogel     | Epiphyte            | April-May          |
| <i>Bulbophyllum triste</i> Rchb. f.                           | Epiphyte            | April              |
| <i>Bulbophyllum wallichii</i> Rchb.f.                         | Epiphyte            | April              |

|                                                               |                     |                    |
|---------------------------------------------------------------|---------------------|--------------------|
| <i>Calanthe plantaginea</i> Lindl.                            | Terrestrial         | March-April        |
| <i>Calanthe puberula</i> Lindl.                               | Terrestrial         | March-April        |
| <i>Calanthe tricarinata</i> Lindl.                            | Terrestrial         | April-May          |
| <i>Cephalanthera longifolia</i> (L.) Fritsch                  | Terrestrial         | April              |
| <i>Chiloschista parishii</i> Seidenf.                         | Epiphyte            | May-June           |
| <i>Chiloschista usneoides</i> (D.Don) Lindl.                  | Epiphyte            | May-June           |
| <i>Cleisostoma fliforme</i> (Lindl.) Garay                    | Epiphyte            | August             |
| <i>Cleisostoma simondii</i> (Gagnep.) Seidenf.                | Epiphyte            | September          |
| <i>Coelogyne alba</i> (Lindl.) Rchb.f.                        | Epiphyte            | April              |
| <i>Coelogyne articulata</i> (Lindl.) Rchb.f.                  | Epiphyte            | April-June         |
| <i>Coelogyne cristata</i> Lindl.                              | Epiphyte/Lithophyte | March-April        |
| <i>Coelogyne demissa</i> (D.Don) M.W.Chase & Schuit.          | Epiphyte            | October-November   |
| <i>Coelogyne fimbriata</i> Lindl.                             | Epiphyte            | September-November |
| <i>Coelogyne flaccida</i> Lindl.                              | Epiphyte            | April              |
| <i>Coelogyne fuscescens</i> Lindl.                            | Epiphyte            | October-November   |
| <i>Coelogyne imbricata</i> (Hook.) Rchb.f.                    | Epiphyte            | June-August        |
| <i>Coelogyne nitida</i> (Wall. ex D. Don) Lindl.              | Epiphyte/Lithophyte | April-June         |
| <i>Coelogyne ovalis</i> Lindl.                                | Epiphyte            | September-November |
| <i>Coelogyne pallida</i> (Lindl.) Rchb.f.                     | Epiphyte            | August             |
| <i>Coelogyne porrecta</i> (Lindl.) Rchb.f.                    | Epiphyte/Lithophyte | September-November |
| <i>Coelogyne prolifera</i> Lindl.                             | Epiphyte            | April-May          |
| <i>Coelogyne protracta</i> (Hook.f.) R.Rice                   | Epiphyte            | September-October  |
| <i>Coelogyne recurva</i> (Lindl.) Rchb.f.                     | Epiphyte/Lithophyte | August             |
| <i>Coelogyne stricta</i> (D. Don) Schltr.                     | Epiphyte/Lithophyte | April              |
| <i>Coelogyne uniflora</i> Lindl.                              | Epiphyte            | April-May          |
| <i>Crepidium acuminatum</i> (D.Don) Szlach.                   | Epiphyte            | July-August        |
| <i>Crepidium biauratum</i> (Lindl.) Szlach.                   | Terrestrial         | June-July          |
| <i>Crepidium purpureum</i> (Lindl.) Szlach.                   | Terrestrial         | June-July          |
| <i>Cryptochilus lutea</i> Lindl.                              | Epiphyte            | June-July          |
| <i>Cryptochilus sanguineus</i> Wall.                          | Epiphyte            | June-July          |
| <i>Cylindrolobus biflorus</i> (Griff.) Rauschert,             | Epiphyte            | June-July          |
| <i>Cymbidium aloifolium</i> (L.) Swartz                       | Epiphyte            | May                |
| <i>Cymbidium bicolor</i> Lindl.                               | Epiphyte            | May                |
| <i>Cymbidium cyperifolium</i> Wall. ex Lindl.                 | Terrestrial         | April              |
