

India – Spring Flowers of Sikkim, Darjeeling & Kalimpong

Naturetrek Tour Report

7 - 22 June 2015



Cathcartia villosa



Coelogyne ochracea



Pleione hookeriana



Kalimpong street market

Report & images compiled by Jenny Willsher



Naturetrek Mingledown Barn Wolf's Lane Chawton Alton Hampshire GU34 3HJ UK

T: +44 (0)1962 733051

F: +44 (0)1962 736426

E: info@naturetrek.co.uk

W: www.naturetrek.co.uk

Tour Participants: Alister Adhikari (Leader), Dipesh Tamang (assistant) and Jenny Willsher (Naturetrek)
With a group of Naturetrek clients

Summary

Starting in the bustling atmospheric hill town of Darjeeling, our two weeks in the smallest of Indian states proved a fascinating mix of culture, tradition and natural history. Our travels in the mountainous North Sikkim, where the rainfall is naturally high, gave us dramatic waterfalls, luxuriant forests and other plant-rich areas but also the attendant complications of landslides and difficult road conditions. Botanical highlights included the beautiful Mecanopsis, both blue and yellow: the Rhododendron forest at Yumthang: the contrasting habitats of lush forest of towering Himalayan Alder, Teak, *Albizia chinensis* and *Schima wallichii* – some so draped in epiphytes as to make their own plant communities; the clouded high meadows strewn with Primulas: the dramatic flowers of the various Arisaemas and the banks of ferns and grasses. Birdlife was always present whether it was the noisy local birds such as Common Mynah, House Crow, various Drongos, Blue Whistling Thrush: fleeting glimpses of bright forest birds such as Scarlet Minivet or, in the high valleys, brief glimpses of Golden and Black Eagle, black and white Snow Pigeons, the bright blue Grandala and an Ibisbill in the Dombang Valley. The good humour and patience of the group alongside the calm, thoughtful competence of Alister, our local guide and tour leader, and the caring attention of his assistant, Dipesh, contributed hugely to the enjoyment of the trip, not to mention the skill of our drivers!

Day 1

Sunday 7th June

London/Manchester to Dubai

Most of group departed London Heathrow on Emirates flight for Dubai. Others were met in Kolkata and others flew from Manchester.

Day 2

Monday 8th June

Flight from Kolkata to Bagdogra then drive to Darjeeling

The group arrived in Kolkata where the temperature had been unusually high – over 40 C - and were ferried to the cool Novotel where there was time to shower and change. Refreshed somewhat, they then returned to the airport for the internal flight to Bagdogra, to be met by Alister and his assistant Dipesh, and Jenny who had accompanied an earlier group. We were soon settled into a fleet of vehicles for our journey to Darjeeling. Bagdogra itself is a transit hub so is a noisy, dusty, bustling place but is graced in places by large trees and drapes of various colours of bougainvillea. We were glad to reach the outskirts, passing through plantations of Assam tea and the attendant shade trees of *Albizia chinensis*, and start climbing up into the hills. One roadside sign warned of “Elephants Crossing”! There are extensive forests where elephants feed and can be seen from the road but, unfortunately, sometimes they are in conflict with the local people. The only animal life were small groups of Rhesus Macaque monkeys on the roadside. The road was dramatic in its twists and turns as we climbed towards Darjeeling at 2200m, sometimes passing through stands of Giant Bamboo, while on the grassy banks were drifts of a miniature Bamboo and many ferns. Tiny settlements clung to the steep edges of the road. To break our journey, we stopped at a cafe in Kurseong where Alister ordered tea and *mo-mo's* (steamed dumplings) for us. Suitably refreshed, we moved on, following the lower reaches of the Darjeeling Light Railway as it crossed and re-crossed the road.

On arrival at the elegant Elgin hotel we were greeted ceremoniously with cherry brandy and draped with white silk scarves. Dinner was ready for us so we were soon seated in the dining room being served a delicious meal by traditionally dressed staff and accompanied by a tinkling piano.

Day 3

Tuesday 9th June

Darjeeling Light Railway, Lloyd Botanical Gardens, Zoological Gardens and Himalayan Mountaineering Institute, Tea Factory

Dawn was early and the local birds were singing – Green-backed Tit, Blackbird, Red-vented Bulbul, Common Myna, White-tailed Nuthatch and Red-billed Leiothrix were seen from the attractive terrace where stands of bright blue Delphiniums and red Amaryllis contrasted with the white paintwork of the hotel. The low cloud swirled, giving brief glimpses of Darjeeling where it tumbled down the hillside. After breakfast, we set off for Darjeeling station where we boarded one of the carriages for the noisy, rattling journey up to Ghoom, the highest station on the railway, and the third highest station in the world, at 2247 m. The railway line followed the road, sometimes crossing it in a cacophony of hooting, brushing past the roadside shops and houses which afforded us intimate views of local life, and also extensive views of forest-clad hillsides. The first stop was at a Ghurka Memorial, surrounded by colourful gardens and with distant views across the hills. Then we went on to Ghoom, where we had a brief stop to explore the railway museum. The railway is now a UNESCO World Heritage Site.

Our next stop was the Lloyd Botanical Gardens where we could get to grips with some of the local plants which we would meet in our travels. Huge trees of *Albizia chinensis*, *Schima wallichii* and Himalayan Alder (*Alnus nepalensis*), were festooned with epiphytes such as Sikkim Blushwort (*Aeschynanthus sikkimensis*), *Coelogyne cristata* and *Agapetes serpens*, and we met the first of many Cobra Lilies (*Arisaema tortuosum*). We also saw *Rhododendron madeni* with its large white blooms, Black Cardamom, an important local crop, and the strange *Campylandra aurantiaca* with its long strap leaves and pineapple shaped flower buried at its base. Various shades of Datura (*Brugmansia suaveolens*) were dotted around and bright green clumps of *Euphorbia sikkimensis*. We then made our way back through the narrow crowded streets of the town to the Zoological Gardens and Himalayan Mountaineering Institute (HMI). The first director of HMI was Sherpa Tenzing Norgay, who lived and died in Darjeeling. It is one of India's most important training centres for mountaineering and offers some fascinating insights into mountaineering past and present.

We were to finish our day at a Tea factory but a political rally in the town means a diversion to the Tibetan Refugee Centre instead, where we watched the spinning and weaving of wool for carpets. There was a colourful display of the wools and the different plants that were used for dyes. We then returned to the hotel. Some of the group ventured into town to purchase flower books at the Oxford Bookshop and Francis bought a very smart brolly in the market!

We then enjoyed another excellent meal in our gracious surroundings.

Day 4

Wednesday 10th June

Darjeeling – Gangtok – crossing into Sikkim

We said goodbye to the charismatic Elgin Hotel and headed north travelling through luxuriant forests with banks of ferns, grasses and shrubs. Occasionally, we passed through plantations of *Cryptomeria japonica* which had been planted by the British for timber. We stopped to look at some Arisaemas (*A. tortuosum*, *A. concinnum*), the delicate blue-flowered Hydrangea *Dichroa febrifuga*, and huge banks of the handsome fern *Gleichenia gigantea*. We found our first terrestrial orchid, *Crepidium acuminatum*, and clumps of the attractive *Ophiopogon intermedius* (Lilyturf). At one place, local women were selling large bunches of beautiful carrots, beetroots and white radish – obviously a good area for root vegetables. The lush forest had occasional splashes of red from Flame Trees (*Delonix regia*) and yellow from the Indian Laburnum (*Cassia fistula*). We descended into the Ramgit River valley, following it north to Rangpo and the Sikkim border, where it merges into the wide Teesta River. At the border, we had lunch while the paperwork was sorted.

