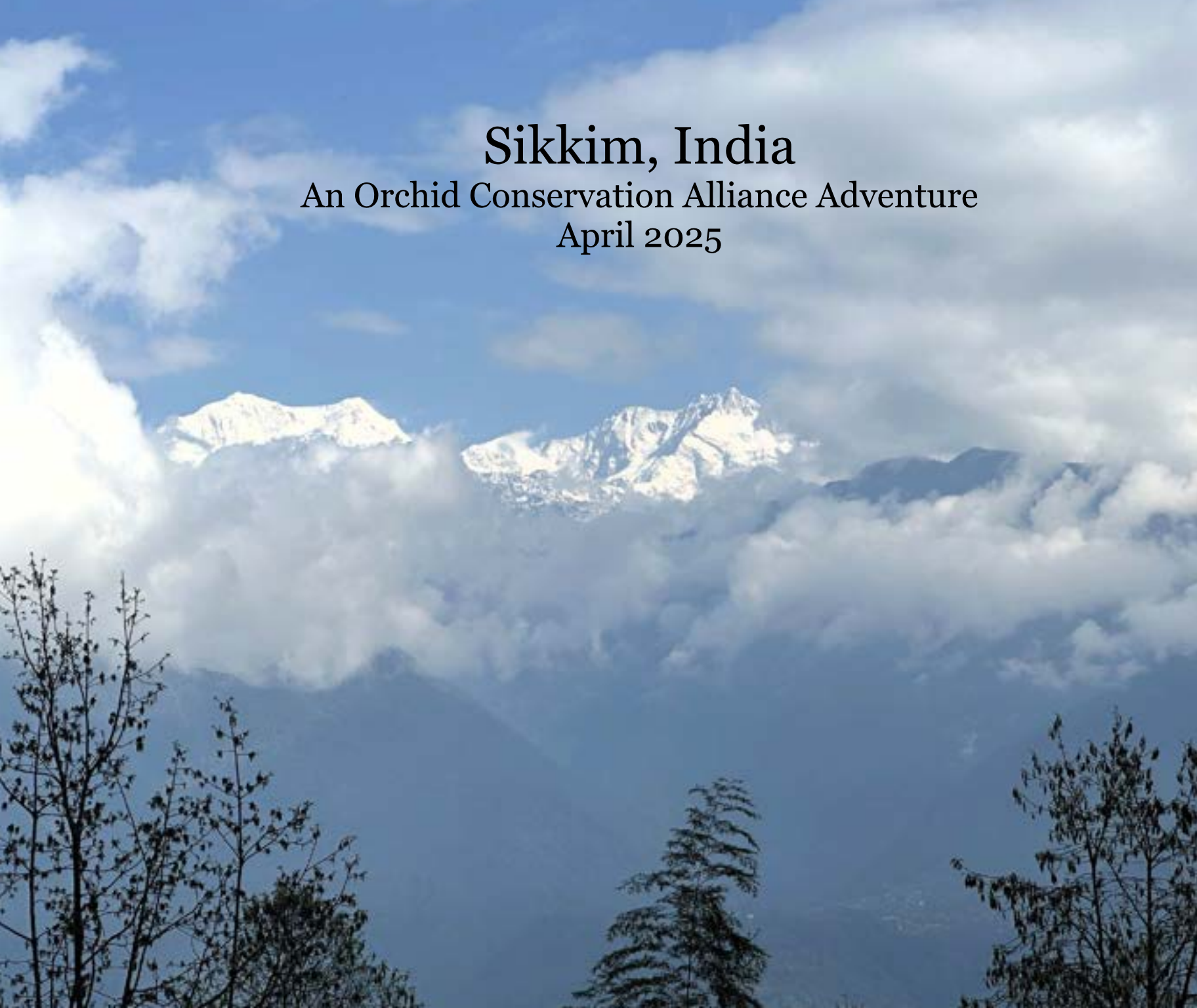


Sikkim, India

An Orchid Conservation Alliance Adventure

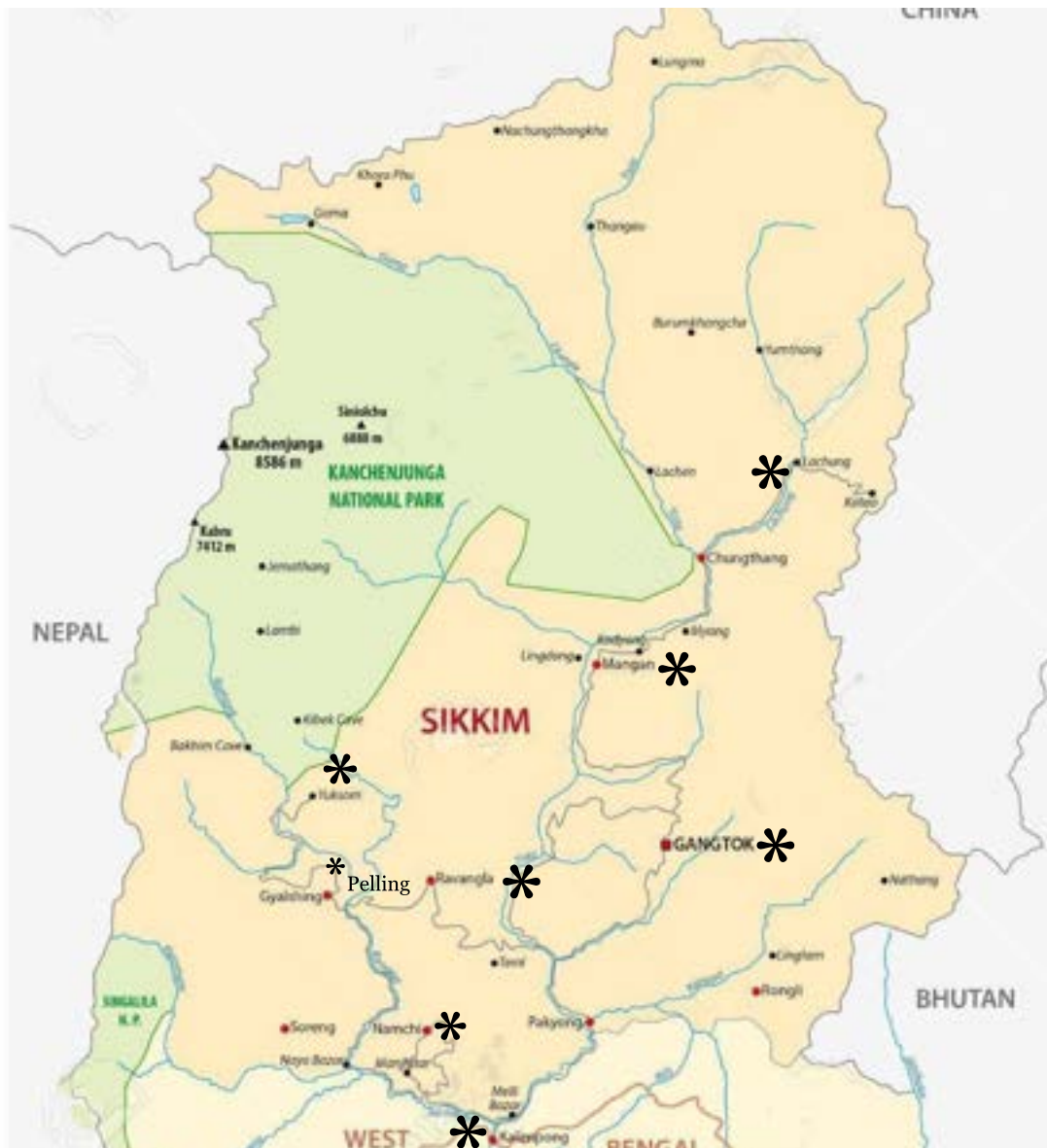
April 2025





Sikkim, India

An Orchid Conservation Alliance Adventure
April 2025



©2025 by Rick Burian. The book author retains sole copyright to his contributions to this book.

The Blurb-provided layout designs and graphic elements are copyright Blurb Inc. This book was created using the Blurb creative publishing service. The book author retains sole copyright to his or her contributions to this book.





The Orchid Conservation Alliance (OCA) was founded in 2004 with the focus being to raise money to conserve land in orchid-rich regions of the world so that nature's most amazing flora will continue to thrive in the wild. Since its inception, the OCA has raised over \$650,000 to support the creation or expansion of seven orchid reserves that are located in Ecuador, Colombia and Brazil. By doing this they have preserved nearly 4,600 acres of pristine, primary biodiverse orchid rich habitats. Preservation of habitat also protects pollinators as well as birds, amphibians, mammals, other plants, and even fungi.

