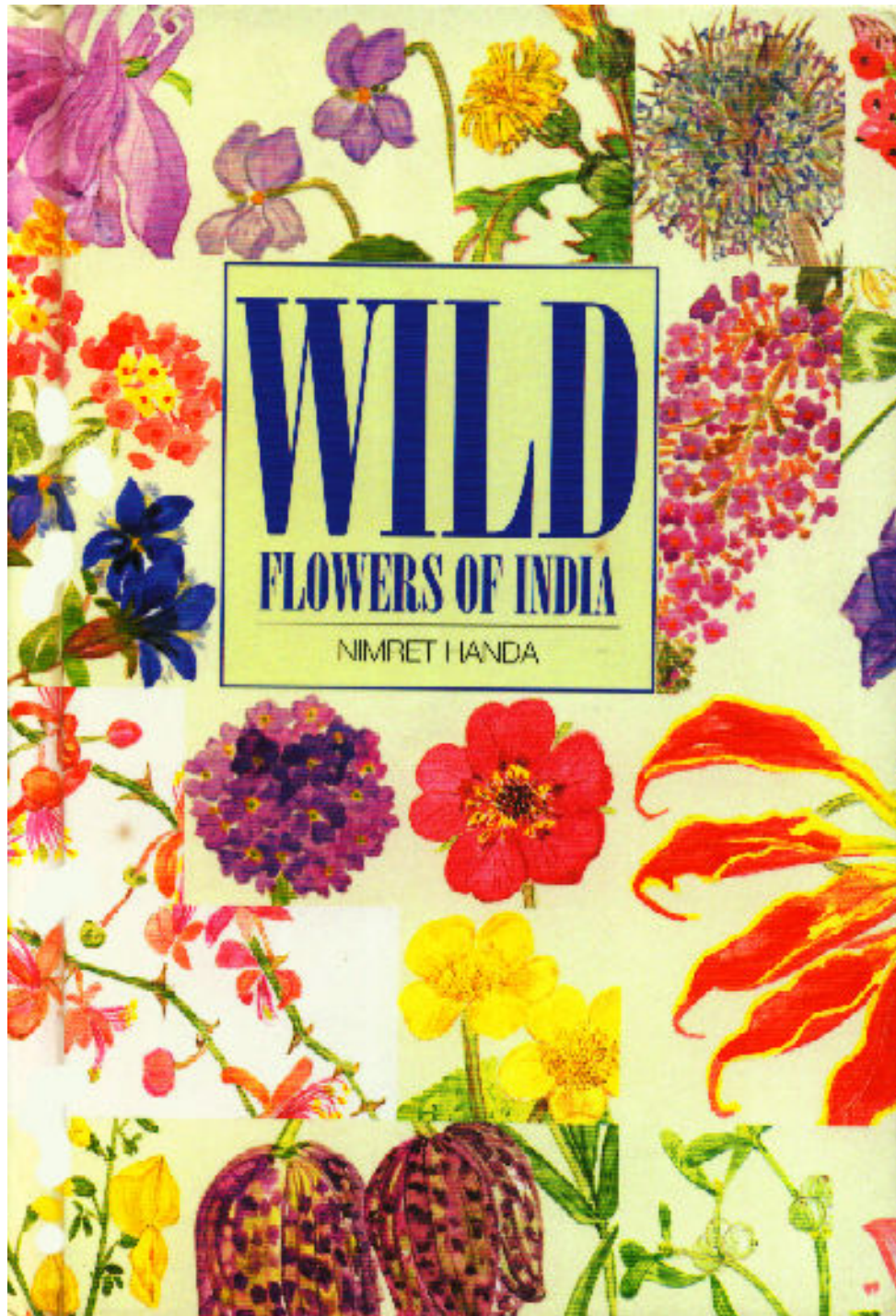


WILD FLOWERS OF INDIA

NIMRET HANDA



INTRODUCTION

Wild flowers are to be found in all kinds of unexpected places if you know how to look for them. While walking in the countryside or climbing a hill in the Himalayas you may come upon some wild flowers brightening a hollow in a rock, or half hidden amidst the ferns which will make the outdoor experience especially rich. Even crowded cities have wild flowers growing in neglected corners of parks, ditches, verges of roads, cracks in pathways and in the corners of your garden. Sometimes one or two pop up in carefully cultivated flowerpots. We tend to think of them as weeds if they come up unexpectedly in gardens and fields. Stop and look at the wild flowers carefully and you will discover that they have a disarming beauty of their own. Many of them are also ancestors of the familiar garden flowers that we tend so enthusiastically.

With its varied climate, and wide range of physical features, India is the home of an amazing array of species. The Himalayas are a treasure trove of flowers many of which grow all over the northern temperate zone too.

Some of them are unique to the Himalayas while others are very alpine in character. The lower hills have a mixture of temperate and subtropical flora. The plains and the scrub deserts have distinctly different flowers, while hot and humid areas have flora that is specific to their condition. The flower spectrum, if one can call it that, is as wide as it is wonderful. However, here are some flowers that are common to most parts of the country, and it is these familiar blossoms that I have covered in this book. The selection has not been easy because each flower has its own special beauty. I have chosen the flowers for their beauty, colour and for their wide distribution over most parts of the country. This selection should be a good first introduction to Indian wild-flowers and can lead from here to wider and wilder pastures!

Those who have studied botany know that it is not easy to learn botanical names; therefore, I have used common names of wild flowers which are easier to remember than the botanical ones. Since there are variations sometimes I have given botanical names as well. Wherever possible I have given Hindi names too. In our wide range of dialects a single flower may have as many as two dozen names and sometimes the names overlap resulting in some confusion.

The ability to identify wild flowers can transform a journey, walk or a drive into a voyage of discovery. Every shady nook, forest path or ditch becomes endowed with charm as you seek out its hidden cache of wild plants. Knowing the flowers in one's surroundings furthers a desire to know more about flowers whether near or far, and the need to save all the wild things that we have inherited on the earth. The fact that a rapidly growing population is threatening wild habitats is also connected with an awareness of nature and the need to preserve it.

There is a lack of awareness about conservation and the balance of nature. Natural plant life is not inexhaustible and we cannot be complacent about it, already many of our wildlife habitats are lost forever. Small things can help, for instance while walking we should walk along a trodden path, for stepping on a plant may mean wiping out a whole species forever. I hope that this book will help to heighten an interest in wild flowers and contribute in a small measure towards saving them. Photographing wild flowers is a good way of enjoying their beauty forever. Plucking them needlessly is as thoughtless as it is destructive.

While describing the species selected for this work, the shapes of the leaves and other parts of the flower are described as far as possible in everyday language. There are line drawings which show the forms of leaves. Some botanical terms which are used are explained in a glossary at the back of the book. I have drawn most of the flowers in the field and some from my own photographs when it was not possible to be on site.

Lastly but not least, I would like to thank Prof. Virendra Kumar and Dr. M.K. Pandit of the CISM, for their encouragement and help in identifying the flowers.



HIMALAYAN MUSK ROSE

Rosa brunanii

Rosaceae

This delicate wild rose is most commonly seen all along the northern hills growing at heights of 1200-2400 m. Come May, and all the musk rose bushes burst into bloom, clothing trees, running wild over hedges and tumbling precariously over cliffs and boulders. The air is heady with their scent and honeybees and nectar-loving insects have a field day.

The five-petalled flowers are white and about 3-4 cm across, filled with a mass of yellow stamens. The stems are prickly and the leaves are finely-toothed ovals with pointed tips. The *R. moschata* found in the western Himalayas is very similar, the main difference being that its branches are smooth and the leaf stalks are without prickles. Several other varieties of wild white roses grow in the hills. Wild, pink roses or *R. macrophylla*, *arc* also common and can be seen growing side by side with the white ones. When the wild rose withers away, its place is taken by a red rounded fruit known as a rose-hip.

In the autumn, a rose bush hung with rose-hips is a very pretty sight.

In Hindi, the musk rose is known as *Kuji*, *Kunja* or *Karer*. Sometimes the wood is used to make walking sticks. An attar is extracted from the flowers. A soothing cough syrup is made out of the hips; these have a high vitamin C content. A kind of a marmalade can also be made of the hips by boiling them and passing the pulp through a sieve; to each 1/2 kg of pulp add an equal amount of sugar and boil till it jells.

*And Mid-May's eldest child,
The coming musk-rose,
full of dewy wine,
The murmurous haunt of
flies on summer eves.*



CHICKWEED

Stellaria media

Caryophyllaceae

The chickweed is one of the most easily seen wild flowers of the winter all over north India. The tiny, white, star-shaped flower grows rampant in cool, moist areas in parks, woodlands and gardens. In the summer it is found growing all over the hills to a height of about 2500 m.

The chickweed is found all over Europe and north America. The plant is about 10-15 cm high, and the oval-pointed leaves which grow opposite each other are long petioled, that is, with long stalks.

The chickweed contains saponin, calcium and potassium salts and is used in traditional medicines. Crushed chickweed was once rubbed on arthritic joints to relieve the pain. It is used homeopathically for rheumatism.

In Hindi it is called, *Buchbucha*. *Herb al'oiseae* is the French name for this plant; *Vogdmiere*, in German and *Morsus gallinae* [hen's-bite] in medieval Latin. All the names associate the chickweed with birds. It has long been used as birdfeed; geese are said to greatly relish the seeds.

Humans use the tender leaves in salads or cook them as a vegetable with a knob of butter added on top.



DUTCH CLOVER

Trifolium repens

Leguminosae

From a distance clover heads look like white puff-balls in the grass. If you look at them closely, you will see that each globular head is made up of many small pea-shaped flowers each on its own little stalk. The flowers are white to start with and then develop a pink tinge. These are fragrant and beloved of honey bees.

The stem creeps along the ground and roots at the joints. The three leaflets which make up one leaf are heart-shaped with the pointed end facing inwards. The leaflets are marked with whitish bands which resemble quarter moons. As a rule there are always three leaflets but, occasionally four-leaved clovers appear and are supposed to be lucky if worn on your lapel or even the brim of your hat!

The name clover may have originated from the Latin, *clava* or clubs, because of the fancied resemblance between the three-pronged club of Hercules and the clover leaf. The clubs of playing cards and the *trefle* [trefoil] of the French are based on this leaf.

Clover grows in meadows, pastures, lawns and sports fields all over the northern hills and in the Nilgiris. It is a hardy plant which can stand up to trampling and prefers a nitrogenous soil. A red-purple variety is found as well, this is *T. pratense*, and is a valued fodder plant. Clover flowers from April to August. The famous Irish shamrock, a type of a clover [*T. minus*], has been introduced in the hills in India.

In Hindi clover is known as *Shaftal* and the pink variety called *Trepatra*. Clover grows throughout the temperate areas of the northern hemisphere. It helps to improve the quality of the soil through the friendly bacteria that live in its roots and thereby help in absorbing nitrogen from the atmosphere, and convert it to usable plant nutrients.