We climbed up again into the forested hills over bumpy roads and, by late afternoon, were in the busy outskirts of Gangtok – the capital of Sikkim. The Hidden Forest Retreat was an orchid haven! On the terrace were banks of orchids – mostly native species, and the gardens were full of other flowers, fruit trees and vegetables. We were welcomed with tea and biscuits, a noisy display of Black Drongos in the garden and a torrential downpour of rain! The owners of the hotel are Sonam Topden Lachungpa and his wife. The manager is Kesang, one of their daughters. Sonam was a Forestry Minister and is now Chairman of the Sikkim Environment Authority. He has an extensive library of natural history books which proved a very useful reference for us.

Day 5

Thursday 11th June

Llaza Falls, Forest Conservation Area, Craft Centre

It had rained most of the night, and still was, while we enjoyed a very good breakfast of porridge, toast, pancakes and eggs. Birds in the garden included House Crow, Large-billed Crow, Oriental Magpie Robin and the turquoise Verditer Flycatcher.

Unfortunately Dipesh had to return to Darjeeling and we missed his kind attentions. Despite the gloomy dampness of the low cloud, we enjoyed some roadside botanising just outside the town – much to the amusement of the passing traffic. Amongst the lush growth of *Gleichenia* and many other ferns we found *Arisaema galeatum* with its huge three-part leaves and helmet shaped spathe, the white flowers of a begonia and the Chameleon Plant (*Houttuynia cordata*), red and yellow Impatiens species, and many small plants such as *Prunella vulgaris* and *Persicaria capitata*. We also had to be aware of leeches but Alister lent us bright yellow leech socks! We passed the scenic Llaza falls which were festooned with coloured prayer flags. The different colours represent different elements - white for water/air, blue for sky, green for vegetation, red for fire, yellow for soil – and they are hung where the breeze can disperse the prayers. Then we drove to a Forest Conservation Area which was partly set up by one of Sonam's daughters. It had only recently been established, so the well-labelled trees and shrubs were young. It was a very attractive walk to a small waterfall where it seemed we were part of the attraction and were requested to be photographed by and with local tourists! Amongst the shrubs, we found the saprophytic orchid *Epipogium roseum*. We had an exclusive viewing of a greenhouse containing an amazing orchid display and then returned to the centre of Gangtok, where we had lunch in an attractive Tibetan restaurant with colourful, highly decorated furniture. Then we visited the Institute of Tibetology with its amazing

collection beautiful artefacts. We finished our day at the craft centre where local crafts of carpet making, weaving, woodcarving and painting are taught and promoted. Tea and biscuits were promptly served on the terrace when we got back to the hotel.

After another very good dinner, Alister had arranged for Sonam to talk to us about forestry in Sikkim. A high percentage of Sikkim, 82%, is forested and 40% is protected under the Forest Conservation Act introduced by Indira Gandhi. Although there is pressure on the land from an increasing population, high-rise buildings are being encouraged, there is promotion at all levels of society to plant trees and environmental science is being promoted in schools. It was inspiring to listen to his dedication.

Day 6

Friday 12th June

Gangtok – Mangan – Lachung

Gangtok is noted for its amazing views of the mountain Kanchendzonga, the highest peak in Sikkim, and we were ever hopeful for views of those wonderful snow-capped peaks but it lived up to its nickname of 'Sleeping Buddha' and doggedly remained asleep under various blankets of low cloud and rain. We had a leisurely breakfast while Alister sorted the various permits for us to proceed north.

Eventually we were on our way. The scenery was amazing as we made our way along forest roads with tempting glimpses of hillsides, small settlements, rice paddies and tea plantations. The many streams and waterfalls were very full. We then descended into the Teesta valley, to Mangan where we had lunch. Then onwards again, crossing and re-crossing, the wide languid river to Chungthang where the Teesta is joined by the Zemu. Then we headed north-east towards Lachung. We saw some familiar plants such as Foxgloves and Elderflower, but also the epiphytic *Rhododendron dalbousie*, *R. lepidotum*, *Thalictrum chelidonii* and *Philadelphus tomentosus*.

We were greeted at our hotel by a welcome cup of tea and some of us began to feel the effects of the higher altitude.

Day 7

Saturday 13th June

Lachung – Dombang Valley – Rhododendron Reserve – Yumthang valley

The weather up to now had been dogged by rain and low cloud but we had a lovely surprise this morning! We woke to clear blue skies and wonderful views across and down the valley to snow-capped peaks. So we set off in high spirits, heading to the Dombang Valley. Our first stop, as we headed up the valley, was some scrubby habitat where the ground is dotted with small wild strawberries, *Androsace rotundifolius*, *Mezus tibetica*, bushes of *Piptanthus nepalensis* with its large yellow pea flowers, bushes of *Berberis* sp., the delicate *Rosa sericea*, the yellow *Rhododendron campylocarpum* and many spikes of *Primula denticulata*. This is a stunning steep-sided valley. We were amongst old fruit trees where, among the lichen, ferns and other epiphytes, there were many flowers of *Pleione bookeriana*. We later saw masses of this pink orchid in the surrounding trees. There was a large patch of *Iris clarkii*, with clumps of *Arisaema concinnum*. We walked along the road, finding more rhododendrons in flower – *R. cinnabarinum* and *R. bailyi*. Two eagles were seen overhead - a Black Eagle and a Golden Eagle, mobbed by smaller birds.

We turned round at this point and headed up into the Shingba Rhododendron Sanctuary, 43km² of rhododendron forest, where many species were at various stages of flowering. Some of us struggled to keep up with the various sizes and shapes of the leaves and colours of the flowers. We stopped to look at a lush bank where we found many spikes of *Roscoea purpurea* – a lovely member of the ginger family. At a wet flush on the roadside, we found *Primula dickiana*, *Euphorbia wallichii* and *Gaultheria pyrolensis*. The bushes were draped with the white flowers of *Clematis montana*.

The scenery opened out and we got occasional glimpses of snow-capped peaks. Our vehicles then negotiated a dramatic moonscape of grey rocks – the result of a recent landslide - which had effectively dammed the river and created a small lake. A wader was spotted in a shallow bend in the river – Ken immediately recognised this as an Ibisbill! It was very exciting to see this rare bird and the drivers enjoyed seeing it too!

Our lunch stop was at a tourist site near some hot springs. We used the tables at one of the tourist booths and Alister and the drivers served us hot food bought up from the hotel. A few birds were seen around the buildings, including Dark-breasted Rosefinch and Grey Crested Tit.

Then Alister took us to find *Meconopsis simplicifolia* and we all admired this stunning blue poppy. We found groups of the purple *Primula calderiana*, *Fritillaria cirrhosa* and bushes of *Rhododendron cinnabarinum*. Turning back we saw the handsome White-collared Blackbird feeding among the yaks and a small flock of black and white Snow Pigeons.

On the last walk of the day, across the river near the springs, we found tall spikes of the yellow *Mecanopsis paniculata*, its hairy stem glistening with raindrops. We were then glad to return to the hotel as the cloud had come down and it was raining again.