Their fundraising is a mix of different activities: presentations to orchid societies, booths at orchid shows, a presence on Facebook and Instagram, direct mailing to our membership, and telling people what we are doing every chance that we get. In addition, our Orchids in the Wild™ Ecotours have succeeded in introducing hundreds of orchid lovers to the wonders of seeing orchids growing in their natural habitats in countries around the globe: North America (Ohio (USA), Newfoundland (Canada)), Chiapas (Mexico), South America (Colombia, Ecuador, Brazil (Rio de Janeiro, Rio Negro, Bahia)), Europe (France, Greece (Crete, Rhodes), Sicily, Spain, Switzerland), Asia (China (North and South Yunnan, Sichuan, Fujian), Nepal, Papua New Guinea, Thailand, as well as South Africa and Madagascar.

This 15 day trip to Sikkim was the inaugural visit to India. The participants gathered in New Delhi but then flew to Bagdogra and drove from there to Gangtok to start the tour. We traveled in four wheel drive vehicles as the roads in the region are often rough, steep or muddy. From Gangtok we headed into Northern Sikkim to Mangan, then Lachung, down to Ravangla, Yuksom and Pelling before ending in Kalimpong, West Bengal.

Sikkim is a state in northeastern India. It borders the Tibet Autonomous Region of China in the north and northeast, Bhutan in the east, Koshi Province of Nepal in the west, and West Bengal in the south. Sikkim is also close to the Siliguri Corridor, which borders Bangladesh. Sikkim is the least populous and second-smallest among the Indian states. Situated in the Eastern Himalaya, Sikkim is notable for its biodiversity, including alpine and subtropical climates, as well as being a host to Kangchenjunga, the highest peak in India and third-highest on Earth. Sikkim's capital and largest city is Gangtok. Almost 35% of the state is covered by Khangchendzonga National Park, an UNESCO World Heritage Site.

The Kingdom of Sikkim was founded by the Namgyal dynasty in the 17th century. It was ruled by Buddhist priest-kings known as the Chogyal. It became a princely state of the British Indian Empire in 1890. Following Indian independence, Sikkim continued its protectorate status with the Union of India after 1947 and the Republic of India after 1950. It enjoyed the highest literacy rate and per capita income among Himalayan states. In 1973, anti-royalist riots took place in front of the Chogyal's palace. In 1975, after the Indian Army took over the city of Gangtok, a referendum was held that led to the dissolution of the monarchy and Sikkim's joining India as its 22nd state.

Modern Sikkim is a multiethnic and multilingual Indian state. The official languages of the state are English, Nepali, Bhutia, and Lepcha. Additional official languages include Gurung, Limbu, Magar, Mukhia, Newari, Rai, Sherpa and Tamang for the purpose of preservation of culture and tradition in the state. English is taught in schools and used in government documents. The predominant religion is Hinduism, with a significant Vajrayana Buddhist minority. Sikkim's economy is largely dependent on agriculture and tourism. As of 2019, the state had the fifth-smallest GDP among Indian states, although it is also among the fastest-growing.

Situated in the Himalayan mountains, the state of Sikkim is characterized by mountainous terrain. Almost the entire state is hilly, with an elevation ranging from 280 meters (920 ft) in the south at the border with West Bengal to 8,586 meters (28,169 ft) in the northern peaks near Nepal and Tibet. The summit of Kangchenjunga, the world's third-highest peak, is the state's highest point, situated on the border between Sikkim and Nepal. For the most part, the land is unfit for agriculture because of the rocky, precipitous slopes. However, some hill slopes have been converted into terrace farms.

Numerous snow-fed streams have carved out river valleys in the west and south of the state. These streams combine into the major Teesta River and its tributary, the Rangeet, which flow through the state from north to south. About a third of the state is heavily forested. The Himalayan mountains surround the northern, eastern and western borders of Sikkim. The Lower Himalayas, lying in the southern reaches of the state, are the most densely populated.

The state has 28 mountain peaks, more than 80 glaciers, 227 high-altitude lakes (including the Tsongmo, Gurudongmar and Khecheopalri Lakes), five major hot springs, and more than 100 rivers and streams. Eight mountain passes connect the state to Tibet, Bhutan and Nepal.



The hills of Sikkim mainly consist of gneiss and schist which weather to produce generally poor and shallow brown clay soils. The soil is coarse, with large concentrations of iron oxide; it ranges from neutral to acidic and is lacking in organic and mineral nutrients. This type of soil tends to support evergreen and deciduous forests.

The rock consists of phyllites and schists, and is highly susceptible to weathering and erosion. This, combined with the state's heavy rainfall, causes extensive soil erosion and the loss of soil nutrients through leaching. As a result, landslides are frequent, often isolating rural towns and villages from the major urban centers.

The state has five seasons: winter, summer, spring, autumn, and monsoon season. Sikkim's climate ranges from sub-tropical in the south to tundra in the north. Most of the inhabited regions of Sikkim experience a temperate climate, with temperatures seldom exceeding 28 °C (82 °F) in summer. The average annual temperature for most of Sikkim is around 18 °C (64 °F).

Sikkim is one of the few states in India to receive regular snowfall. The snow line ranges from 6,100 meters (20,000 ft) in the south of the state to 4,900 meters (16,100 ft) in the north. The tundra-type region in the north is snowbound for four months every year, and the temperature drops below 0 °C (32 °F) almost every night. In north-western Sikkim the peaks are frozen year-round; because of the high altitude, temperatures in the mountains can drop to as low as −40 °C (−40 °F) in winter.

During the monsoon, heavy rains increase the risk of landslides. The record for the longest period of continuous rain in Sikkim is 11 days. Fog affects many parts of the state during winter and the monsoons, making transportation perilous.

Sikkim is situated in an ecological hotspot of the lower Himalayas, one of only three among the ecoregions of India. The forested regions of the state exhibit a diverse range of fauna and flora. Owing to its altitudinal gradation, the state has a wide variety of plants, from tropical species to temperate, alpine and tundra ones, and is perhaps one of the few regions to exhibit such a diversity within such a small area. Nearly 81 percent of the area of Sikkim comes under the administration of its forest department.

Sikkim is home to around 5,000 species of flowering plants, 515 rare orchids, 60 primula species, 36 rhododendron species, 11 oak varieties, 23 bamboo varieties, 16 conifer species, 362 types of ferns and fern allies, 8 tree ferns, and over 900 medicinal plants. A relative of the Poinsettia, locally known as "Christmas Flower", can be found in abundance in the mountainous state. *Dendrobium nobile*, the Noble Dendrobium, is the official flower of Sikkim, while the rhododendron is the state tree. About 40 species of rhododendron bloom late April to mid May across the state.

Orchids, figs, laurel, bananas, sal trees and bamboo grow in the Himalayan subtropical broadleaf forests of the lower altitudes of Sikkim. In the temperate elevations above 1,500 meters (4,900 ft) there are Eastern Himalayan broadleaf forests, where oaks, chestnuts, maples, birches, alders, and magnolias grow in large numbers, as well as Himalayan subtropical pine forests, dominated by Chir pine. Alpine-type vegetation is typically found between an altitude of 3,500 to 5,000 meters (11,500 to 16,400 ft). In lower elevations are found juniper, pine, firs, cypresses and rhododendrons from the Eastern Himalayan subalpine conifer forests. Higher up are Eastern Himalayan alpine shrub and meadows and high-altitude wetlands, which are home to a wide variety of rhododendrons and wildflowers.

The fauna of Sikkim include the snow leopard, musk deer, Himalayan tahr, red panda (the state animal), Himalayan marmot, Himalayan serow, Himalayan goral, muntjac, common langur, Asian black bear, clouded leopard, marbled cat, leopard cat, dhole, Tibetan wolf, hog badger, binturong, and Himalayan jungle cat. Among the animals more commonly found in the alpine zone are yaks, mainly reared for their milk, meat, and as a beast of burden.

The avifauna of Sikkim include the impeyan pheasant, crimson horned pheasant, snow partridge, Tibetan snowcock, bearded vulture and griffon vulture, as well as golden eagles, quails, plovers, woodcocks, sandpipers, pigeons, Old World flycatchers, babblers and robins. Sikkim has more than 550 species of birds, some of which have been declared endangered.

Sikkim also has a rich diversity of arthropods, many of which remain unstudied. Some of the most understudied species are Sikkimese arthropods, specifically butterflies. Of the approximately 1,438 butterfly species found in the Indian subcontinent, 695 have been recorded in Sikkim. These include the endangered Kaiser-i-hind, the Yellow Gorgon and the Bhutan Glory.