DATURA

Datura metel

Solanaceae

This plant is known as the thorn-apple in Europe and as Jimson's weed in America. The datura stands erect and can be about a metre tall. The dark green, ovate leaves are irregularly lobed and toothed. The trumpet-shaped flowers are white and tinged with violet on the outer side. The flowers are very noticeable on account of their large size. The datura flowers from the beginning of the winter and through till the spring, and then again in the rains. It is widely distributed all over India and the flowering time is different according to the area. In the mountains the datura is found to a height of about 2200 m., the varieties at higher altitudes are different. The plant has an unpleasant odour and grows freely on dry, waste ground, amidst rubble or in the ruins of old buildings. Very often it does not look attractive because it is covered with dust. A fresh one fully in bloom is quite spectacular. Garden varieties have been developed from the wild flower. The fruit of the datura is a marble-sized oval covered with prickles, rather like a miniature hedgehog, with wrinkled seeds nestling inside. The name, thorn-apple arises from the shape of the seed.

Dhatura is the Indian name. It has sinister connotations as at one time thugs used a drug from the plant to stupefy their victims. Eating the seed can cause severe hallucinations and even death. All the parts of the plant are narcotic, but its medicinal virtues have been appreciated of old. The dried stalks and leaves are used in asthma cigarettes. It is used in hysteria and neuralgia as well.

Kanaka Asava, an ayurvedic preparation is made from *D. stramonium* and used as an expectorant and antispasmodic. *D. metel* is known as *Sadadatura* in Hindi.

Like a weed whose shade is poison.

– Shelly



INDIAN LILY-OF-THE-VALLEY

Ophiopogon intermedius

Haemodoraceae

The Indian lily-of-the-valley grows in shady forest banks all over the Himalayas, and it may be seen from May to early September. It also grows in the ghats of the Deccan and its range extends to the hilly tracts of Sri Lanka.

This delicate wild flower is about 10-15 cm high. The flowers are white, tinged with pink on the outside. They look like small white bells with heads hanging downwards and grow in a spike-like cluster. The stems are leafless. The little bells are scented and their light fragrance carries in the breeze when a lot of them grow together. The leaves are grass-like and of a deep green hue. The fruit of this wild flower consists of half a dozen berry-like bright blue seeds.

The actual lily-of-the-valley that grows in Europe is quite different and has broader leaves, but the fragrance is somewhat similar. This is grown in all hill gardens.

The tubers of the Indian lily-of-the-valley are used as a herbal treatment for dropsy. A very close relative of this lily, *O. japonicus* is used in our gardens for edging. This plant originally comes from Japan and Korea, and the tubers are used as a substitute for ginseng.

*So bashful when I spied her
so pretty, so ashamed!
So hidden in her leaflets
Lest anybody find
- Emily Dickinson*



SWEET SNOW

Hedychium spicatum

Zingiberaceae

In July and August whole hillsides in the Himalayas are covered with these fragrant, white flowers, touched with orange at the base. The name *Hedychium*, comes from the Greek, *hedys*, sweet and *chion*, snow. The plant belongs to the same family as ginger and is found in the Himalayas from Himachal to Arunachal, at heights of 1800-2800 m. mostly in shaded banks and shrubberies.

The fragrant flowers grow along the stem in a dense spike. The long, narrow petals are a creamy white with orange-red bases with long protruding filaments. The robust leaves are alternate and broadly lanceolate with clasping foot stalks; the leaves remind one of canna leaves. Each dark green leaf can be about 30 cm by 4-12 cm broad.

The plant has a round fruit with three sections, which when ripe, opens to show its orange-red lining with black seeds nestling inside. In turn, these seeds are enclosed in their own covering of red. After the plant has finished flowering these red seeds can be seen studding the plant.

Sweet snow is a hardy plant and does particularly well on the slopes of Simla and Kasauli. In the winter it dies down, for this gives the rhizomes a rest. A perfume known as *abir* is obtained from the rootstock. The roots are dried and powdered and then used for perfuming tobacco. The roots are used medicinally because they are carminative and stimulant. The leaves are woven into mats.

In Hindi, the plant is known as *Sitruti* or *Kapur kachri*.



COBRA LILY OR JACK-IN-THE-PULPIT

Arisaema concinnum

Araceae

One cannot help noticing these singular plants with their pointed hoods and protruding snaky tongues. The hood has given rise to the name of the cobra lily. A very similar plant called Jack-in-the-pulpit or cuckoo-pint or lords and ladies, which also belongs to the Arum family, grows in Europe.

The cobra lily stands about 30-50 cm tall and is found all over the Himalayas extending from Himachal to Burma. There are several varieties and all of them can be seen from June to September.

This curious flower has palmate leaves with seven or more leaflets spreading finger-like from the tip of the leaf stalk. The spathe, or the snake hood is dark green with a purple tip, it is marked with white stripes and purple pencilling at the base. The spadix, or the central stalk encased in the hood, is covered with tiny male and female flowers. It has a foetid smell and attracts flies and other insects.

When the plant has finished flowering, a stalk covered with bright red berries comes up in its place in early autumn, creating a splash of colour in the woods.

The generic name, *Arisaema*, signifies bloody arum, and refers to the purple stains on the spathe. Legend has it that these lilies were received at the Crucifixion. One of the many names of the cobra lily is *Samp-ki-Khumb*.

The tuberous roots of many types of cobra lilies can be boiled and then ground into a flour and eaten.

The American Indians used to greatly relish the boiled scarlet berries of the closely related Jack-in-the-pulpit that grows in North America. It was known as the Indian turnip in that country, for the tubers were boiled and eaten.



STINGING NETTLE

Urtica dioica

Urticaceae

Anyone who has walked in the hills is sure to have experienced being stung by nettles. Widespread all over the temperate Himalayas this plant is completely covered with hollow stinging hairs full of formic acid. The brittle end of the hair breaks when one brushes against the plant, and the contents are ejected into the skin causing discomfort and rash.

The stinging nettle is very easy to recognise with its dark green, large, hairy and coarsely-toothed spear-shaped leaves that grow opposite each other on a robust, grooved stem. Both the stem and the leaves are clothed with stinging hairs. This plant has tiny, green petal-less flowers growing in long, tassel-like clusters. Male and female flowers grow on different plants.

The stems of the nettle contain a fibre and can be woven into cloth. There is a famous fairytale of a princess who was forced to weave cloth out of stinging nettles; she had to complete this painful task if she wanted her brothers 'back in human form, as they had been turned into swans by an enchanter.

The leaves have a high vitamin C and A content and the tender ones can be made into salads and cooked as a vegetable. This is the food plant of the caterpillars of the Small Tortoiseshell and Red Admiral butterflies. For this reason one sees it owing with these caterpillars in the summer.

In Hindi this plant is well known as *Bichu Buti*. It is used to treat rheumatism and sometimes even to activate paralysed limbs. *U. parviflora* a closely related variety is found both in the Himalayas and the Nilgiris.



SHEPHERD'S PURSE

Capsella bursa-pastoris

Cruciferae

The shepherd's purse is a herb which gets its name from the Latin, *cap*, referring to the little triangular pods that grow along the upper stem. These pods resemble the ancient pouches carried by shepherds. If you look at them carefully, they are heart-shaped. The unscented, tiny white flowers grow in loose racemes.

The leaves grow in a rosette at the base. The stems are covered with minute forked hair. The lower leaves are long and deeply notched, whereas the upper ones have barely toothed edges.

The shepherd's purse is a cosmopolitan wild flower found all over the temperate areas of the world. It grows along waste ground, ditches and grassy places. In the hills it grows from April to October and in the northern plains from December to March. Incidentally, the plant has such a wide distribution that it is even found in Greenland where it was introduced by Norsemen over 1000 years ago.

The shepherd's purse is a medicinal plant and has been used as a drug as far back as the middle Ages. The plant has haemostatic properties. For a long time it was used instead of quinine to treat malaria. Homeopathy makes use of the plant in treating nose-bleeds and urinary calculosis. Extracts from the plant are used in cosmetic preparations. The young leaves can be used in salads.

Another name for this plant is pickpocket.



MISTLETOE

Viscum album

Loranthaceae

Everyone has heard of the mistletoe but very few have actually seen this semi-parasitic, evergreen shrub. The reason for this is that the mistletoe grows upon the branches of trees. It is commonly found all along the temperate Himalayas from Kashmir to Nepal at heights of 1000-2700 m. The mistletoe has yellow-green branches and leathery, narrow leaves with blunt ends, rather like the handles of spoons.

The branches fork repeatedly and tiny yellowish-green flowers cluster at the fork. Male and female flowers grow on different bushes in the early summer. The berries ripen early in the winter of the following year and the seeds are distributed by birds. Mistletoe berries are a pearly, translucent white, each with a seed surrounded by sticky pulp. The mistletoe grows on walnut, apricot, poplar, chestnut and old apple trees.

In Europe the mistletoe is well known for the Christmas custom of kissing beneath its branches. In Norse legend it is the goddess of love, Freya, who cares for this plant. The mistletoe is supposed to be the Golden Bough that opened the door to the underworld for Aeneas and the Sibyl.

The mistletoe has been recommended in the herbals of the sixteenth century for epilepsy and cramps. Drugs made from it are used for hypertension, cardiac asthma and even whooping cough, but have to be used with care for the plant can cause intolerant reactions.

Bird-catchers used to make birdlime from the berries. A decoction from the branches is used to treat chilblains. The plant is known as *Ban* or *Banda* in Hindi.



TRIDAX

Tridax procumbens

Compositae

This pretty daisy-like flower is very common all over the plains of northern India; in fact it belongs to the same family as the daisy. The tridax plant stands about 30-60 cm high and has slightly hairy stems. The leaves are ovate or lanceolate with dentate edges. The small creamy or white flower has five petals which are notched on the outer edges. The centre of the flower is yellow.

This plant has flowers all the year around, but from May to December is the time that it is fully in bloom. It is found along paths, roadsides and in the crevices of walls and rocks.

It is a great favourite with low flying butterflies. In the areas where there is a great concentration of these flowers you will find plenty of butterflies there too.



WIND FLOWER

Anemone vitifolia

Ranunculaceae

The wild anemone commonly known as the wind flower, has large white flowers of 3.5-5 cm across, filled with yellow stamens and tinged with pink on the reverse. The stalks are soft and silky, long and erect. The round flower buds are white and woolly. The large leaves are five-lobed like a palm, toothed, with a smooth upper surface and woolly beneath and they grow in a cluster.

The leaves just below the flower head are much smaller and grow on smaller stalks. The wind flower is a perennial and is about 30-90 cm high and can be seen from quite a distance where it grows in the mountains.

The anemone is found all over the temperate Himalayas at heights of 2100-3000 m. and is in flower from July to September. We have several species of anemones in the hills and each one is prettier than the other. Some flower in the spring and some in the autumn.

The word anemone comes from the Greek, *anemos*, or wind. Some of the species bloom in the windy months of early spring and are therefore called wind flowers. Anemones flourish in dry, open woodland and a porous, chalky soil. The ancient Greeks believed that if a wind blew over an anemone-filled meadow it would bring sickness with it. They also believed that anemones sprang from the passionate tears shed by Venus over the body of the slain Adonis. Anemones, fluttering in the breeze, have a tremulous charm of their own.