Day 8

Sunday 14th June

Lachung – Yumthang Valley – Yume Samdang at 4,660m

We woke to another bright and sunny day. Some were out before breakfast – appreciating the sunshine. Local birds included Long-tailed Shrike, Eurasian Collared Dove, and Large-billed Crow. After breakfast, we headed back up the valley, through the Rhododendron reserve. We passed the hot springs and the attendant tourist booths and then climbed higher, crossing more scree and swollen streams. One grassy area was scattered with masses of deep red *Primula calderiana*, including a few white spikes, Creeping Tamarisk (*Myricaria rosea*), the diminutive lillies *Lloydia flavonutans* and *L. longiscapa*, and Dwarf Willows (*Salix calyculata*, *S. serpyllum*). Then on again where the road cut through snow banks to a small rocky plateau with a lake. We turned down a sandy track to another rocky plateau. We were in low cloud so the terrain did not look too promising for flowers but the initial drabness of the scene belied its floral treasures. Despite the altitude and the cold sleet, some enjoyed exploring the short turf, rocky crevices and stream-sides, finding various primulas including the honey scented *P. sikkimensis*, *P. capitata*, *P. atrodentata* and low cushions of *P. concinna*. Other plants included *Anemone vitifolia*, *Daphne retusa*, *Pinguicula alpina*, an Aster, various Louseworts including the yellow *Pedicularis longiflora* and various Potentillas including *Potentilla microphylla*. There were Snow Toad tadpoles in the shallow pools. We also found compact cushions of Himalayan Mandrake (*Mandragora caulescens*), with its spotted, lime-green flowers, and *Spongiocarpella purpurea* with its large, purple, pea flowers. We were not alone at Yume Samdang – there were local families sheltering in a stone barn and they made room for us around the fire to warm up, and we were offered

some puffed rice. They were here to use the hot springs. Ros, Christine and Trish had come prepared and enjoyed a dip in the purpose made concrete bath! The drivers also took the opportunity! The low cloud was not conducive to bird-watching, but Red-billed Chough, Grandala, White-headed Water Redstart and Robin Accentor were seen.

Some of the group were suffering from the effects of the altitude so made a slow descent to the hotel, while the rest of the group continued a little higher to Zero Point at 4800m.

We returned to the hotel with brief stops to photograph the fields of Primulas and for *Arisaema griffithii* – perhaps the most dramatic looking of this unusual plant group.

At log, Alister informed us that there would be a change in our plans over the next few days. Landslides on the road below Lachung and in the Lachen Valley meant that we would not be able to reach Lachen and would stay an extra night in Lachung before returning to Gangtok for two nights instead of one. While that was disappointing, it did mean less travelling and extra time botanising.

Day 9

Monday 15th June

Lachung – valleys east and west of the village

The good weather had held and we spent a good morning roadside botanising in a side valley south of Lachung. Before turning off the main road, we stopped at the roadside where, on a large rock, there was lush growth of *Ophiopogon intermedius*, *Corallodiscus lanuginosus* and a tiny lithophytic orchid. Alister climbed onto the roof of one of the vehicles to take close-up photos! We turned up into the valley east of the village where the hillside was dotted with *Euphorbia griffithii* and the banks were lush with many ferns including Bracken, *Osmunda* sp. and *Asplenium* spp. We found *Buddleia colvillea* with its large waxy red flowers, *Rhododendron lepidotum* with its delicate yellow blooms, a delicate little sundew *Drosera peltata*, *Aletris pauciflora*, with its grass-like leaves and tiny pinkish flowers, the tiny blue pea *Parachetus communis* and one spike of a *Platanthera* sp. orchid. There were lovely views down the Lachung Valley.

We had lunch at the hotel, then headed down the valley and turned up another valley, west of the village. We then spent a very pleasant afternoon walking down the hillside. In a shady gully, Alister found a dramatic group of *Arisaema propinquum*. On and amongst the moss-covered rocks were *Pleione hookeriana*, *Viola betonicifolia*, the small *Arisaema jacquemontii* and *Cotoneaster microphyllus*. There were many ferns including Bracken and Royal Fern. On our return to the hotel we took a small diversion, at Julia's request, to look at the Lachung Monastery. We marvelled at the ornate buildings and the huge colourful prayer wheels.

Day 10

Tuesday 16th June

Lachung – Chungthang – Mangan – Gangtok – the landslide day!

There had been heavy rain in the night and Alister warned us that there had been another landslide lower down the valley, so we had a leisurely breakfast before setting off. There was no rush as the road-workers would not have started till 9. Our first stop was just below the village where Ros had spotted two spikes of the Giant Himalayan Lily (*Cardiocrinum giganteum*). This amazing plant with its glossy heart-shaped leaves can grow to four

metres tall! Then, on a bank of grassy Lilyturf, we found the pale lilac lily *Notbolirion macrophyllum* and the bright white flowers of *Thalictrum virgatum*. We soon caught up with the queue of traffic at the landslide. It was obvious we would have to wait some time, so the group botanised, birdwatched or monitored the progress of the digger! Eventually we were able to progress and head on down the valley. We had a quick lunch stop at Chungthang and then continued.

But the news was not good – Alister had heard that there was another landslide before Mangan. Not our lucky day! Alister felt the best plan was to continue as best we could so, after another enforced botanical roadside forage, we took our rucksacks and, helped by a human chain which included Alister and our drivers, we scrambled across the landslide! We were all moved by the selfless willingness of everyone to help. The drivers then scrambled across with our luggage - Luggage Reclaim took on a whole new meaning! Alister had managed to get us taxis and we then had a rather uncomfortable journey to Gangtok. We were welcomed warmly at The Hidden Forest and were all relieved and pleased to be there.

Day 11

Wednesday 17th June

Lachen – Chungthang – Mangan – Gangtok

Alister had planned an excursion for us today to Tsomgo Lake or Holy Lake, which is east of Gangtok, not far from the Tibet/China border. We headed out of Gangtok and up into the mountains. The lake is a tourist attraction so there was much traffic. A lorry had overturned higher up the mountain so that traffic was slow, but it provided us with wonderful views across Gangtok and we could botanise along the way. We saw the unusual *Campylandra auriantica*, a small *Dendrobium* orchid, Rattlesnake Orchid (*Pholidota imbricata*), and many ferns including *Gleichenia gigantean*, Cup Fern (*Dennstaedtia appendiculata*), *Oleandra wallichii* with its strap leaves, and the small fern *Aleurtopteris albamarginata*, with white undersides.

Unfortunately the lake was shrouded in low cloud, but we walked round the edge and found *Rhododendrum campanulatum* and the tiny *R. lowndesii*, a yellow form of *Primula calderiana* and the purple ?*P. tanneri*. We resisted the Yak rides but some of us got caught up in tourist photos again!

We retraced our steps back to Gangtok, stopping briefly to look at a patch of *Iris clarkii* and finding the lovely bright yellow *Carthcartia villosa*. The thick cloud prevented further stops. Our day ended with more rain. Some took advantage of the library at the hotel to check many of the plants we had seen - especially the primulas and ferns.