The OCA group:
Jan, Fred, Gary, Kay, Mary,
Gerard, Helena, Venk, Michael,
Maryetta, Ross and Rick.



Our drivers and guides:
Neelam, Sonam, Sanjay, Sanjok,
Sameer and Deepak.



Gangtok is the capital and the most populous city of the Indian state of Sikkim. The seat of eponymous district, Gangtok is in the eastern Himalayan range, at an elevation of 1,650 meters (5,410 feet). The city's population of 100,000 consists of the three Sikkimese ethnicities: the Bhutias, Lepchas and Nepalis as well as plainsmen from other states of India. Within the higher peaks of the Himalayas, Gangtok is at the center of Sikkim's tourism industry. It has a monsoon-influenced subtropical highland climate. Because of its elevation and sheltered environment, Gangtok enjoys a mild, temperate climate all year round.







The red panda is the state animal and is a mascot and popular theme for stamps, coins, toys, video games and comic books and as an animated star of children's programs. They are solitary animals of the forests in the eastern Himalayas and SW China that are somewhat related to raccoons and skunks but not to giant pandas which are a bear.





A statue of Mahatma Gandhi (lower left), the anti-colonial nationalist who employed nonviolent resistance to lead the successful campaign for India's independence, is in downtown Gangtok.





Local beer, lunch at a restaurant known for its hot pot menu and one of many shops in the downtown pedestrian area.



In the garden of our hotel, Hidden Forest Retreat: *Coelogyne nitida*, shining coelogyne, Orchidaceae (left); *Esmeralda cathcartii*, Cathcart's esmeralda, Orchidaceae (upper right) and *Paphiopedilum hirsutissimum*, shaggy lady's slipper, Orchidaceae (lower right).



Gary photographing a nice specimen of *Chiloschista parishii*. Indo-China split-lip orchid, Orchidaceae.



A tree filled with *Coelogyne cristata* var. *alba* (left and lower right); *Coelogyne flaccida*, loose or bearded coelogyne, Orchidaceae (upper left) and *Coelogyne cristata*, crested coelogyne, Orchidaceae, typical form with the yellow throat (upper right) which we observed many times throughout the state.



Dendrolirium (Eria) lasiopetala, woolly or shaggy petaled eria, Orchidaceae, turned out to be one of the more common orchids that we saw around the state. Note the large beetle visiting the flower (upper right).

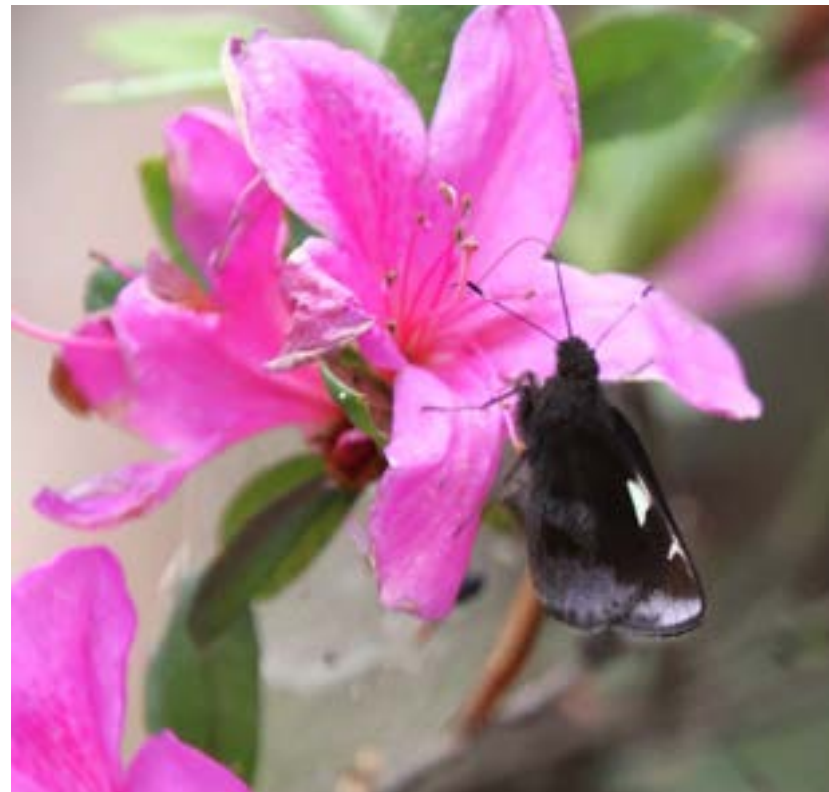
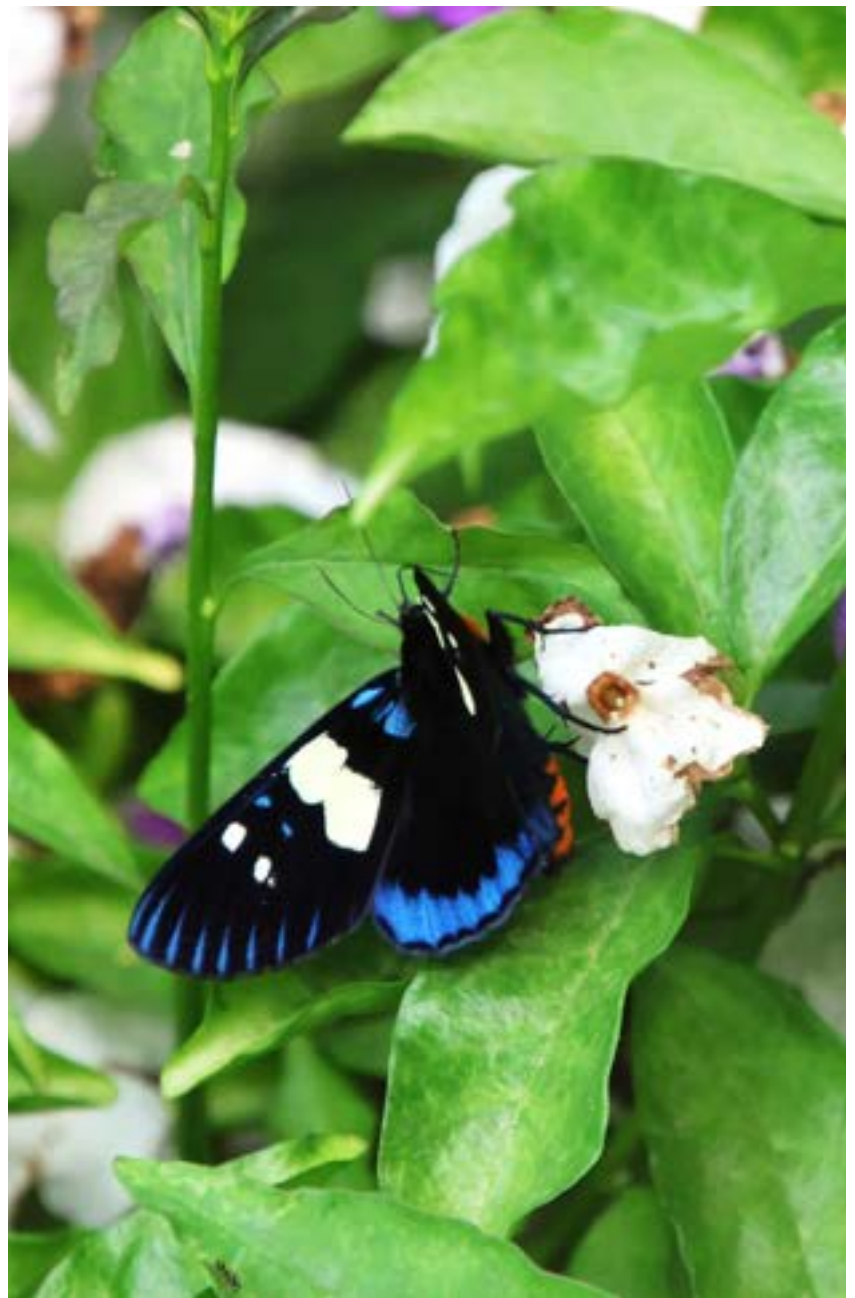




A garden for tourists is decorated with many amaryllis and other flowers. It is run by the owners of the hotel where we stayed.







Pieris brassicae, large white, (upper left);
Exsula victrix (right), a cutworm moth;
Notocrypta feisthamelii, Himalayan spotted demon (lower left).



We visited the National Research Center for Orchids (NRCO) in Pakyong. It was established by the Indian Council for Agricultural Research (ICAR) to study and determine the export potential of orchids with a focus on orchid cultivation, marketing, and sustainability. They had a collection of species but they concentrated on hybrids of Cymbidiums, Vandas and Phalaenopsis.