*Within the woods,
whose young transparent leaves scarce cast a shade,
gay circles of anemones.
Danced on their stalks',
- wrote Byrant of these flowers.*



MAZUS

Mazus japonicus

Scrophulariaceae

This is a tiny white and pale purple flower found mostly in lawns and damp places. Lawns look very pretty when dotted with this flower, but it is considered quite a weed. The plant is about 6-8 cm high, lower leaves are small and oblong, about 2-3 cm long and coarsely toothed; they narrow down into a stalk-like base.

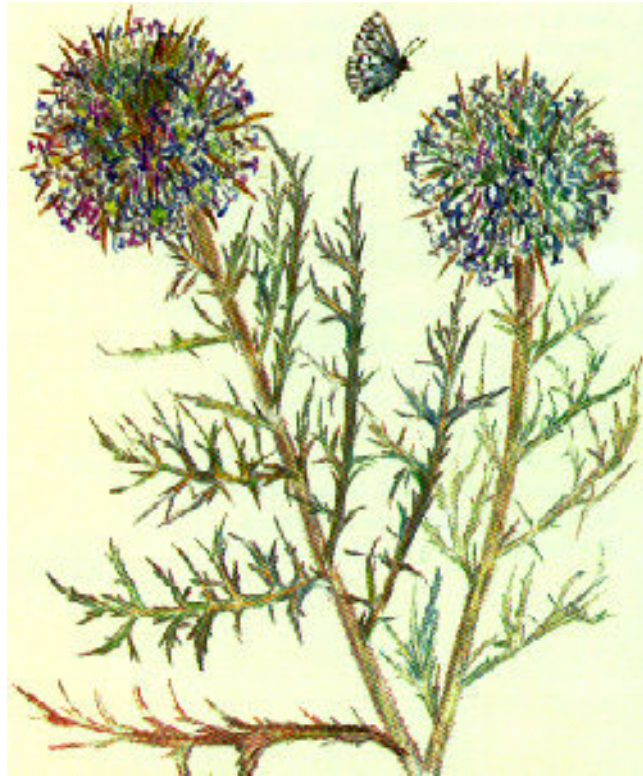
The tiny flowers are actually whitish, faintly shaded with blue-purple and yellow with a darker upper lip. The calyx is lobed half way down. The flowers are tiny so you have to look at them closely _ a magnifying glass would help.

The mazus is found all over the northern plains and in the hills to about a height of 1500 m. where it flowers in the summer. In the plains it flowers in the winter, though some flowers can be found the year around. It is a great favourite with honey bees. In January when not many annuals are in bloom they look to the mazus flower dotting the grass, for nectar.

A herbal infusion of the plant is used to tone up the system.

*Embroiderers of the carpet earth
That gem the velvet sod;*

- Clare



GLOBE THISTLE

Echinops cornigerus

Compositae

The globe thistles are distinctly noticeable and rather handsome plants that grow all over the western Himalayas from 2400-3300 m. They can be seen blooming just after the rains until the beginning of autumn.

The flower heads are almost perfect spheres and made up of small closely packed blue flowers. In between these closely packed flowers sharp spines jut out. They are a little longer than the flowers and can prick your finger very sharply.

The silvery-green leaves are pinnately divided into many segments. The edges of the leaves have sharp spines all along.

Another variety of the globe thistle, *E. niveus*, also grows in the hills. This one is almost white but otherwise very similar.

A variety of the globe thistle, *E. echinatus*, grows in the plains and is again very similar, except that the flower heads are smaller and the leaves have a woolly look about them. This plant is known as the *Oontkatela* in Hindi. Different varieties of globe thistles are cultivated in gardens. They are quite outstanding in flower beds as well as being easy to cultivate.



WILD DELPHINIUM

Delphinium denudatum

Ranunculaceae

The name of this beautiful blue flower comes from the Greek *del-phin*, a dolphin. You only have to look at the shape of the unopened flower buds to see how remarkably they look like dolphins. The other commonly used name, larkspur, comes from the backward projecting spur of the uppermost petal. The spur reminds one of the spurred toes of the lark.

Delphiniums are found growing all over the Himalayas from Kashmir in the west to Nepal at heights of 1500-2700 m. The blue flowers grow along the stalk in spike-like clusters. They are rather irregular in shape, with five outer petals and four shorter inner petals which curve inwards for the nectar is secreted within these. The leaves are divided into narrow segments, so they look rather fern-like. There are several types of delphiniums found in the hills and most of them flower in the summer roughly between June and August. Many different varieties of cultivated delphiniums are grown in winter gardens. They come in shades of pink, white and blue. Some cultivars that are grown in Europe stand almost 3 m. high and have large flowers in a whole range of unbelievable shades of blue and pink.

Delphiniums grow in a chalky and weedy soil in grassy banks and along the margins of fields.

In Hindi this flower is known as *Nirbishi*, or without poison. The roots are used to treat toothaches. The other varieties of wild delphiniums also have medicinal qualities; they are used to heal animal wounds and to kill their ticks and lice.



DOG VIOLET

Viola canescens

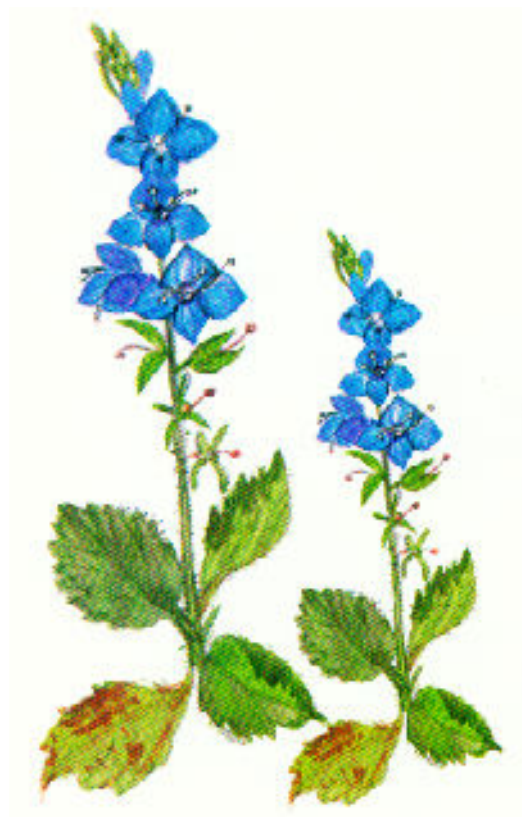
Violaceae

Very often one comes across the phrase, 'sweet violet', because it has a fragrance which has been extolled by poets and writers. The flower is a lilac-purple with a slightly paler centre and about 1.5 cm across. The lowest petal begins in a hollow spur full of nectar. Not only does the shy violet smell sweet but it is also a favourite with honey bees, bumble bees and other insects which feed on nectar.

Violets can be found growing in shady places in woodlands from 1500-2500 m. in the northern hills. The stems are about 6-10 cms and the leaves are heart-shaped or kidney-shaped, of a grey-green hue and covered with pale hair. The plant sends out runners which root to form new plants.

The violet is an old medicinal plant, and a very effective cough mixture called *Banapsha* is made from it. In the Ayurvedic and Unani systems of medicine, violet flowers are used for treating several diseases. Homeopathic remedies for skin, eye and ear troubles also use the violet plant. They are grown commercially in the hills in India. A different type of violet called *V. odorata* is grown extensively for the perfume industry in France. Violet water was a very popular scent at the turn of the century. Surprisingly it was mostly made from the roots of the Iris plant, known as orrisroot, which have a similar fragrance to violets.

*Long as there's 'a sun that sets
Primroses will have their glory
Long as there are violets
They will have a place in story
- Wordsworth*



COMMON SPEEDWELL

Veronica spp.

Scrophulariaceae

There are many types of speedwells found all over the north Indian hills growing from 1500-5000 m. They can be white, lilac, purple-blue or a clear blue, which gives rise to the saying/eyes as blue as speedwells'. Sometimes it is not easy to distinguish one species from another, and even botanists find it a difficult genus.

The four-petalled blue flowers grow in short racemes, each petal veined with a darker blue. The stems and leaves are covered with soft hair. The leaves are small ovals, serrated at the edges. The plants are about 10-30 cm tall.

Speedwells grow in mixed weed-lands, as well as sparse meadows and they like a sandy, loamy and rather acid soil.

In times gone by speedwells were used in folk medicine especially for respiratory diseases, rheumatism and gout. A detailed description of the plant appeared in a herbal written by Hieronymus Bock, one of the best botanists of the Middle Ages. In 1690 Johannes Francus, an herbalist, published a book in which he dealt exclusively with the virtues of the speedwell.

A variety of the speedwell known as *V. anagallis-aquatica*, or the water speedwell, with pale blue flowers and oblong-lanceolate, toothed leaves grows in the north Indian plains and flowers in the winter. This favours damp ground, especially river and canal banks.

The botanical name *Veronica*, is named after St. Veronica.



FLOSS FLOWER

Ageratum conyzoides

Compositae

In long roadsides and under trees in parks, in the winter we notice a blue mist formed by the floss flower plants growing closely massed together. Originally from tropical America, this is another wild flower which has spread all over India. It grows to a height of 2000 m. In the winter, parks and roadsides are carpeted thickly with ageratum. At higher altitudes it flowers from the early summer right up to the autumn.

The plant stands erect and is covered with soft hair all over its stem and leaves. Each flower head looks like a mop and is composed of very tiny florets. The fruit is black, angled and crowned with a ring of three to five minutely barbed, slender scales. Ageratum can also be white. It is grown as a garden flower and attracts a lot of tiger butterflies.

This plant is used for fodder and in Hindi is known as *Nilam*, an apt name for its beautiful blue. For some reason it is also known as *Tambaku*. The botanical name *Ageratum* comes from the Greek *a*, without, and *gems*, age referring to the long lasting flowers.



LESSER PERIWINKLE

Vinca minor

Apocynaceae

While walking through shady woodland slopes of hill stations of north India one sees banks of purple-blue periwinkles. It was originally a garden plant but is truly wild now in the Simla and Mussoorie areas, where it was introduced over a hundred years ago. It tumbles over tree-shaded slopes which it covers with its dark green, oval-pointed leaves.

The periwinkle is a perennial plant with a creeping rootstock, which roots at the nodes and throws up short, erect flowering stems. The purple-blue flowers with five petals, are borne on short stems. The petals are united for half their length to form a tube, and then open out which makes the flower look trumpet-like when it is viewed sideways. The leaves of the periwinkle grow opposite each other.

In the west periwinkles are planted in cemeteries. In the days gone by, garlands were made of the flowers for corpses and condemned criminals. The reason for this is obscure- perhaps purple-blue is linked with sadness and mourning. Sometimes blue eyes are likened to periwinkles.

This periwinkle, also known as the blue periwinkle, is used in herbal medicines to treat diarrhoea and dysentery. The crushed leaves, when applied to surface wounds have astringent and healing properties. This plant should not be confused with the Madagascar periwinkle, a tropical plant, which is *Catharanthus roseus*, or the *Sadabahar* in Hindi, and is cultivated for its valuable medicinal properties.