Day 12

Thursday 18th June

Gangtok - Kalimpong

We headed back to the border today, but our first stop was at the Rumtek Monastery, one of Sikkim's most venerated monasteries, founded during the 12th century, where we were just in time to witness the prayer ceremony. The combination of chanting, drums and cymbals was very moving. Alister talked us through some elements of Buddhism and the particular Black Hat sect (Karma Kagyu lineage) that is associated with this monastery. It is well guarded, as it is at the centre of a controversy over who succeeds the 16th Karmapa, who

was very influential in the spread of Tibetan Buddhism to the West, but who died in 1981. We wandered through the highly decorated main building and up to the golden stupa.

Then we continued south down into the Teesta river valley where we saw familiar trees – *Schima wallichii*, Tree Ferns, the scarlet flowers of Coral Tree (*Erythrina arborescens*) and Flame Tree (*Delonix regia*), Pandanas (Screw Pine), *Albizia chinensis* and the pink-flowered *Albizia julibrissin*, and large lilac pink flower spikes of *Lagerstroemia indiga* – probably planted as roadside trees.

We had lunch at the border and, saying farewell to Sikkim, we headed back up into the hills again, passing more rice paddies and through a low forest of Chinquona trees. The bark from the young branches is collected and dried and is a source of quinine. We also saw more Bamboo Orchids.

We reached the outskirts of Kalimpong and were soon caught up in the traffic in the noisy, colourful, bustling streets. But once through, we turned into the peaceful gardens of the historic Himalayan Hotel, where we were greeted by tea and biscuits on the terrace before finding our rooms.

Similar to Darjeeling, Kalimpong once belonged to Sikkim, and later to Bhutan. But not a tea centre, it was once a centre for India's wool trade with Tibet. It is famous for its stunning views of Kanchenjunga, but the 'Sleeping Buddha' continued to elude us! The Himalayan Hotel was once the home of David Macdonald who was a British Political Officer in Sikkim and assisted the 13th Dalai Lama to escape from Tibet in 1910. It has a close association with Himalayan history, having hosted many famous names from Everest expeditions such as Mallory and Irving, Hillary and Tenzing and many notable Tibetologists.

Day 13

Friday 19th June

Pineview Nursery – Forests outside Kalimpong - Lava

Kalimpong is famous for its many plant nurseries. Our first stop was at the Pineview Nursery which specialises in Cactus. Its unusual history began with growing and exporting orchids, mostly to the USA, but they were not allowed to import dollars so Cactus seed became the currency, and the resulting plants are now shipped all over India.

We then spent the rest of the day exploring the amazing mature forests to the east of Kalimpong, along the road to the little tourist town of Lava. Many of the old trees were whole plant communities in their own right, being festooned with masses of epiphytes. It was a lush habitat on many levels, from the festooned trees to the many shrubs and banks of ferns. Orchids included the pink Fox Brush Orchid (*Aerides rosea*), Rattlesnake Orchid (*Pholidota imbricata*), leaves of a Jewel Orchid (*Goodyera* sp) and *Dendrobium amoenum*. This habitat was also home to masses of leeches! We had all donned our leech socks but we had to be careful not to brush our arms against anything.

There were tantalising bird calls, and we saw Himalayan Bulbul, Blue Whistling Thrush, Verditer Flycatcher, Rufous Sibia, Oriental Magpie-Robin, and heard a Cuckoo and an oriole.

We had lunch at the Yankee Hotel in Lava – a town catering for hikers. Then we made our way back to Kalimpong. Dinner tonight was Chinese cuisine, which was very good.

Day 14

Saturday 20th June

Local market – lunch at hotel – meet Udai and Hemlata Pradhan

It was our last full day of the trip, and we started with a tour of the Paper Factory where we witnessed the whole process, from preparing and soaking the bark of the Indian Paper Tree (*Edgeworthia gardneri*). This plant grows at higher altitude and is naturally resistant to insects. It is boiled for 5-6 hrs and then broken down in a huge processor, where bleach or colouring could be added. The resulting pulp is then spread onto frames, squeezed to remove the water, then put out to dry before being cut to size or made into different products. One of the workers demonstrated patterning the paper with coloured inks and some of the group took the opportunity to have a go. Then we purchased gifts of writing paper, notebooks and gift bags.

We then ventured into the market and Alister led us through the bustling streets. Saturday is the day when people come in from the surrounding areas to sell produce. The market area was a riot of bright colourful vegetables and fruit, bags of spices, herbs, pulses and flowers. Alister explained the uses of many of the products – dried bark and pine needles for incense burning, dried fermented mustard greens for flavouring soup, small cakes of dried yeast for fermenting beer, fiddle heads and other various greens. It was quite an olfactory experience on many levels!

We returned to the hotel for lunch, which included soup with dried mustard greens which Alister had purchased in the market, and then set off for our meeting with Alister's family.

Udai Pradhan is a renowned orchid specialist and writer, and Alister's father-in-law. Alister's sister-in-law is Hemlata Pradhan – an internationally renowned botanical artist, and she is developing the Himalayan Institute of Natural History and Art, where local children can develop their creative skills and learn about their environment and conservation. We were greeted like royalty, and the children were very pleased to show us their work, from their simple sketches in their notebooks to more sophisticated pieces. We then saw samples of Hemlata's work which was stunning in its detail. If the *Mecanopsis simplifolia* had been for sale there would have been fierce competition for it! We were able to purchase cards and bookmarks of both Hemlata's work and that of her students. We were then treated to tea with savoury snacks and cake and were able to talk with Udai about plants we had seen, and he talked about a book on *Arisaemas* he and Hemlata were working on. Alister introduced us to his wife Sanjivini and daughter Alana, who was a bit overwhelmed by the crowd of visitors. It was an inspiring afternoon and a rich ending to the tour.

Before dinner, we thanked Alister for his hard work that made our visit so rich and enjoyable. He presented us with silk scarves and prayer flags of the mystic mantra “*Om Mane Padme Hum*” (Hail jewel in the lotus).

Day 15

Sunday 21st June

Return to Bagdogra for flight to Kolkata

Before leaving Kalimpong, we thanked our team of drivers and then set off for Bagdogra. We made good time, and were soon driving alongside the languid steaming Teesta River, stopping for coffee before reaching the airport. The bustling airport meant we didn't get much time to say goodbye to the drivers, but Alister came into the airport and, once we had checked in, he had lunch with us. Our long journey back to the UK was thankfully uneventful. We said goodbye to Murray in Kolkata as he was staying on for a few days. We all left with

unforgettable memories of this very special corner of India, not only its natural wealth but the culture and peoples. Everyone in the group contributed to the whole experience whether it was their sense of humour, spotting flowers, sharing botanical knowledge or prompting debate about the plants, the habitat or the culture.