| <i>Cymbidium elegans</i> Lindl.                               | Epiphyte/Lithophyte | September-November |
| <i>Cymbidium erythraeum</i> Lindl.                            | Epiphyte/Lithophyte | October-November   |
| <i>Cymbidium iridioides</i> D.Don                             | Epiphyte/Lithophyte | September-November |
| <i>Dendrobium amoenum</i> Wall. ex Lindl.                     | Epiphyte            | May-June           |
| <i>Dendrobium amplum</i> Lindl.                               | Epiphyte/Lithophyte | May-June           |
| <i>Dendrobium anceps</i> Swartz                               | Epiphyte            | April-May          |
| <i>Dendrobium aphyllum</i> (Roxb.) G.E.C. Fischer             | Epiphyte            | April-May          |
| <i>Dendrobium bicameratum</i> Lindl.                          | Epiphyte            | July-August        |
| <i>Dendrobium chryseum</i> Rolfe                              | Epiphyte            | May-June           |
| <i>Dendrobium crepidatum</i> Lindl. & Paxton                  | Epiphyte            | April              |
| <i>Dendrobium darjeelingense</i> Pradhan                      | Epiphyte            | September-October  |
| <i>Dendrobium densiflorum</i> Lindl.                          | Epiphyte            | April-May          |
| <i>Dendrobium denudans</i> D.Don                              | Epiphyte            | October-November   |
| <i>Dendrobium eriiflorum</i> Griff.                           | Epiphyte            | October-November   |
| <i>Dendrobium fimbriatum</i> Hook.                            | Epiphyte            | April-June         |
| <i>Dendrobium formosum</i> Roxb.                              | Epiphyte            | May-June           |
| <i>Dendrobium fugax</i> Rchb.f.                               | Epiphyte            | May                |
| <i>Dendrobium heterocarpum</i> Wall. ex Lindl.                | Epiphyte            | March-April        |
| <i>Dendrobium longicornu</i> Lindl.                           | Epiphyte            | September-November |
| <i>Dendrobium macrostachyum</i> Lindl.                        | Epiphyte            | April-May          |
| <i>Dendrobium moniliforme</i> (L.) Sw.                        | Epiphyte            | April-May          |
| <i>Dendrobium monticola</i> P.F. Hunt and Summerh             | Epiphyte            | May-June           |
| <i>Dendrobium moschatum</i> (Buch.-Ham.) Sw.                  | Epiphyte            | May-June           |
| <i>Dendrobium polyanthum</i> Wall. ex Lindl.                  | Epiphyte            | April              |
| <i>Dendrobium pulchellum</i> Roxb. Ex Lindl.                  | Epiphyte            | July-August        |
| <i>Dendrobium transparens</i> Wall. ex Lindl.                 | Epiphyte            | May-June           |
| <i>Dendrolirium lasiopetalum</i> (Willd.) S.C.Chen & J.J.Wood | Epiphyte            | April-May          |
| <i>Dienia cylindrostachya</i> Lindl.                          | Terrestrial         | July-August        |
| <i>Epipactis veratrifolia</i> Boiss. & Hohen.                 | Terrestrial         | May                |
| <i>Eria coronaria</i> (Lindl.) Rchb.f.                        | Epiphyte/Lithophyte | October-November   |

|                                                                                |                     |                    |
|--------------------------------------------------------------------------------|---------------------|--------------------|
| <i>Eulophia picta</i> (R.Br.) Ormerod                                          | Terrestrial         | August             |
| <i>Gastrochilus calceolaris</i> (Sm.) D. Don                                   | Epiphyte            | March-April        |
| <i>Gastrochilus dasypogon</i> (Sm.) Kuntze                                     | Epiphyte            | November           |
| <i>Gastrochilus distichus</i> (Lindley) Kuntze,                                | Epiphyte            | April-May          |
| <i>Goodyera biflora</i> (Lindl.) Hook. f.                                      | Terrestrial         | July               |
| <i>Goodyera procera</i> (Ker Gawl.) Hook. f.                                   | Terrestrial         | July               |