*Through primrose tufts in that green bower
The periwinkle trailed its wreathes,
And tis my faith that every flower
Enjoys the air it breathes.*

- Wordsworth



COMMELINA

Commelina forkalii

Commelinaceae

The beautiful commelina belongs to the spiderwort family. This is an unusually pretty blue wild flower and can be seen in the rains till the beginning of the winter. There are several different varieties of commelinas found all over India, growing at a height of up to 3500 m.

The stems are fleshy, tinged with pink and the leaves are narrowly oblong, with pointed tips. The petals are a beautiful sky-blue and have an orchid-like appearance, with one petal being lighter than the others. When the flower withers away, its place is taken by a capsule which has three smooth seeds in it. The shape of the seed case is clearly divided into three sections, when viewed from the outside.

This plant flowers in the summer and the rains. Look for it in fields, gardens and wasteland. Animals like to graze on this plant and the young shoots are eaten as a vegetable. *Kankawa*, as the plant is commonly known is very good for making, '*pakoras*'. The other names which are used often are Kana and *Kanteri*.

The commelina is used in herbal medicine for remedies for inflammation of the skin.



WILD CHICORY

Chichorium intybus

Compositae

Chicory is a beautiful perennial with violet-blue blooms, an unusual shade in flowers. These close in the rain but are open in sunny weather. A chicory plant can grow to about a metre in height and is found around the edges of fields and verges of country roads. It blooms in the north-western plains in the winter and in the hills, where it grows to about 2400 m. all through the summer.

This is a somewhat rough textured, erect plant with many branches. The stem is grooved and the large lower leaves are coarsely lobed and grow in a rosette at the base of the plant. The upper leaves are small, linear and covered with downy hair. The flowers are large and have petals that fan out from the centre like blue rays.

The chicory plant has a long taproot that is dried and roasted and added to coffee to improve the flavour. It is an old medicinal plant and is still used for improving eyesight and the skin. The plant is useful for problems of the liver, gallbladder and diabetes.

We call the plant *Kasni*, and it is used as a salad and vegetable. The endive is a cultivated form of this species. This plant is also known as the succory plant and grows all over Europe, North Africa, north America and western Asia. It was known to the ancient Greeks and Romans. The Egyptians have been growing it for the last 2000 years and the word chicory comes from an Egyptian word. The word succory comes from the Latin, *succurrene*, which means to run under, because of the deep tap root.



WATER HYACINTH

Eichhornia crassipes

Pontederiaceae

The purple-blue spikes of this flower can be seen growing in rivers, jheels and ponds all over India. Actually, this plant is so rampant that it has begun to choke streams, rivers and canals and is now considered a pest. The water hyacinth comes from tropical South America and has been naturalised in India. Some think that it was brought in by a British woman as an ornamental plant for her pond in the last century.

Pest or not, it is very pretty with its purple-blue colour with one of the petals touched with gold and peacock-blue hues. The flowers grow on a spike of about a foot tall which in turn, reminds one of so many candles being held aloft on the water. The flowers last only for a day.

The cordate leaves are large and shiny. The leaf stalks or petioles are very swollen and keep the whole plant buoyant on the water. The stalks resemble floats and are not at all like stalks till one looks at them carefully. Some experiments have been made to convert the leaves into paper and even manure for fields since the plant has such a prolific rate of growth, but this has not been such a success. The water hyacinth is very difficult to eradicate; it has to be removed regularly from the roots, even then it returns to grow, choking the habitat of other plants and adversely affecting the ecology of that area. To a certain extent it is useful in absorbing toxins from water but its role is limited in this respect because it prevents other plants from growing.



BLUE PIMPERNEL

Anagallis arvensis

Primulaceae

Everyone is familiar with Baroness Orczy's famous book, 'The Scarlet Pimpernel,' but not everyone knows that there is a wild flower known as the blue pimpernel. It is a beautiful clear blue with five petals and a throat stained red.

The plant is about 10 -12 cm high, and grows in the winter over the cooler parts of India to about 2500 m. It has a square stem, which lies along the ground, and sends up many erect branches. The oval- pointed leaves are stalkless and they grow opposite each other. The fruit is shaped like a tiny closed urn, the upper half of which opens like a lid to release its tiny seeds. The pimpernel is found in cornfields, ditches, flowerbeds and sometimes even takes root in flower pots. There is a red variety which grows in the hills of the north. This form is found all over Europe and as far as north America and the famous book takes its name from this scarlet pimpernel.

When cloudy weather threatens, the pimpernel closes up and acts as a barometer - for this reason it is sometimes called the shepherd's weather glass. At one time this plant was used in herbal medicine for epilepsy and rheumatism. As a cosmetic, pimpernel water is good for freckles. Sometimes the tender leaves are eaten in a salad.

The botanical name of the genus, *Anagallis*, derives from the Greek word *anagalein*, to laugh. This stems from an old saying that if chickens ate the plant they would cackle, or 'laugh'. Birds like the seed. In Hindi, it is called, *Dharti-dhak* or *Buchbucha*.

*No ear hath heard, no tongue can tell
The virtues of the pimpernell
- (An old couplet)*



APPLE OF PERU

Nicandra physalodes

Solanaceae

The dried, papery, inflated pods of this plant growing along a stem of about a metre high catch one's attention while walking in the hills from 800-2300 m. The apple of Peru, in spite of its name comes originally from Mexico but has naturalised well all over the northern hills. It is found in the hilly tracts of the western Deccan peninsula also.

This plant has beautiful, bell-shaped blue flowers of about 2-4 cm across, with white centres. The flowers stay open only for part of the day. The large stalked leaves are ovate with irregular lobes. The flowers have a five-lobed calyx, which is very noticeable. This calyx grows into a papery, net-veined lantern to enclose the green berry of the plant. The berry is like a round, green marble full of tiny seeds and is quite sour. Birds and other animals of the forest eat it.

This plant can be seen growing along verges of roads, in cultivated areas and neglected corners of gardens. It is quite striking when it is in bloom from May to November though it has a foetid smell.

The plant is reputed to have diuretic, antihelmintic and insecticidal properties. It is supposed to be used as a fly poison in some parts of the United States.



KASHMIR GENTIAN

Gentiana cochemirica

Gentianaceae

There are many varieties of gentians growing in the Himalayas. This intensely blue flower ranges from sapphire to sky blue and cerulean to a deep purple-blue. It is a family of flowers that is spread widely across the cooler parts of the world.

Gentians grow close to the ground and have flowers that are trumpet-shaped. One of the more easily seen gentians is the Kashmir gentian which grows at heights of about 2500-4000 m. in the western part of the Himalayas. This flower likes rocky, exposed slopes. The small ovate leaves grow on spreading stems. The flowers are funnel-shaped. Gentians open their blue faces to the sun from about the end of July and stay in flower till autumn.

At the end of the last century many plant collectors took seeds of different gentians from the Himalayas and introduced them as garden varieties; of these, one of the best is the *G. sino-ornata* with its astonishing shade of deep blue. Gentians are easy to recognise on account of their general appearance being the same.

Many gentians share similar properties and are used in herbal medicine in the hills. The roots of *G. kurmo*, known as *Kam* are used for stomach problems and urinary infections.

Thoreau, the nature writer wrote that gentians were, 'Bluer than the bluest sky'. While describing the colour of a particular gentian that grows in America, he wrote, 'such a dark blue! surpassing that of the male bluebird's back!' And finally another poet wrote.

*Blue-blue- as if that sky let fall
A flower from its cerulean wall*



CRANESBILL

Geranium wallichianum

Geraniaceae

The cranesbill or the wild geranium, blooms just before the rains in the north Indian hills from 2400-3600 m. and continues to be in flower right up to September. This is a perennial that grows from 30 -120 cm tall. The purple-blue flowers are about 3-4 cm across.

The leaves are palmately divided into 3-5 lobes and toothed around the outer edges. The stems are slightly hairy and the plant has large, ovate, coloured stipules. When one comes across a whole bank of cranesbill, some of the flowers are a deep pink and the others are blue-purple and veined with a deep purple; the newly opened blooms are the ones with the pink flush.

The name cranesbill comes from the long, beaked fruit which resembles a crane's bill. The fruit is full of seeds. When the seeds are ripe they are thrown out with great force when the outer covering bursts. The seeds are ejected to a distance of about several metres away, and so the plant spreads if the conditions are favourable. The wild geranium is known as *Ratijari* in Hindi and is used in herbal medicine for rheumatism and to cure headaches.

There are roughly about ten different types of geraniums found in our hills. The name Geranium is derived from the Greek, *geranos*, a crane, referring to the long-beaked fruit.



BUTTERFLY BUSH

Buddleja crispa

Loganiaceae

As the name suggests, the butterfly bush is a great favourite with butterflies in the temperate Himalayas. It grows from about 900-2400 m. and flowers from February to June. Butterflies such as, Tortoiseshells, Painted Ladies and Red Admirals flock around the tiny flowers which grow densely in spikes.

The fragrant flowers are a pale mauve and about 8 mm long. The corolla tube opens out into four lobes. The throat of each flower is orangey-yellow. The leaves are oblong lances with toothed edges. The young leaves and branches are covered with rusty hairs. The bush has a peeling bark.

The wild buddleia was taken from the Himalayas to the gardens of Britain where many garden varieties were developed. These were then brought back and now they can be seen growing in many hill gardens.

Another type of pleasantly scented buddleia called *B. asiatica* with white flowers grows over a greater part of

India. This is not a very spectacular bush and blooms from spring to summer. The buddleia bush was named after the Rev. Adam Buddle, a British botanical author of the eighteenth century.



WILD PRIMULA

Primula denticulate

Primulaceae

If all the wildflowers in the hills, primulas are among the first to bloom. They flower as early as April and continue well into July. They are found all over the Himalayas at heights of 1500-4500 m. Primulas are very easy to spot in meadows, slopes and shrubberies, on account of the rounded flowering tops.

From a distance a meadow of primulas looks as though it is carpeted with purple, lilac and sometimes white golf balls fluttering in the mountain breeze. Come closer and you see that each flower head is composed of many small, five-petalled flowers, each petal is heart-shaped and each flower has a long corolla tube.

The leaves of the primula grow in a rosette at the base of the stalk. They are oblong, narrowing at the base, with toothed edges. The texture of the leaves is wavy and wrinkled and slightly mealy with veining. The flower grows on a single stalk that is not branched. It is about 18-20 cm high.

The name, primula comes from the Latin *primus*, first, referring to the early flowering of many species. In fact, the greatest concentration of primula species is found in the Himalayas. The seeds of some primulas were taken by plant collectors to the west at the end of the last century, and developed into beautiful cultivars for gardens.



HIMALAYAN FRITILLARY

Fritilaia roylei

Liliaceae

The fritillary is an unusually pretty lily that grows in the north-western Himalayas, from Kashmir to the Kumaon hills. If you are walking at altitudes of 2700-4000 m. you may come across these drooping, chequered flowers nodding on tall stems.