The director, Dr. Sankar Prasad Das, discussed their work and inquired about any possible relationship with the OCA.





Spiranthes sinensis, Chinese lady's tresses, Orchidaceae (left);
Paphiopedilum venustum, Venus slipper, Orchidaceae (above left);
Papilionanthe vandarum, vanda-like Papilionanthe, Orchidaceae (above right) and *Luisia trichorrhiza*, hairy root luisia, Orchidaceae (lower right).





Dendrobium ruckeri, Rucker's dendrobium, Orchidaceae (upper left); *Dendrobium farmeri*, Farmer's dendrobium (upper right); *Coelogyne flaccida* (lower left) and *Dendrobium densiflorum*, pineapple orchid or densely flowered dendrobium (lower right).

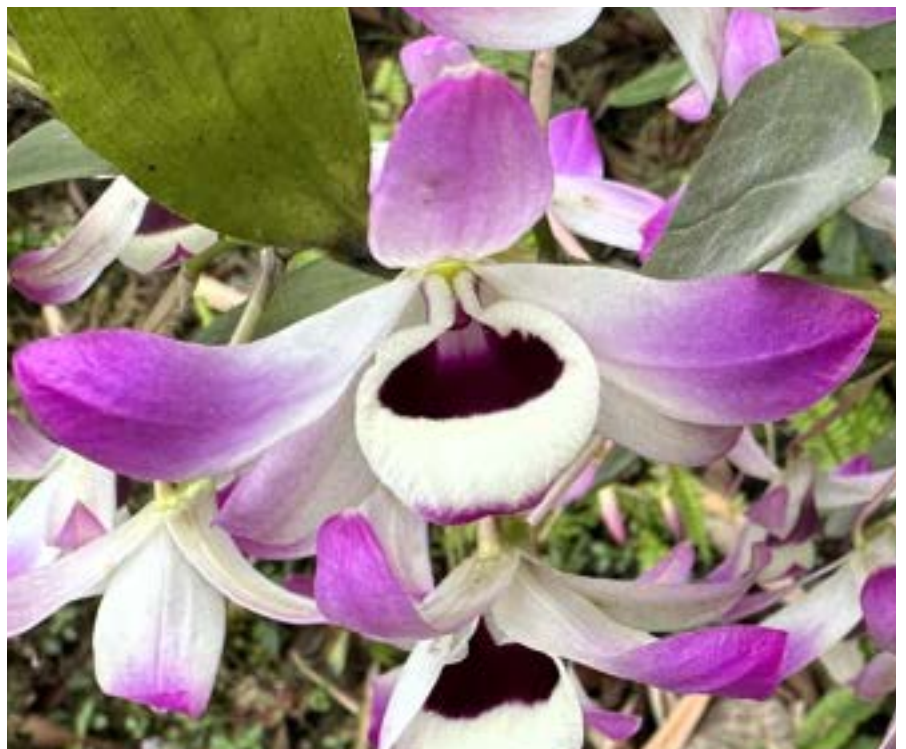




In the forest near the center we spotted *Dendrolirium (Eria) lasiopetala*, (upper and lower left) and *Mycaranthes floribunda* (syn. *paniculata*), free-flowering dendrobium, Orchidaceae (right).



A visit to the home of Sailesh Pradhan, our tour coordinator, with giant bamboo; *Phaius tankervilleae*, the nun orchid, Orchidaceae (upper right and lower center) and *Coelogyne flaccida* (lower right) in the garden.



Dendrobium nobile, the noble dendrobium, Orchidaceae in the garden and part of a large collection of *Clivia miniata*, bush lily, an amaryllis relative from South Africa which is very popular in Asian gardens.





From Gangtok we headed northeast into North Sikkim, now called Mangan District, the largest of the six districts of Sikkim. The landscape is mountainous with dense vegetation all the way up to the alpine altitude before thinning out to desert scrub towards the northern tundra. Numerous waterfalls astride the main road make the trip to this district extremely picturesque but the steepness also results in many landslides in the valleys from erosion from melting snow or monsoon rains. We stayed in the city of Mangan, the district headquarters where most of the population of the district (44,000) lives. The altitude is 900 meters (3,000 feet).



Sikkim has worked hard to improve sanitation so they let everyone know that the region now has toilets for everyone with no open defecation.







Himalayan or white-cheeked bulbul, *Pycnonotus leucogenys*.





Mangang town.





In Mangan we did a bit of botanizing which brought out the locals who were happy to see the foreigners and curious as to what we were doing.

A climbing *Aeschynanthus* vine, a member of the Gesneriaceae with red tubular flowers (lower right).





A large plant of *Dendrobium nobile* in the forest. It is the state flower of Sikkim.







Coelogyne flaccida.



Coelogyne stricta (syn. *elata*), erect or rigid coelogyne, Orchidaceae
(above);
Coelogyne fuscescens plant, ocher yellow coelogyne (lower right).



Mycaranthes floribunda.



Impatiens arguta, toothed busy lizzie, Balsamaceae (above); *Viola pilosa*, smooth-leaf white violet, Violaceae (lower left); *Oxalis articulata*, pink wood sorrel, Oxalidaceae (lower right), an introduced species from South America.





Arisaema tortuosum, the whipcord cobra lily, Araceae.



Aglais cashmiriensis, Indian tortoiseshell.



We spent the day in the countryside, stopping for some exploring along the way. We returned to our hotel in Mangan for the night. A temporary bridge where the roads were washed away (lower right).





The Teesta River.





A stop along the rough roads to see a couple of orchids. *Goodyera hemsleyana*, the white-veined goodyera, Orchidaceae (lower right).





Goodyera procera, the slim goodyera, Orchidaceae.



Impatiens drepanophora, sickle-bearing balsam, Balsaminaceae (left);
Persicaria nepalensis, Nepalese smartweed, Polygonaceae (upper right).



Arisaema concinnum the Chinese cobra lily, Araceae (left and upper left and right); Liverworts (lower left); *Curculigo capitulata*, palm grass, Hypoxidaceae (lower right).



Vanda cristata, comb vanda, Orchidaceae, in a tree by the Mangan police station.





Arundina graminifolia, bamboo orchid, Orchidaceae.

From Mangan we headed northeast to Lachung, only a 60 kilometer (36 miles) drive that was to take just 3 hours but actually took all day.



Phaius wallichii, Wallich's phaius, Orchidaceae, in bloom at a roadside shop.



River crossings and road construction.
The word "Swastik" refers to the ancient symbol, often associated with good fortune, well-being, and auspiciousness in various cultures, particularly Hinduism, Buddhism, and Jainism.





Narrow and winding roads with steep drops were shared by big trucks and cars so the drive went rather slowly.



A short break in a small mountain village. Lots of *Bauhinia variegata*, known as the orchid tree, in bloom along the hillsides (upper left)





Orchids in a garden: *Dendrobium nobile* (left) and *Cymbidium bicolor*, the two colored cymbidium (right).







This area of Sikkim is on the border with China so there is a large military presence.





The spectacular *Arisaema costatum*, Costate cobra lily or Costate Jack-in-the-pulpit, has a burgundy striped spathe that is 15-20 centimeters (6 to 8 inches) tall and a green spadix that has a thread like 45 centimeters (18 inches) long extension that reaches all the way to the ground. The trifoliate leaf has raised veins and purple wavy margins.



Coelogyne stricta.





Plants of *Epigeneium amplum* , the black-tongued orchid (top) and *Bulbophyllum* species (bottom) crawling on the rock cliffs. Unfortunately none were in bloom.





Dactylicapnos scandens (Syn. *Dicentra scandens*), climbing bleeding heart, Papaveraceae (left); *Fragaria daltoniana*, Sikkim strawberry, Rosaceae (upper left); *Edgeworthia gardneri*, Indian papertree, Thymelaeaceae (upper right); fern fiddlehead (lower left); *Dendrobium longicornu* plant, long-horned dendrobium (lower right).





Passing through the town of Chungthang (upper right) which is situated at the confluence of the Lachen and Lachung rivers, which form the Teesta River. The area is a major army outpost. Bhim Nala Falls (left) outside of Lachung is 21 meters (70 feet) tall. Farms near town above the river with overcast skies (lower right).





We had two nights in the town of Lachung and it was rather cold at night. The staff built a fire in the dining room for us (lower left) and they provided heaters but hats and gloves were still needed to stay warm while in bed (lower right)! Mountains behind hotel Ethos Metho (upper right). A local family garden (lower center).