| <i>Goodyera schlechtendaliana</i> Rchb.f.                                      | Terrestrial         | April-November     |
| <i>Habenaria arietina</i> Hook.f.                                              | Terrestrial         | July-August        |
| <i>Habenaria commelinifolia</i> (Roxb.) Wall. ex Lindl.                        | Terrestrial         | July-August        |
| <i>Habenaria dentata</i> (Sw.) Schltr.                                         | Terrestrial         | September-October  |
| <i>Habenaria marginata</i> Colebr.                                             | Terrestrial         | August-September   |
| <i>Habenaria plantaginea</i> Lindl.                                            | Terrestrial         | July-September     |
| <i>Herminium clavigerum</i> (Lindl.) X.H.Jin, Schuit.,<br>Raskoti & Lu Q.Huang | Terrestrial         | August             |
| <i>Herminium lanceum</i> (Thunb. ex Sw.) Vuijk                                 | Terrestrial         | July-September     |
| <i>Herminium latilabre</i> (Lindl.) X.H.Jin, Schuit., Raskoti<br>& Lu Q.Huang  | Terrestrial         | July-August        |
| <i>Herpysma longicaulis</i> Lindl.                                             | Terrestrial         | September          |
| <i>Liparis caespitosa</i> (Thou.) Lindl.                                       | Epiphyte            | August             |
| <i>Liparis bootanensis</i> Griff.                                              | Epiphyte/Lithophyte | July-August        |
| <i>Liparis cordifolia</i> Hook.f.                                              | Terrestrial         | July-August        |
| <i>Liparis deflexa</i> Hook. f.                                                | Terrestrial         | July-August        |
| <i>Liparis resupinata</i> Ridl.                                                | Epiphyte            | September-October  |
| <i>Luisia brachystachys</i> (Lindl.) Blume                                     | Epiphyte            | April-May          |
| <i>Luisia inconspicua</i> (Hook. f.) King & Pantl.                             | Epiphyte            | August             |
| <i>Luisia teretifolia</i> Gaud.                                                | Epiphyte            | April-May          |
| <i>Luisia trichorhiza</i> (Hook.) Blume                                        | Epiphyte            | April-May          |
| <i>Luisia zeylanica</i> Lindl.                                                 | Epiphyte            | April-May          |
| <i>Nervilia aragoana</i> Gaudich.                                              | Terrestrial         | April-May          |
| <i>Nervilia crociformis</i> (Zoll. and Mor.) Seidenf.                          | Terrestrial         | June               |
| <i>Nervilia gammieana</i> (Hook. f.) Schltr.                                   | Terrestrial         | April              |
| <i>Oberonia caulescens</i> Lindl.                                              | Epiphyte            | August             |
| <i>Oberonia ensiformis</i> (Sm.) Lindl.                                        | Epiphyte            | October-November   |
| <i>Oberonia falconeri</i> Hook. f.                                             | Epiphyte            | July-August        |
| <i>Oberonia myosurus</i> (Forster f.) Lindl. ex Wall.                          | Epiphyte            | August-September   |
| <i>Oberonia pachyrachis</i> Rchb. f. ex Hook. f.                               | Epiphyte            | November           |
| <i>Papilionanthe teres</i> (Roxb.) Schltr.                                     | Epiphyte            | April-May          |
| <i>Papilionanthe teres</i> (Roxb.) Schltr.                                     | Epiphyte            | April-May          |
| <i>Papilionanthe uniflora</i> (Lindl.) Garay                                   | Epiphyte            | September          |
| <i>Pecteilis susannae</i> (L.) Raf.                                            | Terrestrial         | July-August        |
| <i>Pelatantheria insectifera</i> (Rchb. f.) Ridl.                              | Terrestrial         | October-November   |