Fritillaries grow on grassy slopes, forest glades and in between rocks, at one time they were widespread on the slopes of Gulmarg in Kashmir.

These lilies grow from bulbs and can grow to about 60 cm tall. The longish leaves rather like lances, begin a little higher up on the stem. Three to six leaves grow in a whorl and the upper leaves are opposite each other.

The purple-brown or yellow-green flowers are like inverted bells painted in a chequered pattern of purple.

The fritillary has been named after J.F. Royle, a pioneer in Himalayan botany. The name comes from the Latin, *fritillus*, a dice-box, referring to the six glands nestling at the base of the flower.

The bulbs are pounded, boiled with orange peel and sugar and used for the treatment of chest problems by hill folk.



IRIS

Iris kemaonensis

Iridaceae

This wild flower has one of the loveliest names of all flowers. The iris is the Greek name for the rainbow; the flowers have many rainbow hues, as the name suggests. Sometimes women are named after the flower. The iris is found in the Himalayas from the west to the east.

It grows at heights of 2800-4000 m. on open slopes and grazing grounds. Very often it grows in large clumps and from a distance makes a pretty picture when it flowers in early April to July.

The flowers are a very bright lilac-purple and have yellow-tipped beards or combs on the outer petals. Dark purple mottling on the petals makes the flowers look a deeper colour. When iris bloom in early April they stand about 15 cm high massed in banks. At this stage they have very few leaves. Later on, the sword-shaped leaves come up and are taller than the flowers.

The iris grows from an underground rhizome, and likes wet ground. The capsule which contains the seeds is longish with a pointed end; when the seeds are ripe, it splits open.

There are more than a dozen varieties of iris in the mountains. *I. germanica* or *Keoreka-mul*, is cultivated in the hills, especially in Kashmir, for an oil known as orris oil which is obtained from the root. This oil used in perfumes and smells of violets. The roots of *I. nepalensis*, or *Chiluchi*, are used in medicines as a diuretic and for bilious complaints.



COLUMBINE

Aquilegia pubiflora

Ranunculaceae

Once, while walking in the valley of Kashmir, I rounded a bend and there, spread in front of me was a carpet of blue-violet columbines in a sun-dappled grove of conifers and maples. A breeze was gently rippling through them, turning their delicate heads this way and that rather like butterflies fluttering in the breeze.

Columbines grow at a height of 2500-3300 m. on open slopes and semi-shaded groves in the Himalayas all along from the west to the east. They bloom from early June to August.

Columbines are very elegantly formed and coloured in shades of lilac, purple and pinky-violet. The flower is very easy to distinguish because of the five backward projecting spurs of the inner petals. The spurs are full of nectar. A row of inner and outer petals forms the columbine, which grows in a drooping fashion. The leaves are divided into three lobes with crenate edges and look rather ferny.

The columbine was once used as a medicinal plant in the past centuries in Europe and was used as a garnish for food. It has been used in homeopathy for troubles of the nervous system. There are several varieties of this flower found in the Himalayas. Many garden varieties of the columbine have been developed and are grown in hill gardens.

The botanical name of the columbine *Aquilegia* comes from the Latin *aquila*, an eagle, referring to the claw-like spurs. The name columbine supposedly comes from *columba*, a dove; the outer petals with the spurs resemble a group of pigeons clustered around a dish, a motif often used in fountains.



ASH-COLOURED FLEABANE

Vernonia cinerea

Compositae

The vernonia can be seen almost anywhere in India. It grows along roadsides, in gardens and fields. It can be found even in crevices of stones and cracks in masonry. The small flowers are a deep pink or a purple-pink. Actually, a whole lot of minute flowers which are tubular in shape make up a bigger flower head. The leaves are ovate to lanceolate and of a dark green shade.

It flowers from the monsoon to the winter. During the monsoon it can grow up to a metre tall. When the flowers wither away their place is taken by feathery seed-heads which get carried far and wide.

The flower is named after William Vernon, an English botanist and traveller in north America in the seventeenth century. America has several species of this plant, where it is known as the Ironweed.

In Hindi it is known as *Sahadevi* and is very valuable in herbal medicine.

All flowers in a field of forest which enclose.

Their trembling eyelids to the kiss of day.

- Shelley



ROSCOEIA

Roscoea alpine

Zingiberaceae

This is among the most common wild flowers of the north Indian hills and grows best during the rainy season at a height of about 2500-4000 m. Roscoea is a small genus of Asiatic herbs named in honour of William Roscoe, who was the author of a work dealing with these plants of the Himalayas.

The *Roscoea alpine* grows about 20 cm high and has linear leaves 6-10 cm long. Sometimes the plant flowers without leaves, which come out later, giving the leafless bloom the look of an orchid. The flower is of a deep purple colour, though sometimes white ones are also seen. It has an interesting appearance with its upper petals arching in a helmet-like structure, and the modified stamen forming a large petal-like lip.

R. purpurea is taller and with much larger flowers and grows in the U.P. hills and further east and has roots that are used in veterinary medicine.



WILD INDIAN TULIP

Tulipa stellata

Travellers are sometimes surprised to find wild tulips in the Himalayas. Tulips are generally associated with Holland and most people think that they originated there. Actually, it was only in the sixteenth century that bulbs were taken from Turkey to Holland, where the flowers were adapted for the garden.

Tulips originated in the highlands of central Asia extending all the way down to the Himalayas. We have only one wild variety that grows from Kashmir to Uttar Pradesh at a height of 1500-3300 m.

This beautiful flower is white with a broad pinkish stripe on the outer side of the elliptic petals. Each flower is solitary on a hollow stem of 15-40 cm. At first the flowers are bell-shaped but later the petals open out. The leaves are linear, about 15-20 cm long and of a grey-green colour.

Tulips grow in April and May in fields of young wheat. Whole hillsides are carpeted by them. Another form of the same variety with yellow and red flowers grows at greater heights. The word tulip comes from the Persian, 'tuliban', or turban referring to the shape of the flowers. According to a Persian myth, the tulip sprang from the tears of a legendary lover as the lines below illustrate,

*And where the tulip, following close behind
the feet of Spring, her scarlet chalice rears,
there Ferhad for the love of Shirin pined,
Dyeing the desert red with his heart's tears.*

But it is in a little poem by Humbert Wolfe that we find the most perfect epitome of these flowers,

*Clean as a lady, cool as glass,
fresh without fragrance the tulip was.*



FIELD BINDWEED

Convolvulus arvensis

Convolvulaceae

Many different kinds of bindweed grow in the plains and the hills. In the hills they can be found up to 4000 m. The field bindweed grows in fields, gardens and wastelands and can be found twining over fences and hedges. This climbing plant has a delicate and slender appearance with its twining stem and distinctive arrow-shaped leaves, which grow opposite each other.

Bindweed flowers can be plain pink or striped pink and white. They are shaped like little trumpets and are lightly scented. The flowers open in the morning and close in the afternoon and each flower lasts for a day. Another surprising fact about this plant is that the tip of the stem, in about an hour and a half, completes a full anti-clockwise rotation of several centimetres in diameter.

The bindweed is an old medicinal plant and is used as a purgative and to increase the flow of bile. It is used as fodder and is known as *Hirankhuri* in Hindi.

Pink, small and punctual, Aromatic, low...

- (unknown)



WILD INDIAN ASPODEL

Vinca minor

Apocynaceae

The asphodel has a delicate appearance with its tiny, white flowers which look like stars growing in a dense spike. On the outer edge, each petal has a thin cerise stripe that runs from the tip to the base. The dark green, hollow leaves are shaped like narrow swords; when crushed, they give out a garlicky aroma. The black seeds grow in a round, green capsule, which turns brownish as it matures.

The Indian asphodel grows on moist waste ground, in fields and ditches. It is found all over the plains of India and is in flower from January right up to May. It can be found growing in the north-western hills where it flowers in the summer.

This plant is eaten when food is scarce.

The well known poet Tennyson wrote the poem, *The Lotus-Eaters*, in which he mentions lands, where the wild asphodel grows; he was writing of the European asphodel which is found all over Europe and around the shores of the Mediterranean where the poem is set. Alcohol is obtained from the fermented tubers of this plant, and the plant is also used to make lotions to lighten freckles .

In Hindi, the Indian Asphodel is called *Pyazi*.



KNOTWEED

Bistorta amplexicaulis

Polygonaceae

When the rains come in July, the thickly packed, deep pink, red and sometimes white flower spikes of the knotweed spring up all over the temperate Himalayas. The knotweed grows at heights of about 2000-4500 m. It is a slender, erect plant with ovate, heart-shaped, clasping upper leaves. The leaves have pointed edges and are dark green. The solitary flower spikes are 5-15 cm long and densely packed with little flowers 3-6 mm long. The lower leaves are long-stalked. The rootstock of the knotweed is used in the tanning process and the plant is used as fodder.



WILD FIELD THISTLE

Cirsium arvense

Compositae

This wild thistle flowers from the winter through to April. It is found all over central and north India growing up to a height of 3600 m. in the northern hills and in all of temperate Eurasia. In the hills the thistle is in flower from the early summer to early autumn.

Thistle flowers are a deep pink. The leaves are oblong-linear and coarsely pinnate. They have wavy margins which are tipped with spines along the edges. If you turn the leaf over you will see that it is soft and woolly beneath. When the thistle flower dies its place is taken by a ball of fluff; these are actually seed heads, or achene's, which are light enough to float in the wind and be carried to new places for the plant to seed. The phrase, 'light as thistle-down', becomes very clear when one sees these seeds floating in the breeze.

The wild thistle is found along edges of fields and waste ground. Different varieties of thistles grow all over the world in temperate areas. The artichoke belongs to the thistle family.

There is an interesting story about another variety of the thistle, the national emblem of Scotland. In the early days of Scottish history, armies marched only during the day. The Danes, who were at war with the Scots thought that they would surprise the Scots at night. But one of their men stepped on a thistle thorn and cried out in pain, arousing the Scots, who drove them off. Since then the thistle has been the emblem of the Scots.

All thistle flowers are attractive to bumble bees and bees.

In Hindi it is commonly known as *Katteli*.

The thistle scatters its down on the pool.

And yellow leaves clothe the river.

- Henry David Thoreau



LOTUS

Nelumbo nucifera

The lotus, known as the *Kamal*, or *Padma*, is one of our best known wild flowers. This beautiful flower mostly pink and sometimes white, is found all over the warmer parts of India and grows in lakes, ponds and rivers. The big flowers have a pleasant fragrance and bloom from August to October.

The leaves are large and round like huge green plates, held a foot or so above water on a central supporting stalk. Young leaves tend to float. There is a waxy coating on the leaves which causes water to roll off and in this way the leaves stay dry.

Each stalk has one flower and when it is in full bloom, numerous stamens are seen surrounding the large seed pod, which reminds one of the rose of a watering can. This pod has seeds which are good to eat. Lotus stalks are known as *Kamal Kakri* and are sold as vegetable. The leaves are used as plates. In some rivers lotus is grown for commercial use. The Dal Lake in Srinagar is known for its beautiful lotus flowers.