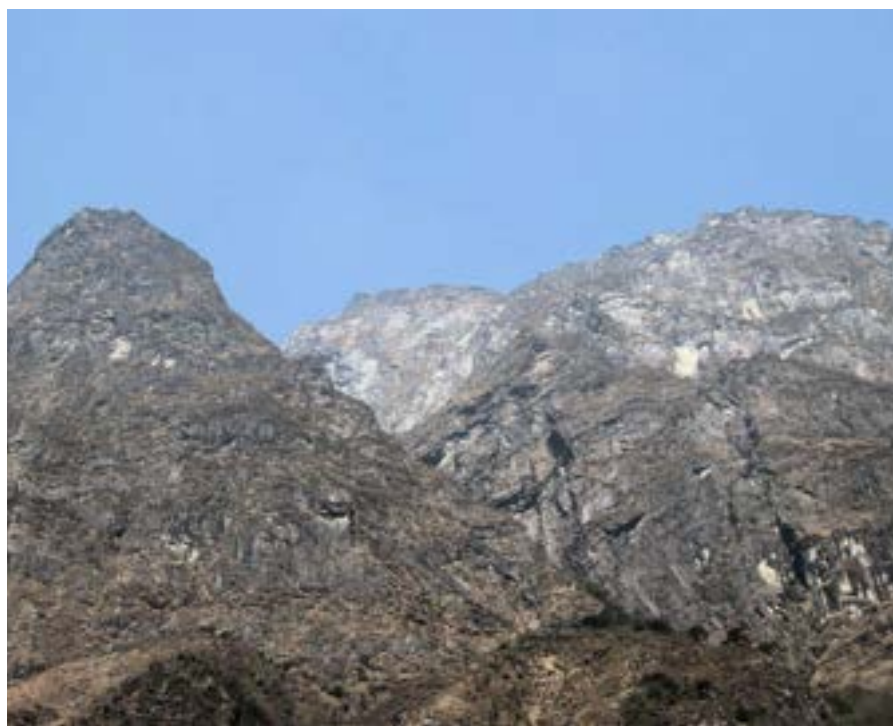


Lachung is known for its stunning natural beauty and as a gateway to the Yumthang Valley (Valley of Flowers). It sits at an altitude of about 2,743 meters (9,000 feet) and is surrounded by snow-capped peaks, gushing waterfalls, and lush valleys.





Typical rough roads for our excursions.





Arisaema nepenthoides, Himalayan cobra lily (left);
Likely *Malus sikkimensis*, Sikkim crabapple, Rosaceae (upper left);
Bergenia purpurescens, purple bergenia, Saxafragaceae (upper right);
Pieris japonica, Japanese andromeda, Ericaceae (lower right), a cultivated
plant in Sikkim.





Primula denticulata, the drumstick primrose, Primulaceae, is widespread in the Himalayas at high elevations.



Vanessa cardui, painted lady.



Sikkim is home to around 36 species of rhododendrons with 45 different forms (including subspecies and varieties). They are found at altitudes ranging from 1,500 to 6,000 meters (4,900 to 19,700 feet) above sea level.

Rhododendron hodgsonii, Hodgson rhododendron (upper left); *Rhododendron ciliatum*, fringed leaf rhododendron (upper right); *Rhododendron arboreum*, tree rhododendron (lower left); *Rhododendron niveum*, bell snow rhododendron (lower right), the state tree of Sikkim.





Rhododendron campanulatum, bell flowered rhododendron (upper left); *Rhododendron barbatum*, bearded rhododendron (upper right);
Rhododendron thomsonii, Thomson's rhododendron (lower left); *Rhododendron virgatum* (lower right).



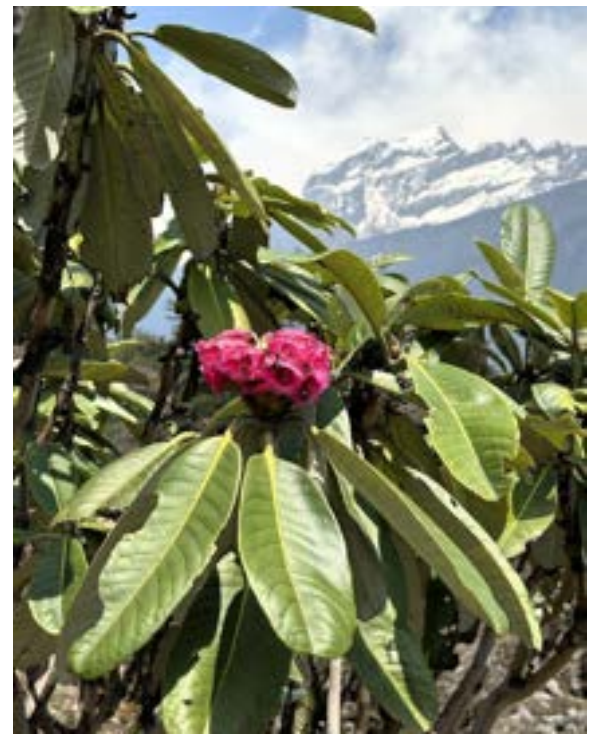


We stopped in the Singba Rhododendron Sanctuary as we drove higher into the mountains. The reserve is spread in an area of 43 square kilometers (16.6 square miles) and its altitude ranges between 3,048 to 4,575 meters (10,000 to 15,000 feet) above sea level.





*Rhododendron
hodgsonii.*

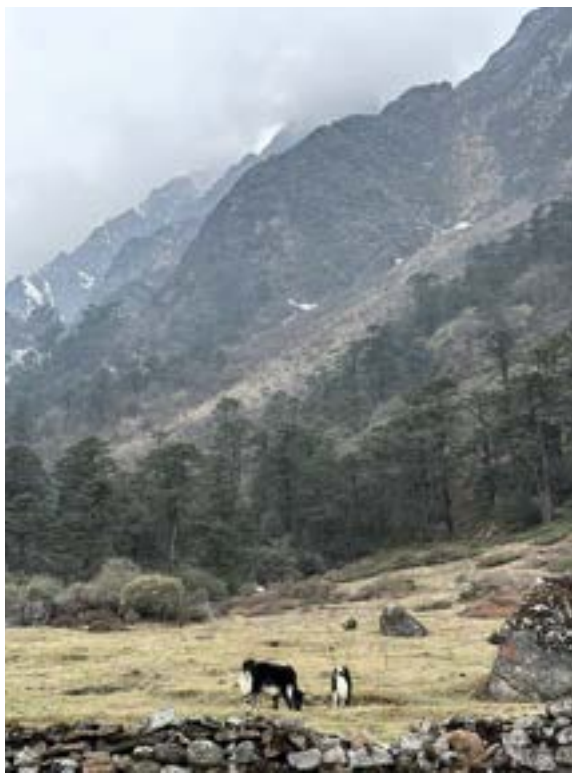




Daphne papyracea, Indian paper plant (left);
Viburnum grandiflorum, Himalayan viburnum (lower right).







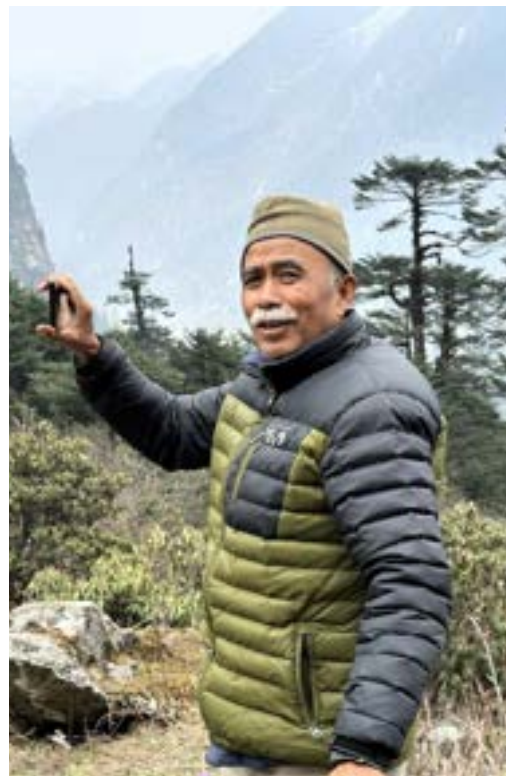




The Yumthang River in the mountains.









Prayer flags are important in Buddhist and Himalayan culture. The colors of the flags represent the different elements: blue for sky, white for clouds, red for space, green for water, and yellow for earth.