Day 16

Monday 22nd June

Return flights to the UK

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Primula calderiana

Species Lists

Plants

Family	Genus	Species	English name, notes	
Aceraceae	<i>Acer</i>	<i>campbellii</i>	Lloyd Botanical Gdns, Dombang valley	
Amaryllidaceae	<i>Allium</i>	<i>pratii</i>		
		<i>Zephyranthes</i>	<i>carinata</i>	widespread, from Mexico
Anacardiaceae	<i>Cotinus</i>	<i>coggygia</i>	Smoke Tree, shrub	
	<i>Rhus</i>	<i>wallichii</i>	shrub	
Araceae	<i>Arisaema</i>	<i>griffithii</i>	Cobra Lily	
		<i>concinnum</i>	“	
		<i>consanguineum</i>	“	
		<i>nepenthoides</i>	“	
		<i>speciosum</i>	“	
		<i>tortuosum</i>	Whipcord Cobra Lily , seen regularly,	
		<i>jacquemontii</i>	Cobra Lily	
		<i>galeatum</i>	“	
		<i>echinatum</i>	“	
		<i>propinquum</i>	“	
		<i>utile</i>	Sikkim Cobra Lily, seen regularly, small plants	
Araliaceae	<i>Remusatia</i>	<i>hookeriana</i>	tall arum spike, side of road	
	<i>Acanthopanax</i>	<i>cissifolios</i>	shrub	
	<i>Panax</i>	<i>pseudo-ginseng</i>	Ginseng, Yumthang	
	<i>Trevesia</i>	<i>palmata</i>	palmate leaves, shrub	
Aristolochiaceae	<i>Aristolochia</i>	<i>griffithii</i>	above Lachen, climber	
Asclepiadaceae	<i>Hoya</i>	? <i>sikkimensis</i>	nr landslide south of Chungthang	
	<i>Hoya</i>	<i>polyneura</i>	umbel of flowers, nr landslide, south of Chungthang	
Balsaminaceae	<i>Impatiens</i>	<i>cristata</i>	yellow flowers	
	<i>Impatiens</i>	<i>glandulifera</i>	Himalayan Balsam	
	<i>Impatiens</i>	<i>urticifolia</i>	yellow flowers, nettle -shaped leaves	
	<i>Impatiens</i>	<i>decipiens</i>	pink flowers	
Begoniaceae	<i>Begonia</i>	<i>picta</i>	white flowers	
Berberidaceae	<i>Berberis</i>	<i>spp</i>	many species seen particularly above Lachung	
	<i>Mabonia</i>	<i>nepalensis</i>	seen regularly	
	<i>Pododphyllum</i>	<i>hexandrum</i>	above Lachen	
Betulaceae	<i>Alnus</i>	<i>nepalensis</i>	Himalayan Alder – quick growing, shade tree for black cardomom	
	<i>Betula</i>	<i>utilis</i>		
Caprifoliaceae	<i>Leycesteria</i>	<i>formosa</i>	Himalayan Honeysuckle, Pheasantberry, shrub	
	<i>Lonicera</i>	<i>cyanocarpa</i>	var <i>porphyrantha</i> , dark red funnel shaped flowers, shrub	
	<i>Triosteum</i>	<i>himalayanum</i>	hairy perennial, green/purple flowers	
Caryophyllaceae	<i>Cerastium</i>	<i>cerastioides</i>		
Compositae	<i>Gypsophila</i>	<i>cerastioides</i>	widespread,	
	<i>Ageratum</i>	<i>conyzoides</i>	common roadside plant, pale lilac flowers	
	<i>Ainsliaea</i>	<i>aptera</i>		
	<i>Anaphalis</i>	<i>nepalensis</i>	small white papery flowers	
	<i>Artemisia</i>	<i>vulgaris</i>	Wormwood	
	<i>Bidens</i>	<i>pilosa</i>	common universal weed	
	<i>Eupatorium</i>	<i>adenophorum</i>	common universal weed from Mexico	
	<i>Galinsago</i>	<i>parviflora</i>	common universal weed from South America	
	<i>Pseudognaphalium</i>	<i>affine</i>	yellow papery flowers	
	<i>Erigeron</i>	<i>multiradiatus</i>	Himalayan Fleabane, Yume Samdang	
	<i>Taraxicum</i>	<i>sps</i>	seen widely ,roadsides	
	Coriariaceae	<i>Coriaria</i>	<i>nepalensis</i>	shrub

Family	Genus	Species	English name, notes
Crassulaceae	<i>Rhodiola</i>	<i>himalensis</i>	Roseroot
	<i>Sedum</i>	<i>multicaule</i>	Stonecrop
Cruciferae	<i>Cardamine</i>	<i>macrophylla</i>	
	<i>Brassica</i>	<i>juncea</i>	Mustard greens – fermented and dried and used to flavour soup
Diapensiaceae	<i>Diapensia</i>	<i>himalaica</i>	above Lachung
Droseraceae	<i>Drosera</i>	<i>peltata</i>	Sundew, above Lachung
Elaeagnaceae	<i>Elaeagnus</i>	<i>latifolia</i>	
Ephedraceae	<i>Ephedra</i>	<i>gerardiana</i>	source of drug ephedrine
Equisetaceae	<i>Equisetum</i>	<i>sps</i>	various species seen
Ericaceae	<i>Agapetes</i>	<i>serpens</i>	epiphytic shrub seen regularly, bright red flowers
	<i>Cassiope</i>	<i>fastigiata</i>	above Lachung
	<i>Enkianthus</i>	<i>deflexus</i>	Himalayan Red Bells, above Lachung, shrub
	<i>Gaultheria</i>	<i>trichophylla</i>	Himalayan Snowberry
	<i>Pieris</i>	<i>formosa</i>	Lily-of-the-valley Tree
	<i>Rhododendron</i>	<i>arboreum</i>	Red/pink, large flowers, mostly over
		<i>barbatum</i>	large shrub, deep red flowers
		<i>campanulatum</i>	pale mauve/purple flowers
		<i>falconeri</i>	Large shrub, creamy white/yellow flowers
		<i>hodgsonii</i>	not seen in flower,
		<i>wightii</i>	large yellow bell-shaped flowers
		<i>dalbousiae</i>	epiphytic, large yellow flowers
		<i>anthopogon</i>	small shrub, yellow flowers
		<i>triflorum</i>	pale yellow flowers
		<i>glaucophyllum</i>	small shrub, white flowers
		<i>nivale</i>	small low growing shrub, pink/mauve flowers
		<i>thomsonii</i>	deep red flowers
		<i>maddenii</i>	white/pink flowers
		<i>campylocarpum</i>	pale yellow flowers
		<i>cinnabarinum</i>	orange/red drooping bells
	<i>setosum</i>	compact sub-shrub, purple flowers	
	<i>camelliflorum</i>	often epiphytic, small red/pink flowers	
	<i>ciliatum</i>	small shrub, often procumbent on rocks, pink flowers	
	<i>lepidotum</i>	subshrub, pink, red or yellow	
	<i>mekongiensis</i>	large shrub, yellow flowers	
	<i>lowndesii</i>	subshrub, solitary or paired pale yellow flowers	
	<i>virgatum</i>	small shrub, pale pink flowers	
	<i>baileyi</i>	small shrub, small open wine red flowers	
	<i>aeruginosum</i>	large shrub, pink flowers	
Euphorbiaceae	<i>Euphorbia</i>	<i>sikkimensis</i>	botanic garden, above Lachung
		<i>wallichii</i>	above Lachung
	<i>Ricinus</i>	<i>communis</i>	widely seen
Fagaceae	<i>Castanopsis</i>	<i>indica</i>	evergreen tree
	<i>Quercus</i>	<i>spp</i>	conservation area, Gangtok
Fumariaceae	<i>Corydalis</i>	<i>?longifolious</i>	
Gesneriaceae	<i>Aeschynanthus</i>	<i>sikkimensis</i>	Sikkim Blushwort, epiphytic
	<i>Chirita</i>	<i>urticifolia</i>	
	<i>Corallodiscus</i>	<i>lanuginosus</i>	small lilac flowers
	<i>Didymocarpus</i>	<i>albicalyx</i>	purple tube-shaped flowers
Graminaceae	<i>Dendrocalamus</i>	<i>sikkimensis</i>	Giant Bamboo
	<i>Bambusa</i>	<i>spp</i>	Bamboo, many species seen
	<i>Thysanolaena</i>	<i>latifolia</i>	Tiger Grass, tall arching reed-like grass with plume of flowers
Guttiferae	<i>Hypericum</i>	<i>hookeriana</i>	shrub
	<i>Gentiana</i>	<i>spp</i>	
Hydrangeaceae	<i>Dichroa</i>	<i>febrifuga</i>	seen regularly, delicate blue hydrangea-like flowers