| <i>Peristylus constrictus</i> (Lindl.) Lindl.                                  | Terrestrial         | July-August        |
| <i>Peristylus goodyeroides</i> (D. Don) Lindl.                                 | Terrestrial         | July-August        |
| <i>Peristylus lawii</i> Wight                                                  | Terrestrial         | July-August        |
| <i>Phalaenopsis taenialis</i> (Lindl.) Christenson & Pradhan                   | Epiphyte            | May-June           |
| <i>Pinalia acervata</i> (Lindl.) Kuntz.                                        | Epiphyte            | April-May          |
| <i>Pinalia amica</i> (Reich.f.) Kuntze                                         | Epiphyte            | March-April        |
| <i>Pinalia apertiflora</i> (Summerh.) A.N.Rao                                  | Epiphyte            | July-August        |
| <i>Pinalia bipunctata</i> (Lindl.) Kuntz.                                      | Epiphyte            | July-August        |
| <i>Pinalia bractescens</i> (Lindl.) Kuntze                                     | Epiphyte            | April              |
| <i>Pinalia excavata</i> (Lindl.) Kuntze.                                       | Epiphyte            | June               |
| <i>Pinalia graminifolia</i> (Lindl.) Kuntze                                    | Epiphyte            | June-July          |
| <i>Pinalia leucantha</i> Kuntze                                                | Epiphyte            | May-June           |
| <i>Pinalia spicata</i> (D. Don) S. C. Chen & J. J. Wood                        | Epiphyte            | July-August        |
| <i>Pleione humilis</i> (Sm.) D. Don                                            | Epiphyte            | February-March     |
| <i>Pleione praecox</i> (Sm.) D. Don                                            | Epiphyte            | September-November |
| <i>Porpax elwesii</i> (Rchb.f.) Rolfe                                          | Epiphyte            | October-November   |
| <i>Porpax extinctoria</i> (Lindl.) Schuit., Y.P.Ng &<br>H.A.Pedersen           | Epiphyte            | April              |
| <i>Rhynchosstylis retusa</i> (L.) Blume                                        | Epiphyte            | June-July          |
| <i>Satyrium nepalense</i> D. Don                                               | Terrestrial         | July-August        |
| <i>Smitinandia micrantha</i> (Lindl.) Holttum                                  | Epiphyte            | April-May          |
| <i>Spathoglottis ixioides</i> (D.Don) Lindl.                                   | Lithophyte          |                    |
| <i>Spiranthes sinensis</i> (Pers.) Ames                                        | Terrestrial         | July-September     |
| <i>Thunia alba</i> (Lindl.) Reichenb. f.                                       | Epiphyte            | June-July          |

|                                                                       |             |                  |
|-----------------------------------------------------------------------|-------------|------------------|
| <i>Thunia alba</i> var. <i>bracteata</i> (Roxb.) N.Pearce & P.J.Cribb | Epiphyte    | June-July        |
| <i>Trichotosia dasyphylla</i> (C. S. P. Parish & Rchb. f.) Kraenzl.   | Epiphyte    | August-September |
| <i>Tropidia curculigoides</i> Lindl.                                  | Terrestrial | June-September   |
| <i>Vanda ampullacea</i> (Roxb.) L.M.Gardiner                          | Epiphyte    | April-May        |
| <i>Vanda cristata</i> Wall. ex Lindl.                                 | Epiphyte    | March-June       |
| <i>Vanda tessellata</i> (Roxb.) Hook. ex G. Don                       | Epiphyte    | March-November   |
| <i>Vanda testacea</i> (Lindl.) Rchb. f.                               | Epiphyte    | May-June         |
| <i>Zeuxine affinis</i> (Lindl.) Benth. ex Hook.                       | Terrestrial | April            |
| <i>Zeuxine flava</i> (Wall. ex Lindl.) Trimen                         | Terrestrial | April            |
| <i>Zeuxine strateumatica</i> (L.) Schltr.                             | Terrestrial | November-March   |



Fieldwork during the orchid survey



*Cymbidium aloifolium*