The lotus is a sacred flower of the Hindus. Hindu mythology says that Brahma rose from the lotus on Vishnu's navel, and went on to create the world. In her incarnation as Padma, Lakshmi stands on the lotus of knowledge. The Buddhists believe that Lord Buddha was born in the heart of a lotus blossom. In fact when they say 'Om *Mani Padme Hum*', translated as, the jewel is in the lotus, they are referring to a state of perfection. Girls are named, *Kamal* and *Padma* after the lotus. In our literature, "Lotus-eyed" is used to describe someone beautiful. Ayurvedic medicine uses the flower for its astringent, anti-allergic and anti-spasmodic properties.

Because of the loss of habitat and continuous plucking, the number of lotus flowers have been declining over the years all over the country.



WILD STRAWBERRY

Fragaria nubicola

Rosaceae

Fragaria, the botanical name for the wild strawberry comes from the Latin *fragrans*. This is not surprising because the fruit of the strawberry smells wonderful. The plant grows all over the northern temperate regions of the world. In India several varieties grow in the northern hills at heights of 1800-3800 m in forests, shrubberies and shady banks. The strawberry plant is a small, silky-haired perennial with trifoliate leaves, with long runners which root at intervals as they creep along the ground. The small flowers have five white petals, and each flower gives way to a red, succulent strawberry whose surface is dotted with tiny seeds. Wild strawberries are delicious and the flavour is especially fine in June when they grow profusely. Some fruit can be found from April to November.

In old European paintings the strawberry was shown as the fruit of temptation and whoever ate it was reputed to turn into a monster! The several varieties of strawberries growing in the Himalayas are all a great treat for fruit-loving animals and birds.

A herbal tea is made from the leaves which are picked young and dried. This is useful in diarrhoea and urinary infections.

In the northern hills this fruit is known as *Kiphalia* or *Kulachnia*. There are a variety of names in different areas for these bright little berries.

Red jewels warm from Nature's heart.

- Kipling



BLACK NIGHTSHADE

Solanum nigrum

Solanaceae

This variety of the night shade grows all over India to a height of about 2500 m. It is more prolific in warmer places. Perhaps the nightshade is better known by its small, red, tomato- like berries- in fact, it comes from the same family as the tomato.

The flowers are white stars about the size of a pea, with five petals. They grow in racemes and resemble tomato and potato flowers, except that they are much smaller.

Incidentally, potatoes also belong to the same family.

The nightshade grows to about 30-50 cm in height. The stems are slightly hairy and the leaves ovate with coarse, angular teeth; they grow in an alternate fashion along the stalk. The flowers appear all through the year and then ripen into red berries. The bunches of scarlet berries on the bush are very colourful and birds are fond of feeding on them. Children like to eat the berries as well. In some places they are dried and then fried as a snack. The plant smells a bit repulsive when crushed.

This very well known plant of the countryside is known as *Makoi* in Hindi. The black nightshade is used as a poultice for aches and pains. A freshly made extract of the plant is given to those who have cirrhosis of the liver. This is also a household remedy for animals when they are affected with anthrax.

Some varieties have black fruit that is reputed to taste better. Another name for the plant is *Chirmothi*.



SHEEP'S SORREL

Rumex hastatus

Polygonaceae

Walking in the hills you may see flowering drifts of knee-high, salmon-pink grasses being rippled by the wind. Come close and you will see that the pink is composed of papery nutlets growing in masses.

Sheep's sorrel grows in the Himalayas at about heights of 2000 -3000 m. on stony slopes, banks and in between crevices of walls. It looks for dry areas and is a bushy plant with many stems and arrow-shaped leaves which are sour in taste. The tiny flowers are greenish-white and the fruit is a papery, pink, three-angled nutlet. The plant is covered with these nutlets which look like tiny rose-pink flowers. Several varieties which look alike are common in the northern hills from west to the east.

Sheep's sorrel is one of the most abundant producers of pollen. It is a wind pollinated plant and produces about 400 million pollen grains per plant. It can be seen all over the hills from April to September.

The young leaves have a piquant flavour and are eaten in salads or as a *saag*. The roots of the closely allied *R. acetosa* or *chukka* as it known can be dried, powdered and used for diarrhoea and bleeding. Sheep's sorrel if gathered in large quantities, makes delicate wild flower arrangements in the winter when flowers are scarce on the hills. In Hindi it is known as *Bhilmom*.



CRIMSON CINQUEFOIL

Potentilla nepalensis

Rosaceae

A bank of blooming crimson cinquefoil is one of the most beautiful sights in the Himalayas. This flower grows at heights of 2100-2700 m. from Kashmir to Nepal and is in flower from about early June to September. Look for it in meadows, light forests and verges of paths and fields.

There are more than a dozen varieties of potentillas growing in the hills, most of them yellow, orange or dark red. The name, *Potentilla*, comes from the Latin *potens*, powerful, which refers to the medicinal properties of some plants. The crimson cinquefoil has five heart-shaped petals of a deep rose-crimson and measures about 1-2 cm across. A mass of stamens crowds the centre of the flower. The plant is between 20-90 cm high and has slightly hairy stems. The five ovate, toothed leaflets are arranged finger- fashion or digitately. The upper leaves are composed of three leaflets. The colour of this flower varies from crimson to rose to orange in some areas.

Many garden cultivars have been developed from this lovely potentilla. A decorative design known as the cinquefoil- likened to the petals of the flower- with five cusps is often used in windows and arches as a motif.



WILD POMEGRANATE

Punica granatum

Punicaceae

This is one of the most striking flowering shrubs of the lower north-western Himalayas. Sometimes it can grow into a small tree, which looks equally dazzling whether in flower or studded with small fruits.

This shrub is indigenous to the Himalayas and grows on sunny limestone soils. The bark is a smooth grey with small, shiny, oval-pointed leaves growing opposite each other.

The showy flowers which come out in April have large, crinkled, scarlet petals. The long tubular calyx is scarlet as well. There are plenty of stamens in the flower, which does not have any fragrance but flaunts its beauty when other wild flowers are scarce. The fruit ripens in September and is reddish-brown with transparent, deep pink seeds packed inside.

Most parts of the tree and the fruit are used in herbal medicine. The dried seeds are made into *anardana*, a sour flavouring. The powdered rind of the fruit is good for stomach and liver problems and for expelling worms.

The name of the famous courtesan, *Anarkali*, comes from this beautiful scarlet bloom. Pomegranate cultivars are grown commercially and as ornamentals for the garden. Because of the large number of seeds that the fruit produces, it has been regarded as a symbol of fertility. Pomegranate motifs are frequently used in traditional embroidery patterns.

Shakespeare mentioned a pomegranate tree in *Romeo and Juliet*: he chose the tree for his nightingale and wrote of the songster, '*Nightly she sings on yon pomegranate tree*'. In India, bulbuls perch on the tree.



WILD INDIAN CAPER

Capparis deciduas

Capparidaceae

Very often while walking about in dry, scrubby areas and wasteland around monuments and even crevices of ancient walls, one sees a dark green spinous bush crowned with hundreds of orangey-red to coral flowers. It is almost as if little tongues of fire had covered the bush. Come closer and you see that the flowers grow along the side of the branch in groups of threes and fours.

They have a mass of golden stamens in the centre but no scent. The straggly bush is a tangle of leafless, thorny branches, when not in flower. It is in bloom from February onwards and the fruits ripen in the summer and early rains. The fruit is a dark green berry or the caper as it is commonly known. This bush is found all over the drier parts of India and in the foothills.

The caper is known as *Dela* or *Karer* in Hindi and is used mainly for pickling. The tender leaves and shoots are powdered and used for toothaches, blisters, boils and inflammation in folk medicine. Very often this bush is planted as a windbreak along the edges of fields.

There are over two hundred varieties of the *capparis* family all over the world; the fruit and buds of quite a few are eaten and used in pickles. Capers used in western cuisine come from bushes of the same family, *C. sepiaria* or the *Heens*, as it is commonly known in Hindi, is another variety and has ovate-lanceolate leaves and four-petalled flowers with long stamens and purple berries. *C. spinosa*, or the European caper, is known as the *Kabra*, and is similar to the *Heens*. However, this is a smaller bush and is also found in the drier parts of north and central India.



INDIAN WOOD SORREL

Oxalis corniculata *O. maritiana*

Oxalidaceae

If you look closely at the grass in the winter or just after the rains, you'll see small, five-petaled, yellow flowers growing in between clumps of trifoliate leaves that look rather like clover leaves. Sorrel forms a dainty carpet where it grows in dappled sunlight, in patches in the grass. It likes moist places and has a stem that creeps along the ground and sends up shoots from this stem. It is found over most of India to a height of about 2500 m.

There is also a larger pink variety with bigger leaves, *O. maritiana*. This is seen frequently in shady places in gardens, fruit orchards and nurseries. Very often it grows in flower pots, especially if they have just come from the nursery. This is commonly known by children as *Khat-mith* and the leaves have a sour taste. The yellow oxalis is known as *Champa-methi*, *Teepatiya*, *Khat-mithi* and *Nonki*.

A variety with white flowers, *O. ace-tosella* grows in the hills and is some times worn as the Irish shamrock on St. Patrick's Day on March 17th. There is some doubt whether this is the real *Seamroge* or Shamrock by which St. Patrick illustrated the concept of the Holy Trinity to the then pagan Irish. High concentrations of oxalic acid and its salt are found in this plant and this is what gives it its sour taste. In folk medicine, oxalis juice is used to cure warts and to shine brass.



INDIAN HAWSSBEARD

Launea nudicaulis

This is one of the most charming wild flowers of the winter and has a nice fragrance too. It grows in parks, verges, ditches and in places with strong sunlight.

The Indian hawksbeard is one of the earliest to flower in November and goes on well into April all over north India to a height of 1000 m. Many similar composite plants are commonly known as hawksbeard, hawksbit, and hawkweed.

The yellow flowers are somewhat like those of the dandelion but smaller and less dense. Sometimes the plant flowers close to the ground at about 20 cm, but usually it grows to 40 cm or so. The leaves are pinnate with soft white teeth at the edges. The upper stalks are slender and hardly have any leaves. When the flower withers away its place is taken by a small, puff ball composed of seeds that float away in the breeze. When broken off the stalks have yellow latex.

This flower is known as Gobi in north India. The name hawksbeard may have come from the small, white feathery hair on the seed. These fluffy hairs act as a parachute and carry the seeds far and wide.



BUTTERCUP

Ranunculus repens

Ranunculaceae

There are several varieties of buttercups growing in the temperate Himalayas, from heights of 1500-5000 m. They can be annual or perennial. In the summer if you see a meadow blanketed with yellow or a stream with burnished yellow flowers along the edge, more likely than not, they will be buttercups. The golden yellow flowers are about 1-2 cm across, with a mass of stamens in the centre.

The petals shaped like shallow cups, shine as though they are varnished; this is because of light reflecting from a special layer of starch grains just below the surface. Children hold buttercups under one another's chins, to see if the chin takes on a yellow glow, and those whose chins shine are supposed to like butter.