Family	Genus	Species	English name, notes
	<i>Philadelphus</i>	<i>tomentosus</i>	Lachung
Iridaceae	<i>Iris</i>	<i>clarkii</i>	Dombang, below Tsomgo Lake
Labiataeae	<i>Ajuga</i>	<i>species</i>	Bugle, seen regularly
	<i>Salvia</i>	<i>campanulata</i>	yellow flowers
Lardizabalaceae	<i>Holboellia</i>	<i>latifolia</i>	Sausage Vine, twining shrub, white flowers
Leguminosae	<i>Albizia</i>	<i>chinensis</i>	shade tree, yellow/white flowers
		<i>julibrissin</i>	Persian Acacia, shade tree, pink flowers
	<i>Cassalpinia</i>	<i>decapetala</i>	Cat's Claw, climber or shrub, yellow panicles
	<i>Baubinia</i>	<i>variegata</i>	Orchid Tree/Mountain Ebony, naturalised from China
	<i>Cassia</i>	<i>fistula</i>	Golden Shower Tree/Indian Laburnum
	<i>Delonix</i>	<i>regia</i>	Flamboyant/Flame Tree
	<i>Astragalus</i>	<i>species</i>	Yume Samdang
	<i>Oxytropis</i>	<i>?microphylla</i>	"
	<i>Erythrina</i>	<i>arborescens</i>	Coral Tree
	<i>Indigofera</i>	<i>cassiodes</i>	shrub, lilac pink flowers
	<i>Parochetus</i>	<i>communis</i>	Blue Oxalis, small blue pea flowers
	<i>Piptanthus</i>	<i>nepalensis</i>	Evergreen Laburnum, bush with silvery foliage, yellow pea flowers, Lachung
	<i>Spongiocarpella</i>	<i>purpurea</i>	low growing, purple or yellow pea flowers, Yume Sandang
	<i>Trifolium</i>	<i>repens</i>	White Clover, common roadside plant
Liliaceae	<i>Clintonia</i>	<i>udensis</i>	Bead Lily
	<i>Cardiocrinum</i>	<i>giganteum</i>	Lachung
	<i>Fritillaria</i>	<i>cirrrosa</i>	Yumthang and Chopta
	<i>Paris</i>	<i>polyphylla</i>	
	<i>Campylandra</i>	<i>aurantiaca</i>	strap leaves, compact flower spike at base, botanical garden
	<i>Chlorophytum</i>	<i>nepalensis</i>	starry white flowers on long stems, 'spider plant'
	<i>Lloydia</i>	<i>flavonutans</i>	Yume Samdang
	<i>Lloydia</i>	<i>longiscapa</i>	"
	<i>Ophiopogon</i>	<i>intermedius</i>	Lilyturf
	<i>Smilacina</i>	<i>oleracea</i>	a false Solomon's Seal
		<i>fusca</i>	
	<i>Streptopus</i>	<i>simplex</i>	white flowers
	<i>Hemerocallis</i>	<i>fulva</i>	Day Lily
Magnoliaceae	<i>Magnolia</i>	<i>campbellii</i>	not in flower
		<i>globosa</i>	above Lachung,
Melanthiaceae	<i>Aletris</i>	<i>pauciflora</i>	short stems of tiny pinkish flowers, grass like leaves
Melastomataceae	<i>Melastoma</i>	<i>normale</i>	Himalayan Melastome, shrub with mauve flowers
Meliaceae	<i>Melia</i>	<i>azedarach</i>	Indian Bead Tree/Persian Lilac
Moraceae	<i>Ficus</i>	<i>benghalensis</i>	large tree planted in villages for shade, sacred to Hindus
		<i>religiosa</i>	Pipal Tree, as above
Musaceae	<i>Musa</i>	<i>sikkimensis</i>	Sikkim Banana
Oleaceae	<i>Jasminum</i>	<i>officinale</i>	
Orcidaceae	<i>Aerides</i>	<i>rosea</i>	Fox Brush Orchid, epiphytic, Cinquona Forest
	<i>Arundina</i>	<i>graminifolia</i>	Bamboo Orchid, terrestrial
	<i>Bulbophyllum</i>	<i>affine</i>	epiphytic on <i>Schima wallichii</i>
	<i>Coelogyne</i>	<i>corymbosa</i>	Epiphytic, Darjeeling
		<i>ochracea</i>	"
	<i>Dendrobium</i>	<i>amoenum</i>	Epiphytic, seen regularly
		<i>densiflorum</i>	Hidden Forest Retreat
		<i>porphyrochilum</i>	
	<i>Epipogium</i>	<i>roseum</i>	terrestrial, saprophytic, Plant Conservatory, Gangtok
	<i>Goodyera</i>	<i>sps</i>	A Jewel Orchid, terrestrial, leaves only
	<i>Malaxis</i>	<i>acuminata</i>	Terrestrial, loose spike of small pink/green flowers
	<i>Malaxis</i>	<i>purpurea</i>	terrestrial, compact spike of tiny red flowers