The domestic yak (*Bos grunniens*), also known as the Tartary ox, grunting ox or hairy cattle, is a species of long-haired domesticated cattle found throughout the Himalayan region of the Indian subcontinent, the Tibetan Plateau, Gilgit-Baltistan (Kashmir), Tajikistan and as far north as Mongolia and Siberia. It is descended from the wild yak (*Bos mutus*). Yaks are heavily built animals with bulky frames, sturdy legs, rounded, cloven hooves, and extremely dense, long fur that hangs down lower than the belly. While wild yaks are generally dark, blackish to brown in coloration, domestic yaks can be quite variable in color, often having patches of rusty brown and cream. They have small ears and wide foreheads, with smooth horns that are generally dark in color. Both sexes have long shaggy hair with a dense woolly undercoat over the chest, flanks, and thighs to insulate them from the cold. Yaks are not known to produce the characteristic lowing (mooing) sound of cattle, but both wild and domestic yaks grunt and squeak, which inspired the scientific name of the domestic yak variant, *Bos grunniens* (grunting bull).

Yak physiology is well adapted to high altitudes, having larger lungs and hearts than cattle found at lower altitudes, as well as greater capacity for transporting oxygen through their blood, due to the persistence of foetal hemoglobin throughout life. Conversely, yaks have trouble thriving at lower altitudes, and are prone to suffering from heat exhaustion above about 15 °C (59 °F). Further adaptations to the cold include a thick layer of subcutaneous fat, and an almost complete lack of functional sweat glands. Compared with domestic cattle, the rumen of yaks is unusually large. This likely allows them to consume greater quantities of low-quality food at a time, and to ferment it longer so as to extract more nutrients. Yaks consume the equivalent of 1% of their body weight daily while cattle require 3% to maintain condition. They are grazing herbivores, with their wild ancestors feeding primarily on grass and sedges, with some herbs and dwarf shrubs. Domesticated yaks have been kept for thousands of years, primarily for their milk, fiber and meat, and as beasts of burden. Their dried droppings are an important fuel, Yak's milk is often processed to a cheese. Yak butter can be used as fuel in lamps.



Another beautiful waterfall outside of Lachung (left); *Rhododendron arboreum* in town (right). The tree rhododendron typically grows to a height of 12 meters (39 feet) and flowers are usually red but also can be pink or white. It is found in Bhutan, China, India, Myanmar, Nepal, Sri Lanka, Pakistan and Thailand.



A beautiful specimen of *Cymbidium hookerianum*, Hooker's cymbidium, spotted in a tree in town. It is distributed throughout Nepal, Bhutan, and Sikkim on steep river banks in dense and humid forests or oak forests, always at heights of 1,600 to 2,400 meters (5,200 to 7,900 feet) so this plant was likely brought from lower elevations but obviously thrives here. It is very fragrant.



We left Lachung early in the morning and had a last few views of the dramatic scenery as we headed southwest to the city of Ravangla. Our drive was about 120 kilometers (75 miles) but the roads again were steep, rough and under construction due to landslides so it took us most of the day. A bridge destroyed by flooding along the Teesta River (upper left and lower right). After the trip we heard that landslides isolated this area.





Our drivers were great but still driving so close to the edge of the roads was rather scary at times.





Severe damage to houses in one now mostly abandoned village of Naga high up above the river (lower right).







A stop to stretch our legs was a good time for roadside botanizing.



Persicaria capitata, pink knotweed, Polygonaceae (left); *Pilea* species, Urticaceae (upper left); *Viola sikkimense*, Sikkim violet, Violaceae (lower right).





Pinalia amica, the lovely pinalia (left), photo by Sameer Gurung;
Papilio polyctor, common or Indian peacock, a type of swallowtail butterfly
 (upper right). Note the chrysalis from which it just emerged.
Coelogyne stricta (lower right).



Papilio polyctor, common or Indian peacock.



We were fortunate to find plants of *Cymbidium eburneum*, the ivory-colored cymbidium, in bloom.



Dendrobium aphyllum, the hooded orchid, was one of the more common orchids that we observed in the state.



The Temi Tea Garden in Temi was established in 1969 by the erstwhile King Palden Thondup Namgyal, the last ruler of Sikkim. It is the only tea garden in Sikkim and is considered one of the best in India and the world, particularly for their Orthodox black tea. Around 100 tonnes (220,000 pounds) of tea is produced here. The nearby state of Assam produces 60% of the country's tea. India is second to China in global tea production. We stopped by here for lunch and a tour of the factory.





Some of the machines for sorting and packing the tea.







Ravangla, also known as Rabong or Ravongla, is a picturesque town and tourist destination in South Sikkim, situated at an elevation of about 2,400 meters (8,000 feet).

The town is the home of the Tathagata Tsal or Buddha Park within the larger religious complex of Rabong Monastery, itself a centuries-old place of pilgrimage. Also nearby is Ralang Monastery, a key monastery in Tibetan Buddhism.





Entrance to Buddha Park





The park was constructed between 2006 and 2013 and features a 130 feet (40 meters) high statue of the Buddha, erected to mark the 2550th anniversary of the birth of Gautama Buddha, as its main attraction. The statue, built of 60 tonnes (132,000 pounds) of copper, is an example of repoussage (a metalworking technique in which a malleable metal is shaped by hammering from the reverse side to create a design in low relief). Mount Narsing forms the backdrop to the statue.

Built and installed through the joint efforts of the government and people of Sikkim, the statue was consecrated on 25 March 2013 by the 14th Dalai Lama. The Buddhist circuit of the park was built under a state government project, intended to boost pilgrimage and tourism to the region. The Cho Djo lake is located within the complex, surrounded by forest. The park has a tranquil setting with spacious pathways, and there is a Buddhist conclave, a meditation center and a museum with a spiral gallery.







Buddhism is a
philosophy of life
not a religion.



Don't compare your
life to other
There's no comparison
between the sun and moon.
They shine when
it's there time.



Speak with kindness
for your words hold the
power to heal or harm



There are about two dozen quotes of Buddha along the pathways to inspire guests.

Your actions sow the seeds
of your future; what you give,
you shall receive



Focus on the present
moment; it holds the true
essence of karma.



BUDDHA

If you light a lamp
for somebody
it will also
brighten
you path



BUDDHA

Peace comes from
within.. do not seek
it without



BUDDHA QUOTES

Give, even if you
only have a little.

BUDDHA



The greatest
prayer is
patience.



If you want to be happy.
have zero expectations of
others.



Happiness does not
depend on what you
have or who you
are. It solely relies on
what you think.



BUDDHA

Do not dwell in the
past, do not dream
of the future
concentrate the
mind on the present
moment.



Your actions sow the seeds
of your future; what you give,
you shall receive



Successful people
always have two
things on their lips

1. silence
2. smile



OPEN YOUR MIND
BEFORE
YOU OPEN
YOUR MOUTH



If you truly
loved yourself
you could never
hurt another

BUDDHA



NEVER ANNOUNCE
YOUR MOVES
BEFORE YOU MAKE THEM.
MOVE IN SILENCE
AND SHOCK THEM
WITH YOUR SUCCESS.

Gautama Buddha



“When it hurts
observe, life is
trying to teach
you
something”



Life is really simple
But
We insist on making
it complicated



Never give up. great
things take time

TRUE BUDDHA QUOTES



DO NOT LET THE BEHAVIOR
OF OTHERS DESTROY YOUR
INNER PEACE.



A positive mind
finds opportunity in
everything

TRUE BUDDHA QUOTES



Understanding
brings peace,
even in difficult
situations.









We looked for plants in the woods above town. *Agapetes serpens*, Himalayan lanterns, Ericaceae (upper left); *Pleione praecox* plant, early blooming pleione, Orchidaceae (upper center); *Geranium* species (upper right); *Gentiana capitata*, clustered gentian, Gentianaceae (lower left); *Polygonatum verticillatum*, whorled Solomon's-seal, Asparagaceae (lower center).





Yungdrung Kundrakling is the only Bon Monastery in Sikkim with only one other in India. Most are in Tibet. Animistic in nature, Bon preceded Buddhism in Tibet, some claim as long ago as 3,800 years ago. Buddhism originated in the 7th to 9th centuries CE. Bon has since been largely subsumed by Buddhism. Temples of both traditions feature direction guardians at the door and inside you'll find similar statuary, though with Tonpa Shenrab, the supposed founder of the religion, in the place of the Buddha. Bon prayer wheels are turned anticlockwise. Bon temples have distinctive rituals and chanting practices. This monastery was founded in 1980 and houses about 25 students.