The lower leaves are long stalked, palmate and deeply lobed with five to seven lobes, the upper leaves have shorter stalks. The whole plant is covered with soft hair.

The buttercup fruit is a rounded head of many compressed seeds or achene's'.

There are more than half a dozen species of buttercups to be found in the Himalayas and one in the plains.

Buttercups contain anemone and protoanemone and are somewhat poisonous and are avoided by grazing cattle. This is one of the reasons that they grow in such profusion. Cows are commonly named Buttercup in Britain, though they keep their distance from the plant when they are out at pasture!

This plant is used in fevers, asthma and gout. The celery-leaved crowfoot, another variety of the buttercup or *R. scdemptus*, is used in homeopathic medicines for skin.



COMMON PURSLANE

Portulaca oleracea

Portulacaceae

This small five-petalled, bright yellow flower is a far cry from the garden variety of the ornamental portulaca. The pinkish stem grows in a trailing fashion the ground.

The fleshy, wedge-shaped leaves are like those of succulent plants and grow opposite each other. At the top of the stem they are almost whorled. The little flowers are set in the bark of the branches.

This wild flower is found growing in most of India at lower altitudes in weedy places and in fields all through the summer and the rains. A warm and sunny location and a sandy soil is what it thrives on.

The common purslane is rich in vitamin C and has been used for scurvy, liver and spleen problems. The juice is effective, both internally and externally in the treatment of skin diseases. Purslane is used as a blood purifier, chiefly in homeopathy. The young tops have a very pleasant flavour and are used for salads, soups and vegetables.

Interestingly, the seeds of the plant are spread far and wide by ants. The little plant, which is easily grown from seed is a great favourite with rabbits. The fruit is an oval capsule containing many dark, minute seeds.

This plant is the well-known wild *Kulfa* or *Khursa* which is used to make a vegetable all over India. It is found in the Far East and Africa. In fact it was probably introduced from India into Europe in the Middle Ages.



ST. JOHN'S WORT

Hypericum cernuum

Hypericaceae

One can't help but notice this beautiful, yellow flower blooming in the hills. The yellow is actually a deep gold when the sun shines on it. The golden stamens grow in a multitude and if you brush against a flower, you collect a generous dusting of pollen on your clothes. The smooth stems are greenish-red and cylindrical.

St. John's Wort is a shrubby plant about 1-2 m. tall; old plants are more bushy and taller. The long oval leaves grow opposite each other and are dotted with red if you look closely.

This striking flower grows at heights of 800-2500 m. in the western Himalayas. It is in flower from April to September, though the odd flower can be seen almost throughout the year. There are several varieties found all over the Himalayas. *H. mysorense* grows in the Nilgiris and looks quite similar.

In Europe the flowers of *H. perforatum* come out on around the 24th of June, which is St. John's day and that is how the flower gets the name of the Common St. John's Wort. Here it is commonly known as *Basant*, because it is yellow. In Europe, in times gone by, people would gather the flower on St. John's eve and hang it on doors and windows as a safeguard against thunder and evil spirits. Some believed that on this night the soul had the power to leave the body and visit the spot from where it would be summoned on its last journey. The crushed flowers acquire a reddish hue, a symbol of blood, according to superstitious folklore.

Hypericine is a red pigment found in these flowers and causes an illness in animals that graze on the plant. The odd thing is that those animals that browse on the plant in the shade escape the ill-effects. The leaves have ethereal oil which is used as a solvent and anaesthetic. The flowers are used in an ointment to cure wounds. The plant is also called *Fuga daemonum*, as it was once considered a remedy for melancholia. Homeopathically, bruises and nerve injuries are treated with *Hypericum*.



WILD PEA OR THE YELLOW VETCHLING

Lathyrus aphaca

Papilionaceae

These are delicate and graceful wild flowers that bloom in the plains in the winter months, at the same time when their cousins, the sweet peas are blooming in cultivated gardens.

The little yellow flowers are solitary and are miniature versions of pea flowers. They grow on long climbing stems of about 15 -30 cms. The leaves of the wild pea are either oval with pointed tips or heart-shaped and grow opposite each other. Long tendrils curve out from between the leaves. The leaves and the stem are of a delicate grey-green colour. After the plant has finished flowering, small pods with seeds which are smaller than mustard seeds, appear on the plant. The seeds are actually minute peas.

The wild pea grows in cornfields, weedy places gardens and wastelands from December to early April. In the hills it grows to about 2500 m. from April to June. It is found in West Asia, North Africa and Europe as well.

The yellow vetchling likes a chalky, loamy soil.

The wild pea is used as a fodder plant and is known as *patteil* in Hindi. Sparrows and other seed-eating birds are fond of eating the seeds when ripe.



SOW THISTLE

Sonchus oleraceus

Compositae

At first glance the sow-thistle looks rather thistle-like with its dense, yellow flower heads which are about 1.5 cm across, and its large leaves armed with small, spiky thorns. The lower leaves clasp the stem at the base and are large and sagittate with noticeable veins. The whole plant is covered with short hairs and if you break off a hollow stem, a milky juice comes out.

When the flower dies, a fluffy rounded bunch of seed heads takes its place. The sow-thistle is 60-100 cm tall and the flower opens only in sunny weather.

The sow-thistle is a wild flower of the winter and spring and is found all over north India to a height of 2000 m. In the plains it flowers in the cold season and in the hills it flowers in the summer. It flourishes in vegetable fields, gardens, roadside verges and wasteland. It prefers nitrogenous soil. The sow-thistle is found all over the temperate areas of Europe and Asia.

During the Middle Ages it was eaten as a vegetable in Europe. However, they may not have thought too highly of it, since they called it sow-thistle. Perhaps pigs were fed on it and that is how it got its name.

The French feed this plant to edible snails, whilst in Greece and elsewhere it is eaten as a winter salad. The first half of the scientific name derives from *Sonchus*, the ancient Greek name for this plant.

In Hindi this plant is known as *Pili Dhudhi*.



INDIAN COUNTRY MALLOW

Abutilon indicum

Malvaceae

The Malvaceae family includes plants like the hibiscus, the hollyhock and even the cotton plant. From a distance the country mallow looks very much like a small hollyhock with its slightly hairy, heart-shaped leaves.

The flowers are deep golden-yellow. The plant stands about 1-3 m. high and blooms most prolifically during the monsoons up to November, though, some blooms are found the year around. The plant grows almost all over the warmer parts of India to a height of about 500 m.

The dry seed pod of the flower is a many-angled capsule which bursts when the seed is ripe.

Country people collect the stems for a fibre to make ropes. The roots are used in an infusion to cool the system. The seeds are known as *Balbij*, and have laxative and soothing properties and are used for herbal medicines for the digestive system.

The commonly used Hindi name for this mallow is *Kanghi* or *Aphra*.

*Full many a flower is born
to blush unseen And waste its sweetness
on the desert air.*

- Thomas Gray



COMMON BARBERRY

Berberis lyceum

Berberidaceae

This thorny bush with its pale brown bark and racemes of small yellow flowers is one of the best known bushes of the north-western temperate Himalayas. It flowers in May and June adding splashes of colour to the hillsides. Many different varieties of berberis grow in the hills from 1500-3000 m. and are separated from each other by small botanical differences.

The six-petalled yellow flowers grow in small bunches. The ovate leaves grow in clusters with three spines at the base. In August and September the barberry is covered with oblong, scarlet berries which are edible and are loved by shepherds and school boys who call the fruit *Chatroa*. Another name for the berry is *Kashmal*. The fruit is rich in vitamin C and used in a dried form when food is scarce. Jams and jellies can also be made from the berries.

B. aristata or the Indian Barberry commonly known as *Darhald* or *Rasaut* is found widely over the Himalayas at a height of 1200-2500 m. This variety of the barberry is also found in the Nilgiris. In the summer this bush is covered with berries that are blue-black and covered with a bloom. The root and the stems yield a yellow dye which is used for wool and leather. An extract from the plant is used for diseases of the skin, eye and liver.

Sometimes reddish spots are seen on the leaves of barberries; these are a stage in the life of the parasitic fungus that produces 'rust' in wheat and grasses. The barberry acts as an intermediate host for the rust parasite and is not liked by farmers for this reason.



DEVIL'S FIG

Argemone mexicana

Papaveraceae

The devil's fig is another wild flower that has its origin in Mexico but is now found all over India. The plant stands anywhere from 1/2-1 m. tall. The thistle-like leaves are greyish-green and thickly veined with white and thorny around the outside edges.

The poppy-like flowers are a bright yellow with six petals. The seed pod is egg-shaped, about 2 cm or so long and has four to six compartments filled with black seeds. These striking yellow flowers can be seen the year around, but are at their best from March to early winter. One of the reasons that the devil's fig does so well in any terrain is that the seeds set easily and the plants are well protected from grazing animals by being spiny and containing a bitter tasting yellow latex.

Gerard, the herbalist, wrote that the name devil's fig came from the fruit which, 'doth much resemble a figge in shape and bignesse', and goes on to add that if one were stuck in someone's throat, 'doubtless it would send him packing either to heaven or to hell'.

Another name for this flower is the golden thistle of Peru but this is a glaring geographical and botanical error as it does not come from Peru and is far removed from the thistle family. In Hindi this plant is known as *Shailkanta*.

The juice of the plant is used in diseases of the eye. In Mexico, oil from the seeds is used in soap-making and for burning for light. It is also used as an adulterant in mustard oil in India and is known to cause severe ailments, even death, among unsuspecting users.



WILD FENUGREEK

Trigonella corniculata

Papilionaceae

The wild fenugreek is widespread over the plains of north India and flowers in the winter. It grows in the western Himalayas to about 3000 m. and flowers in the summer.

The plant is about 30-40 cm tall. The leaves are made up of three leaflets which are toothed along the edges. There are several stems and two or more yellow flowers grow at the end of the stalk in close racemes. The pod of the flower is shaped like a half moon and when seen from a distance, a group of pods resemble several little green half moons bunched together. This plant is found in fields, lawns and waste places. It seems to be a favourite with ladybirds which can be seen upon it in season.

Jungli methi, as it is commonly known, is eaten in times of scarcity. Another close cousin *T. incisa* also grows wild at the same time; it tastes better and is known as *Chanihari*. One often comes across people gathering the herb for cooking. The cultivated fenugreek is called *T. foenum-graecum* and grows in the winter too.



COMMON MELILOT

Melilotus indica

Papilionaceae

This flower gets its name from the Greek *meli*, for honey, and *lotus*. Honey bees are frequently found on the flowers for their high pollen content. The common melilot grows all over the temperate regions of the Old World. It flowers in the winter in moist waste places, especially in cultivated fields and sometimes in flower pots.

The plant is about 20-45 cm tall and has leaves that are made up of three ovate leaflets with small teeth around the top edges. The yellow flowers are tiny and grow densely in spike-like racemes.

The Hindi name for this plant is *Banmethi* or *Senji*. In some parts of north India it is cultivated as fodder.