Family	Genus	Species	English name, notes
	<i>Oreorchis</i>	<i>foliosa</i>	Terrestrial, spike of red/brown flowers, Dombang Valley
	<i>Pholidota</i>	<i>imbricata</i>	Rattlesnake Orchid, epiphytic, tightly packed raceme of cream flowers (popcorn!)
	<i>Platanthera</i>	<i>leptocaulon</i>	terrestrial, above Lachung, pale green spike, small green flowers with long spur
	<i>Pleione</i>	<i>hookeriana</i>	Epiphytic, masses seen in Dombang Valley
	<i>Spathoglottis</i>	<i>ixioides</i>	Terrestrial, Daffodil Orchid, leaves only
	<i>Vanda</i>	<i>cristata</i>	Epiphytic, Hidden Forest Retreat
Oxalidaceae	<i>Oxalis</i>	<i>corniculata</i>	seen regularly, yellow flowers
		<i>latifolia</i>	“ , pink flowers
Pandanaceae	<i>Pandanus</i>	<i>nepalensis</i>	Screw Pine, seen regularly in forests near the river
Papaveraceae	<i>Cathcartia</i>	<i>villosa</i>	Himalayan Woodland Poppy, below Tsongo Lake
	<i>Corydalis</i>	<i>juncea</i>	
	<i>Dicentra</i>	<i>macrocapnos</i>	yellow flowers
	<i>Dactylicapnos</i>	<i>species</i>	Bleeding Heart Vine
	<i>Meconopsis</i>	<i>paniculata</i>	Yumthang and Chopta
		<i>simplicifolia</i>	“
Pinaceae	<i>Abies</i>	<i>densa</i>	East Himalayan Silver Fir, Dombang
		<i>spectabilis</i>	Himalayan Silver Fir
	<i>Larix</i>	<i>griffithiana</i>	East Himalayan Larch, Dombang, Yumthang
	<i>Picea</i>	<i>smithiana</i>	Himalayan Spruce
	<i>Pinus</i>	<i>wallichiana</i>	Himalayan Blue Pine, Dombang, Yumthang
		<i>roxburghii/longifolia</i>	Long-leaved or Chir Pine, roadside south of Gangtok
		<i>a</i>	
Polygonaceae	<i>Aconogonum</i>	<i>molle</i>	?Japanese Knotweed, young shoots edible
	<i>Oxyria</i>	<i>digyna</i>	Mountain Sorrel, leaves are edible
	<i>Bistorta</i>	<i>vacciniifolia</i>	Red Carpet Knotweed
		<i>vivipara</i>	Alpine Bistort
	<i>Persicaria</i>	<i>capitata</i>	Pink Knotweed
		<i>nepalensis</i>	Nepal Knotweed
	<i>Polygonatum</i>	<i>kansuense</i>	tall spike, lilac flowers in leaf axils, Dombang
		<i>hookeri</i>	low growing, pink flowers, seen widely
		<i>multiflorum</i>	Solomon's Seal,
	<i>Rheum</i>	<i>nobile</i>	one very dead spike found at Yume Sandong, collected locally for medicinal use
		<i>acuminatum</i>	Himalayan Rhubarb, Dombang Valley
	<i>Rumex</i>	<i>nepalensis</i>	Nepal Dock, common on waste ground
Primulaceae	<i>Androsace</i>	<i>rotundifolia</i>	common in and around Lachung
	<i>Primula</i>	<i>atrodentata</i>	small globular head of lavender flowers, Yume Samdang
		<i>calderiana</i>	flowers purple, Yume Samdang
		<i>capitata</i>	flat topped head of drooping purple flowers
		<i>concinna</i>	low cushion of purple flowers, Yume Samdang
		<i>elongata var elongata</i>	Dombang
		<i>denticulata</i>	globular head, flowers purplish with white or yellow eye
		<i>dickieana</i>	loose head of 1-6 pale yellow flowers, with darker yellow eye
		<i>?obliqua</i>	possibly the yellow sp at Tsomgo Lake
		<i>?smithiana</i>	yellow,
		<i>?stuartii</i>	yellow
		<i>sikkimensis</i>	yellow drooping flowers, honey scented, above Lachen, Yume Sandang
		<i>?tanneri</i>	possibly the purple sp at Tsomgo Lake
Ranunculaceae	<i>Anenome</i>	<i>rivularis</i>	Botanical Garden, Yumthang
		<i>vitifolia</i>	Grape Leaf Anenome
		<i>polyanthus</i>	white flowers
	<i>Ranunculus</i>	<i>sps</i>	various species seen
	<i>Thalictrum</i>	<i>chelidoni</i>	small lilac flowers

Family	Genus	Species	English name, notes
		<i>virgatum</i>	small white flowers
	<i>Clematis</i>	<i>montana</i>	seen widely in above Lachung, Yumthang
Rosaceae	<i>Cotoneaster</i>	<i>microphyllus</i>	dwarf shrub
	<i>Fragaria</i>	<i>nubicola</i>	Himalayan Strawberry, widespread at Lachung and Yumthang
	<i>Potentilla</i>	<i>microphylla</i>	Yume Sandang
		<i>ericarpa</i>	
	<i>Rosa</i>	<i>sericea</i>	Small yellow flowers, seen regularly
	<i>Rubus</i>	<i>ellipticus</i>	Yellow Himalayan Raspberry, sharp to taste!
	<i>Sibbaldia</i>	<i>cuneata</i>	Yume Sandang
	<i>Spiraea</i>	<i>bella</i>	seen widely, tiny pink flowers
Rubiaceae	<i>Coffea</i>	<i>bengbalensis</i>	shrub with white fragrant flowers
	<i>Mussaenda</i>	<i>roxburghii</i>	Shrub with random white leaves (calyx), seen widely at lower levels
	<i>Rubia</i>	<i>manjith</i>	bristly climber, a dye – manjith – is obtained from the roots
Salicaceae	<i>Salix</i>	<i>calyculata</i>	Dwarf Willow, red catkins
		<i>serpyllum</i>	Dwarf Willow, yellow catkins
		<i>sikkimensis</i>	Yumthang Valley
Sambucaceae	<i>Sambucus</i>	<i>adnata</i>	Low growing, elderflower heads, seen regularly
		<i>canadensis</i>	shrub, seen regularly
Saurauiaceae	<i>Saurauia</i>	<i>nepaulensis</i>	shrub
Saururaceae	<i>Houttuynia</i>	<i>cordata</i>	Lizard Tail, Chameleon Plant, common roadside plants
Saxifragaceae	<i>Astilbe</i>	<i>rivularis</i>	False Spirea
	<i>Bergenia</i>	<i>purpurascens</i>	Purple Bergenia
	<i>Saxifraga</i>	<i>stolonifera</i>	Yumthang and Botanical Gardens
Scrophulariaceae	<i>Hemiphragma</i>	<i>heterophyllum</i>	ground covering creeper, pink flowers
	<i>Digitalis</i>	<i>purpurea</i>	naturalised from gardens
	<i>Lancea</i>	<i>tibetica</i>	stemless flowers of bright blue/purple
	<i>Mazus</i>	<i>sps</i>	small blue flowers
	<i>Pedicularis</i>	<i>longiflora</i>	yellow flowers, Yume Sandang
		<i>?nepalensis</i>	globular head of pink flowers,
		<i>? trichoglossa</i>	single heads, deep pink
	<i>Veronica</i>	<i>laguniosa</i>	
Solanaceae	<i>Mandragora</i>	<i>caulescens</i>	Yume Sandang
	<i>Datura</i>	<i>suaveloens</i>	Widespread in forest and gardens
	<i>Solanum</i>	<i>viarum</i>	very spiny
Tamaricaceae	<i>Myricaria</i>	<i>rosea</i>	creeping tamarisk
Theaceae	<i>Shima</i>	<i>wallichii</i>	large tree, simple white flowers, seen widely at lower levels
	<i>Camellia</i>	<i>sinensis</i>	Tea plant – seen widely, infusion drunk regularly and in quantity!
Thymelaeaceae	<i>Daphne</i>	<i>retusa</i>	Yume Sandang
	<i>Edgeworthia</i>	<i>gardneri</i>	Indian Paper Tree
Umbelliferae	<i>Cortia</i>	<i>depressa</i>	Low-growing, alpine plant
	<i>Heracleum</i>	<i>nepalense</i>	above Lachung
Urticaceae	<i>Elatostema</i>	<i>platyphyllum</i>	
	<i>Girardinia</i>	<i>diversifolia</i>	Large stinging nettle
	<i>Pilea</i>	<i>scripta</i>	stinging plant
Violaceae	<i>Viola</i>	<i>biflora</i>	seen widely, yellow flowers
		<i>betonicifolia</i>	lilac flowers
Vitaceae	<i>Vitis</i>	<i>jacquemontii</i>	shrub
Zingiberaceae	<i>Cantleya</i>	<i>spicata</i>	loose spike of red/yellow flowers
		<i>gracilis</i>	denser spike of flowers
	<i>Hedychium</i>	<i>ellipticum</i>	globe of long narrow flowers
		<i>spicatum</i>	long spike of white flowers
	<i>Amomum</i>	<i>aromaticum</i>	Cardomom, seen cultivated