From Ravangla we drove northwest just 60 kilometers (37 miles) to Yuksom, again taking much of the day, where we spent two nights. The town was the first capital of the Kingdom of Sikkim, established in 1642 AD by Phuntsog Namgyal, the first Chogyal of Sikkim. The Mani Hall (below) in the center of town is a one of a kind creation, a glass-walled, sanctuary like building encasing 18 larger than usual wheels of prayer in two close-pressed lines. Each is made of decorated, part-plated copper. They are heavy to the point that while you turn them, you are sure to burn some calories. It is a place to meditate and unwind.





The center of Yuksom.





Our hotel and a stupa at the entrance.



A collared owlet, or collared pygmy owl, *Taenioptynx brodiei*, was perched in a tree at the hotel.



An overlook from the town center allows good mountain views on a clear day.





Karthok Lake is surrounded by prayer flags and is considered as the soul lake of Lama Kathok Kuntu Zangpo, who pioneered in introducing Buddhism to this beautiful land in 1642 A.D. This lake had been sanctified by him to use as a medium to connect with God for oracular practices. Its holy water was taken to anoint the first chogyal (king) at his coronation. Locals believe that all of your wishes can be fulfilled by this lake if asked with a pure heart.





Norbugang 'coronation park' is a historic woodland garden containing a small temple, a huge prayer wheel, a chorten containing earth from each corner of Sikkim, and the simple but deeply significant four-seat Coronation Throne, Norbugang (lower left) where the first Chogyal of Sikkim (Phuntsok Namgyal) was crowned in 1641. The site holds significant cultural and historical value for the Sikkimese people, symbolizing the foundation of their kingdom.

In front of the throne is a stone with low railings and behind it is what the devout believe to be a footprint of the foremost lama, Lhatsun Chempo (lower right). I am wearing fancy gold colored rubber boots that cost less than \$4 USD.





The chorten or stupa containing earth from each corner of the state.



The giant prayer wheel (left); 300 year old *Cryptomeria* pine tree that stands guard over the throne (upper left). The tree had many orchid plants in it. Additional structures around the park (upper right and lower left and right).







Thang Gyal Monastery sits next to the Norbugang Coronation Park. On the upper floor is a statue of Thangtong Gyalpo. Thangtong Gyalpo was a 15th-century Tibetan Buddhist lama, physician, blacksmith, architect, and a pioneering civil engineer. He is famous for building 58 iron chain suspension bridges across Tibet and Bhutan, some of which are still in use today.



Bulbophyllum umbellatum, umbrella bulb-leaf orchid (above);
Epigeneium rotundatum, rounded epigeneium (below).

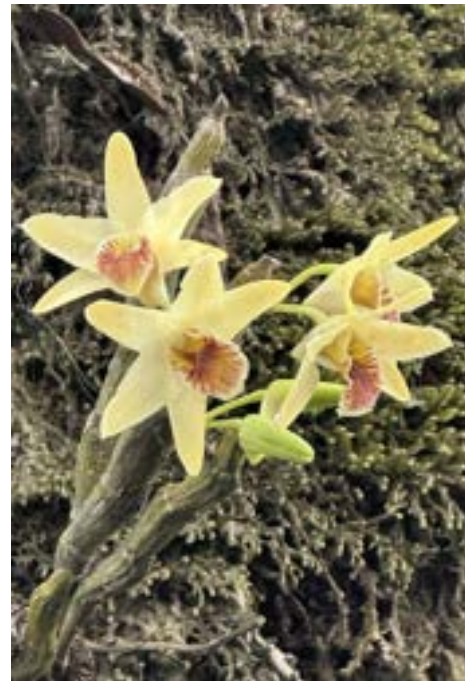




Huge plants of *Coelogyne cristata* adorned trees all over the area and many gardens were decorated with this orchid.



Dendrobium heterocarpum, golden-lip dendrobium or the different fruit dendrobium.
It is native to China, Nepal, Bhutan, the Indian subcontinent and Southeast Asia.





Neptis hylas, common sailor butterfly.



During a rainy and foggy time of day we hiked down a mountain road looking for orchids.
Arisaema concinnum (lower left); *Amomum subulatum*, large cardamom (lower right) are an important crop in Sikkim and provide substantial income for small farmers.







Many huge plants of *Coelogyne cristata*.



While enjoying the views of this beautiful waterfall we noticed that uninvited guests were crawling on our boots and pants! A common leech, *Haemadipsa sylvestris* (upper right) and a tiger leech, *Haemadipsa picta*, (middle right) which is fast and aggressive. Someone got attacked (lower right)!





Nice weather for the drive from Yuksom to Pelling which is 40 kilometers (25 miles) and took us half a day.

Arundina graminifolia (upper right) was in bloom on a grassy hillside (note our cars below). Only one species is accepted for the genus though some give subspecies or varietal names for plants that are smaller. It is native to Myanmar, India, Sri Lanka, Nepal, Thailand, Vietnam, the Ryukyu Islands, Malaysia, Singapore, China to Indonesia, the Philippines and New Guinea. It has become naturalized in Réunion, Fiji, French Polynesia, Micronesia, the West Indies, Costa Rica, Panama, Belize, and Hawaii.







One of the drivers spotted a plant of *Chiloschista parishii* high up in a tree (lower left).





Kanchenjunga Waterfall is believed to have originated high up in the glaciers of the majestic Mt. Kanchenjunga, the third highest peak in the world (8,586 meters, 28,169 feet), giving it a perennial flow throughout the year.

It has a drop of over 30 meters (100 feet) making it one of the largest waterfalls in Sikkim.

One climbs about 50 steps to the viewing area and there is an option of a rope slide. Many snack and souvenir shops line the steps.





A smaller waterfall along the road
near the main falls





The Sanga Choeling Monastery was established in the 17th century by Lama Lhatsün Chempo. It is one of the oldest monasteries in Pelling. The literal meaning of Sanga Choeling is "Island of the Guhyamantra teachings", where ling means a vihara and "secret Mantra teachings" is a synonym for "Vajrayana Buddhism". The monastery, built in 1647 (also noted as 1697), is also known as the place of secret spells. It has clay statues dating back to the 17th century. The monastery was affected by fire several times and was rebuilt, the latest in 1960. Murals were repainted in 1981. The abbot runs a school of Tibetan Buddhism here and has about 20 students.







Next to the monastery is a 42 meters (137 feet) tall statue of Chenrezig, a bodhisattva (a person who is able to reach nirvana but delays doing so out of compassion in order to save suffering beings). It is the tallest Chenrezig statue in the world. The entrance is from the first glass skywalk in India. On a good weather day it would provide great views of the surrounding mountains and valleys including Kanchenjunga.



We got a beautiful but quick view of Mount Kanchenjunga in the morning from our hotel before we headed southeast to Kalimpong, about 120 kilometers (75 miles). With stops it took us most of the day.



Coelogyne nitida growing on the hill by the hotel.





The Pemayangtse Monastery has more than 100 monks. It is a parent monastery for all monasteries following the Mindroling lineage in Sikkim. Planned, designed and founded by Lama Lhatsun Chempo in 1647, it is one of the oldest and premier monasteries of Sikkim and also the most famous in Sikkim.