DANDELION

Taraxacum officinale

Compositae

Dandelions are found in the temperate hill regions of both north and south India. The name *Taraxacum* is from the Greek *tarasso*, to stir up and refers to its medicinal qualities. The dandelion grows all over the temperate parts of Asia and Europe. It is found in North America too and is a very variable plant that botanists divide into hundreds of similar 'microspecies'.

Almost everyone is familiar with the bright yellow flowers of the dandelion. The narrow and numerous ray-shaped petals fan out into a circle. The stems are leafless and hollow with latex which leaves brown stains on the skin. The narrowly-oblong leaves with jagged edges form a rosette at the base of the plant.

Dandelions grow in fields, verges and lawns, in short, anywhere and everywhere. The seed heads form a globe of thistle-down, which, if blown away in a puff is meant to grant a wish. The seed heads are known as Fairy Clocks by children. Each seed is carried away by its own little parachute.

The plant contains an alkaloid which is slightly poisonous. The young leaves contain vitamin C and are used in a salad. A coffee is made out of the powdered, dry roots. An infusion of dandelion leaves is good for lightening the skin. In America the Apache Indians prized it as a food.

The word, dandelion comes from the French, *dent de lion*, or lion's teeth. Some say that the jagged leaves are responsible for the name, while others think that the yellow flowers are like the golden teeth of the heraldic lion. In every European country the plant has a similar name. The roots and tender leaves are eaten as a vegetable and the flowers and leaves made into a wine. In India it is called *Dalai* or *Barau*.



MARSH MARIGOLD

Caltha palustris

Ranunculaceae

The marsh marigold is also known as the kingcup. The name kingcup is derived from the Greek *calathos*, a cup, referring to the shape of the flower. Marsh marigolds are seen very commonly near brooks, streams, damp meadows and marshy places in the Himalayas.

They grow between heights of 2400-4000 m. Meadows and sides of streams are covered with swathes of yellow which are actually masses of kingcups growing together. The richly golden-yellow flower has five to eight highly burnished petals; strictly-speaking these are not petals but enlarged sepals. The centre of the cup is crowded with stamens and carpels. The flowers are about 2-3 cm across and can be white sometimes. The stem is hollow and the broadly heart-shaped, glossy leaves have toothed edges. The leaves increase in size when the plant has finished flowering. These flowers are at their best from May to late August.

Marsh marigolds have seeds that float on the surface of the water and are spread in this way. The flowers are a great favourite with bees, for they are rich in nectar. The leaves are sometimes used in salads for their peppery taste, but are very slightly poisonous on account of their proto-anemonine content. The plant is sometimes dried and used as a tobacco substitute for those trying to give up smoking. The tight buds are are pickled and used as capers.

*And winking Mary-buds begin
To open their golden eyes.*

- Cymbeline



GREAT MULLEIN OR AARON'S ROD

Verbascum thapsus

Scrophulariaceae

From a distance the mullein looks like a yellow torch. It grows in the Himalayas from Kashmir to Sikkim and stands erect, about 1-2 m. high, with the torches about 10-30 cm long. The large, oblong leaves are broader near the apex, a silvery-grey and have a distinct woolly texture on both sides.

The five-petalled, yellow flowers grow along the spike, and each flower is about 2 cm across. The flowers are delicately scented and leave a coating of pollen on the nose when you bend down to smell them.

Look for the mullein in sunny places, on porous stony soils, rich in nitrogen. It is found all along the northern hills at heights of 1800-4000 m. and flowers from May to September.

Folklore recommends its juice for warts and lining of shoes with its woolly leaves in the autumn and winter to keep the feet warm. In the days gone by the woolly hairs from the leaves were twisted into wicks and the plant

came to be known as Hag's Taper. The Romans called it *candelaria*, for they dipped the long, dry stalk in fat and used it as a funeral torch. Mullein tea is made from the leaves for pulmonary complaints in humans as well as cattle.

In Hindi, the Mullein is known as *Ban-tamakhu* or *Gidar-tamakhu* or even *Phulla*. The dried leaves are rolled into cigarettes and smoked to give relief from asthmatic attacks and spasmodic coughs. The leaves can also be chopped into compresses for local application to ease neuralgic pains. The seeds are narcotic. An essential oil made from the roots is used for frost bite and bruises.



COMMON BROOM

Sarthothamnus scoparius

Scrophulariaceae

This shrub is very easy to recognise with its cloud of pea-like, bright yellow flowers. The 15-25 mm long flowers grow in ones or twos on small stalks; they have a vertical standard petal two wings and a keel. The common broom grows up to a height of about a metre and a half and old plants can even reach five metres.

When the longish seed pod is ripe, it catapults its many seeds far away with a crackling noise. Sometimes in the late summer, while sitting in a quiet grove where the broom grows, you can hear this pop-popping.

The small leaves are made up of three leaflets. The five-sided branches are twiggy. The lower leaves drop off and only the upper shoots have simple leaves, giving the plant a near leafless appearance.

The broom flowers in the summer in the Himalayan hills at a height of 1500-3500m. The Nilgiris have a lot of broom as well. It was introduced by the British here and in the northern hills. The heartlands of central Europe are its original home.

Country people make brooms out of the twigs. The plant contains an alkaloid, especially in the upper branch tips. The drug is used for heart and circulatory problems.

An arrested fountain of molten gold

- Unknown



GLORY LILY

Gloriosa superba

Lilaceae

This flamboyant yellow and red flower is a climbing lily of which there are very few in the world. It grows wild in the Siwalik hills and the Western Ghats at a height of about 500-1600 m.

The glory lily grows at its best from June to September, though a few can be found in the cooler months as well.

The leaves are oval with pointed tips and grow alternately. The flower's large claw-like petals are bright yellow and red, with wavy margins. The stamens, green at first, then red, are tipped with yellow anthers.

The plant climbs by 'finger-tip' tendrils at the tips of the leaves. Old plants can go to about 3 m. or more. The lily grows from a rhizome, which is a sort of thickened underground stem. These flowers can grow from seed but take time to flower this way. Tiger's claw is another apt name that is used for this flower.

Glory lilies are cultivated in north India for a drug used for the heart. An extract from the plant is used to expel worms. The juice from the plant is also used to kill lice in the hair. The *Gloriosa superba* is a favourite with gardeners and is not difficult to spot in the wild, especially in the ghats. *G. rothschildiana*, which comes from tropical Africa has also been planted in various gardens. In the latter, the blossoms are red and yellow and then change to a deep red. In Hindi, the flower is known as *Kalihari*.

There is a folk tale about a miser who buried his riches deep in the ground. King Solomon asked for the riches when he was building his temple in Jerusalem, but the miser refused. Soon after that, the miser's daughter fell sick and he offered his riches to anyone who could cure her. As he went to collect them, he broke his leg and died. The Glory lily sprang up where he lay buried. On the plant lived a praying mantis, who was the spirit of the old miser.



YELLOW SAGE

Lantana camara

Verbenaceae

This is one of our most colourful and widespread wild flowers. It grows in cultivated areas, along ditches, waste ground and hedges all over India. Lantana bushes can be found growing in the hills to a height of 1500 m. When a forest is denuded and not replanted, lantana takes a firm hold of the soil and does not allow other kinds of vegetation to flourish easily.

This is a rambling, rough, hairy, evergreen shrub with ovate, toothed leaves which give out a sharp smell when crushed. Its tiny orange and yellow or pink and yellow flowers make up a rounded flower head. Each flower has a corolla tube of about 1 cm. which opens out into four spreading lobes. Lantana flowers can be white or pale purple as well.

The fruits of the lantana grow in a rounded cluster; when they ripen, they turn purple and soft and are greatly loved by birds and children. Butterflies flock to the lantana for nectar. In the monsoon when the bush is fully in flower, one can see plenty of butterflies hovering around it. Some flowers are found on the lantana the year around.

The lantana is originally from tropical America but has naturalised itself so well in India that in some places it is considered somewhat of a pest. The bark is astringent and used to treat eruptions. Boiled leaves are used for swelling and pain. In some areas baskets are woven from the stems by the country people. Smoke from burning lantana leaves chases away mosquitoes. Lantana based pesticides have been recently introduced.

L. indica has white flowers. In Hindi the bush is known as *Meva ka Ped* for the fruit, or *Tulsidal* for its aromatic leaves.

GLOSSARY

- achene a small *dry* one-seeded *fruit that is usually one of many in a fruiting head*
- anther the part of the stamen which contains the *pollen*
- axil the *angle between the upper side of the leaf and supporting branch or stem*
- berry a fleshy fruit with a *number of seeds or pips*
- bulb an *oval or round underground stem consisting of overlapping layers of fleshy scales*
- calyx a *collective name for the outer section of the flower formed by leaf-like parts known as sepals which are usually green*
- capsule a *dry, many sectioned fruit which very often splits open to release numerous seeds*
- catkin a *pendulous, tassel-like, slender spike of unisexual flowers*
- cordate (of leaves) *nearly heart-shaped*
- corolla a *collective term for all the petals of a flower*
- crenate (of leaves) *edged with shallow, rounded indentations*
- dentate (of leaves) *with a sharply toothed margin* digitate (of leaves) *having leaflets that are arranged like the fingers of a hand*
- elliptical *tapering at both ends with the broadest part in the middle*
- keel sharp *central ridge on an organ resembling the keel of a boat*. The lower petal of a flower
- lanceolate (of leaves) *lance-shaped, tapering to a pointed apex*
- latex *milky sap*
- linear long and narrow with *parallel sides*
- lobate (of leaves) *divided into lobes*
- lobe a part of an organ, *deeply divided from the rest of the organ but not separated from it*
- nectar a *sugary liquid which attracts insects*
- nodes a point on the stem from which one or more (leaves or buds) arise
- oblong *longer than broad, with margins parallel for most of their length*
- ovate *egg-shaped, with the broadest part towards the base*
- perennial *living for more than two years*
- pinnate a *regular arrangement of leaflets in two rows on either side of the stalk*
- pinnatifid cut to *about half-way between margin and mid-rib*
- pollen the spores of *seed-plants containing the male sex cells*
- raceme an *elongate inflorescence with stalked flowers with the youngest at the apex*
- rhizome a *swollen underground stem, from which flowering stems arise*
- rosette an *arrangement of leaves radiating from a crown or centre, often spreading over the ground*
- runner a *long slender stem with leaves springing from its nodes*
- sepal a *leaf-like segment of the calyx, making up the outer whorl of the flower*
- serrate *with a toothed margin, like a saw*
- spadix on *inflorescence on a single axis surrounded by a type of bract known as a spathe*
- spathe a *large sheathing leaf which envelopes the inflorescence*
- spike a *slender duster bearing a number of flowers without footstalks*
- spoon-shaped *with the broadest part at the tip and tapering to the base*
- stamen the *male organ of the flower which bears the pollen*
- standard the *upper petal of the flowers of most of leguminous, as in pea flowers*
- stigma the *part of the female organ which receives the pollen*
- stipule *small leaves, always in pairs, at the base of the leaf-stalk*
- tap root the *main descending root*
- trifid *split into three*
- trifoliate with *three leaflets*
- tuber a *swollen portion of a stem or root, usually below the ground*
- whorl an *arrangement of leaves or flowers arising from the same level of the stem*