Ferns

<i>Adiantum concinnum</i> , Brittle Maidenhair	<i>Asplenium phyllitidis</i> , Himalayan Bird'snest Fern
<i>Woodwardia unigenmata</i> , Chain Fern	<i>Cyathea gigantea</i> , a Tree Fern
<i>Dennstaedtia appendiculata</i> , Cup Fern	<i>Pteridium revolutum</i> , Bracken or Eagle Fern
<i>Acrophorus paleolulatus</i> , (bronze young shoots)	<i>Lindsaea odorata</i> , Grassy Necklace Fern
<i>Angiopteris indica</i> , Giant Fern	<i>Oleandra wallichii</i> , Stilt Fern
<i>Drynaria coronans</i> , Epiphytic	<i>Polypodiodes amoena</i> , Epiphytic
<i>Lycopodium japonicum</i> , a Clubmoss	<i>Huperzia pulcherrima</i> , a Tassel Fern
<i>Aleuritopteris albomarginata</i> , small white-backed fern	<i>Gleichenia gigantea</i> , A scrambling fern forming large banks

Birds

Common Name	Scientific Name	Notes
Little Egret	<i>Egretta garzetta</i>	seen in river valleys
Cattle Egret	<i>Bulbulcus ibis</i>	Near Bagdogra
Pintail	<i>Anas acuta</i>	Yumthang
Mallard	<i>Anas platyrhynchos</i>	Yumthang
Tufted Duck	<i>Aythya fuligula</i>	"
Greater Yellownappe	<i>Picus flavincha</i>	Darjeeling
Black Kite	<i>Milgrus migrans</i>	Nr Bagdogra
Black Eagle	<i>Ictinaetus malayensis</i>	Dombang Valley
Golden Eagle	<i>Aquila chrysaetos</i>	Yume Samgdang
Kalij Pheasant	<i>Lophura leucomelanos</i>	Nr Kalimpong
Hill Pigeon	<i>Columba rupestris</i>	Yumthang
Snow Pigeon	<i>Columba leuconota</i>	"
Speckled Wood-pigeon	<i>Columba hodgsonii</i>	Lachung
Spotted Dove	<i>Streptopelia chinensis</i>	"
Oriental Turtle Dove	<i>Streptopelia turtur</i>	seen regularly
Common Cuckoo	<i>Cuculus canorus</i>	Heard only
Ibisbill	<i>Ibidorhyncha struthersii</i>	Yumthang
Sirkeer Malkoha	<i>Phaenicophaeus leschenaultii</i>	
Himalayan Swiftlet	<i>Collocalia brevirostris</i>	
Owl spp X 2		Kalimpong – hotel garden
House Swift	<i>Apus nipalensis</i>	
White-throated Kingfisher	<i>Halcyon smyrnensis</i>	Nr Bagdogra
Indian Roller	<i>Coracias benghalensis</i>	"
Eurasian Hoopoe	<i>Upupa epops</i>	Heard only
Barn Swallow	<i>Hirundo rustica</i>	seen occasionally
Asian House Martin	<i>Delichon dasypus</i>	Chungthang
Blue-throated Barbet	<i>Megalaima asiatica</i>	Kalimpong – hotel garden
White Wagtail	<i>Motacilla alba</i>	Lachung
Scarlet Minivet	<i>Pericrocotus flammeus</i>	Lower lachung Valley
Red-vented Bulbul	<i>Pycnonotus cafer</i>	Common
Black Bulbul	<i>Hypsipetes leucocephalus</i>	
Mountain Bulbul	<i>Pycnonotus leucogenys</i>	Kalimpong – hotel garden
Brown Dipper	<i>Cinclus pallasi</i>	? Teesta River nr Rangpo
Eurasian Wren	<i>Troglodytes troglodytes</i>	
Rufous-breasted Accentor	<i>Prunella strophia</i>	Yume Samgdang
Robin Accentor	<i>Prunella rubeculoides</i>	"
Blue Whistling-thrush	<i>Myophonus caeruleus</i>	Lloyd Botanical garden, Gangtok
Grandala	<i>Grandala coelicolor</i>	Yume Samdang
White-collared Blackbird	<i>Turdus albocinctus</i>	Yumthang

Common Name	Scientific Name	Notes
Grey-winged Blackbird	<i>Turdus boulboul</i>	Lloyd Botanical garden, Gangtok
Common Blackbird	<i>Turdus merula</i>	Gangtok
Little Pied Flycatcher	<i>Ficedula westermanni</i>	Gangtok
Verditer Flycatcher	<i>Eumyias thalassina</i>	Gangtok
Black Redstart	<i>Phoenicurus ochruros</i>	Yumthang
White-capped Water Redstart	<i>Chaimarrornis leucocephalus</i>	Yumthang
Oriental Magpie-Robin	<i>Copsychus saularis</i>	Gangtok, Kalimpong
Streaked Laughingthrush	<i>Garrulax lineatus</i>	Gangtok
White-throated Fantail	<i>Rhipidura albicolis</i>	"
Red-billed Leiothrix	<i>Leiothrix lutea</i>	Darjeeling
Rufous Sibia	<i>Heterophasia capistrata</i>	Heard regularly
Whiskered Yuhina	<i>Yuhina flavicolis</i>	
Stripe-throated Yuhina	<i>Yuhina gularis</i>	
Green-backed Tit	<i>Parus monticolus</i>	Darjeeling
Grey Crested Tit	<i>Lophophanes dichrous</i>	Yumthang
White-tailed Nuthatch	<i>Sitta himalayensis</i>	"
Black-hooded Oriole	<i>Oriolus xanthornus</i>	Heard only
Ashy Drongo	<i>Dicrurus leucophaeus</i>	
Long-tailed Shrike	<i>Lanius schach</i>	Common around Lachung
Black Drongo	<i>Dicrurus macrocercus</i>	Gangtok
Bronzed Drongo	<i>Dicrurus aeneus</i>	"
Greater Racket-tailed Drongo	<i>Dicrurus paradiseus</i>	"
Grey Treepie	<i>Dendrocitta formosae</i>	Lachen
Red-billed Chough	<i>Pyrrhocorax pyrrhocorax</i>	
House Crow	<i>Corvus splendens</i>	Common
Large-billed Crow	<i>Corvus macrorhynchos</i>	"
Common Myna	<i>Acridotheres tristis</i>	"
Common Green Magpie	<i>Cissa chinensis</i>	Kalimpong – hotel garden
Yellow-billed Blue Magpie	<i>Urocissa erythrorhyncha</i>	Gangtok
Scarlet-backed Flowerpecker	<i>Dicaeum cruentatum</i>	
Eurasian Tree Sparrow	<i>Passer montanus</i>	Darjeeling
Scarlet Finch	<i>Haematospiza sipahi</i>	Yumthang
Dark-breasted Rosefinch	<i>Carpodachus nipalensis</i>	"



Cassiope fastigiata



Waterfall with prayer flags