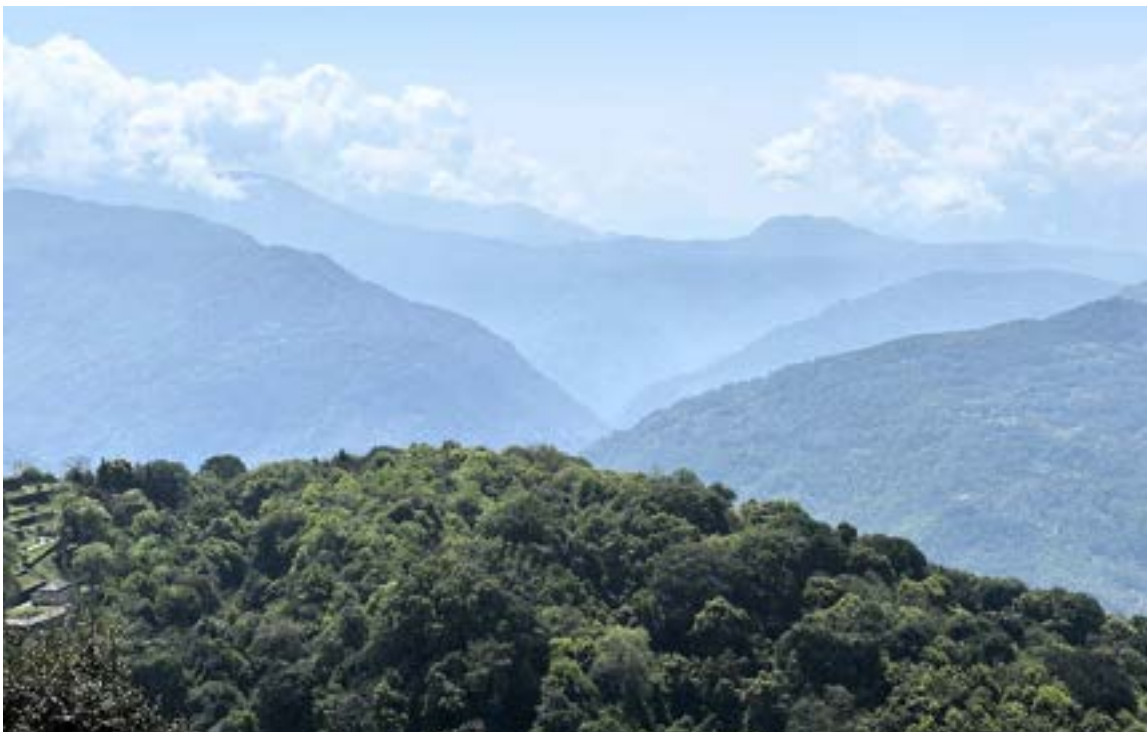


Built as a three storied structure, the monastery depicts paintings on its walls and statues of saints and Rinpoches, deified in various floors. The monastery was damaged by earthquakes in 1913 and 1960 but has been refurbished several times. The main prayer hall covers 140 square meters (1,500 square feet).









The monastery, located at an elevation of 2085 meters (6,840 feet), is built with a scenic backdrop of snow-capped mountains on two sides.





We stopped at the Sidkeong Tulku Bird Park, named after the 10th Chogyal of Sikkim, Sidkeong Tulku Namgyal. The landscaped park is home to about 200 of the 550 avian species in the region. We did a walk bypassing the animals to get to the ruins of the second kingdom of Sikkim.

Calanthe yuksomnensis, the Yoksom Calanthe or one of the Christmas orchids (upper left); *Arisaema concinnum* (upper right); *Cymbidium lancifolium* plant, bamboo leaf orchid (lower left); *Rohdea pachynema* (syn. *Campylandra sinensis*), sacred lily, Asparagaceae (lower right).





Rabdentse was the second capital of the former Kingdom of Sikkim from 1670 to 1814. The capital city was destroyed by the invading Gurkha army and only the ruins of the palace and the chortens are seen here now. It was first established in 1670 by the 2nd Chogyal Tensung Namgyal, son of the 1st Chogyal Phuntsog Namgyal by shifting from the first capital of Yuksom that was consecrated in 1642.

This monument has been declared as of national importance by the Archaeological Survey of India.

These ruins are part of the Buddhist religious pilgrimage circuit starting with the first monastery at Yuksom known as the Dubdi Monastery, followed by Norbugang Chorten, Tashiding Monastery, the Pemayangtse Monastery, the Sanga Choeling Monastery, and the Khecheopalri Lake.





The Three Chortens where the royal family of Sikkim used to offer prayers to their deities at Rabdentse palace.





From the vantage point of this former capital, superb views of the Khanchendzonga ranges can be seen.



Curcuma aromatica, wild turmeric, Zingiberaceae.



Dendrobium fimbriatum var. *oculatum*, fringed lip dendrobium spotted in the trees (lower right) and in a garden for the close up view.



Kalimpong is a town in the Indian state of West Bengal. It is located at an average elevation of 1,250 meters (4,100 feet). Kalimpong is known for its educational institutions, many of which were established during the British colonial period. It used to be a gateway in the trade between Tibet and India before China's annexation of Tibet and the Sino-Indian War. Kalimpong and neighboring Darjeeling were major centers calling for a separate Gorkhaland state in the 1980s, and more recently in 2010. The municipality sits on a ridge overlooking the Teesta River and is a tourist destination owing to its temperate climate, natural environment and proximity to popular tourist locations in the region. Horticulture is important to Kalimpong. It has a flower market notable for its wide array of orchids. Nurseries, which export Himalayan grown flower bulbs, tubers and rhizomes, contribute to the economy of Kalimpong. The population is about 69,000. Official languages are Nepali, Bengali and English.







What makes a cake "live"?









Gaden Tharpa Choling Monastery is a Gelugpa monastery situated at the top of Tirpa hills in Kalimpong. The monastery was founded by Domo Geshe Rinpoche Ngawang Kalsang in 1912. It is a non-profitable development association. The monastery is under the direct supervision of the religious department and the Dalai Lama Administration. The monastery's discipline is based on the regulations laid down by the 13th Dalai Lama in abidance with the rules of the Vinaya, the spiritual code of conducts. There is a monastic school on the premises with instruction in Tibetan and English.

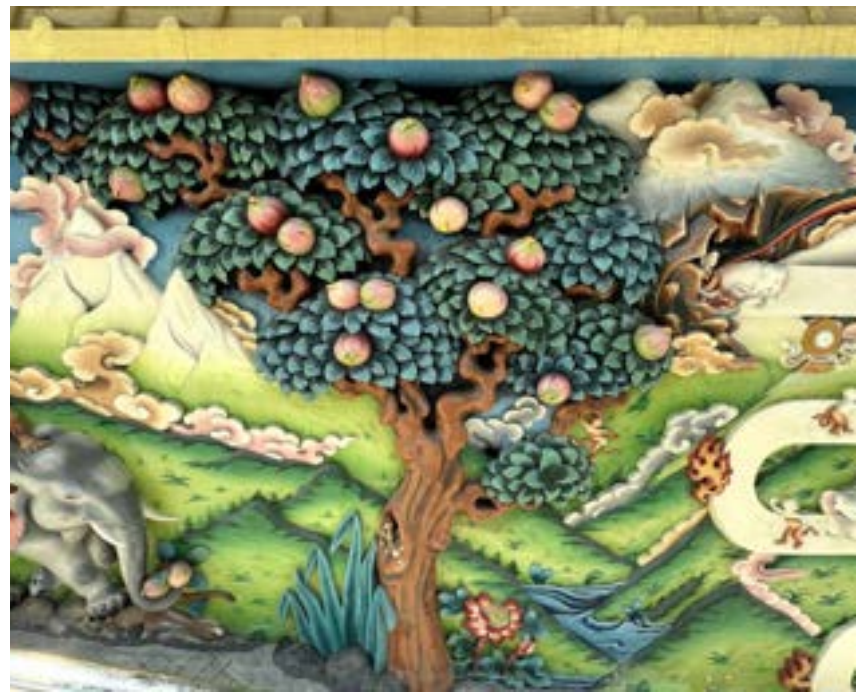




The golden Buddha statue overlooks Kalimpong city, offering a stunning backdrop.







In the complex there is a museum that houses rare artifacts, sacred relics, and traditional Buddhist art. The museum offers a glimpse into the spiritual and cultural history of the region.







We visited a local orchid nursery, Nursery International, with thoughts of purchasing some plants to be shipped to the US but that hasn't materialized yet.. *Kaempferia rotunda*, Asian ginger (lower left); *Gastrochilus calceolaris*, shoe-shaped belly-lip orchid (lower right).





Panisea uniflora, single flowered panisea (upper left); *Vanda cristata*, comb vanda (upper right);
Chiloschista parishii, Asian ghost orchid (lower left); *Dendrobium farmeri*, Farmer's dendrobium (lower right).





We stayed at the Helumba Haven Resort, a family run orchid business and hotel.
Dendrobium primulinum, primrose dendrobium (lower left); *Dendrobium gratiosissimum*, the very graceful dendrobium, (lower right).





Cryptochilus strictus, erect eria (upper left); *Mycaranthes floribunda* (upper right);
Epigeneium rotundatum (lower left); *Ascocentrum ampullaceum*, vein-like ascocentrum (lower right).





Phaius flavus, yellow crane orchid.



Phalaenopsis lobbii,
white-orange moth orchid.



Nervilia macroglossa, large tongued nervilia.



Coelogyne flaccida.



Coelogyne pempahisheyana, Pempahishey's coelogyne, is named for the owner of the hotel where we stayed, Sri Karma T. Pempahishey. It is closely related to *Coelogyne flaccida*. It was found and described in 2004 in Darjeeling at an elevation of 1,300 meters (4,265 feet).









We headed back to Bagdogra for our flights home. Lots of road construction on the 77 kilometer (48 miles) drive.





Driving through Siliguri, a town of over 1 million which ranks it as 90th in size for the country of 1.46 billion, the most populated on earth.







We spent a little time at a modern mall (lower right), quite the contrast to the poverty seen all around.





Our farewell luncheon.



Just a small orchid in bloom by the restaurant.



