
THE CULTURE OF FLOWERING PLANTS IN THE LOW AND MID COUNTRY OF CEYLON *

Cultural Notes on some Annuals and Perennials
suitable for the Low and Mid Country

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ALYSSUM

CRUCIFERAE

Alyssum maritimum

An attractive annual with very small leaves. Horticultural varieties like *A. maritimum* var. *minimum* reach a height of only 2 inches. There are varieties with white, violet and lilac flowers. Alyssum is an excellent annual for edging borders and for rock gardens. Propagated by seeds, which are very minute, and are best sown *in situ*. Alyssum is early-flowering, and takes about 4 or 5 weeks to flower.

ANCHUSA

BORAGINACEAE

Anchusa italica

A very showy annual, growing to a height of about 3 ft. Flowers are bright blue resembling Forget-me-nots, and are borne on lateral branches arising from the main stem. Anchusa is suitable for both low and medium elevations, and is very showy when grown in borders. It is propagated by seeds, and takes about 2-2½ months to flower.

ANGELONIA

SCROPHULARIACEAE

Angelonia salicariaefolia

A perennial, growing to a height of 2 or 3 ft. with toothed, lanceolate leaves. The flowers are bluish-purple and scented. Variety *alba* has white flowers. Angelonia is more suitable for borders. Propagation is by cuttings or division. It thrives well in any type of soil, and needs very little attention.

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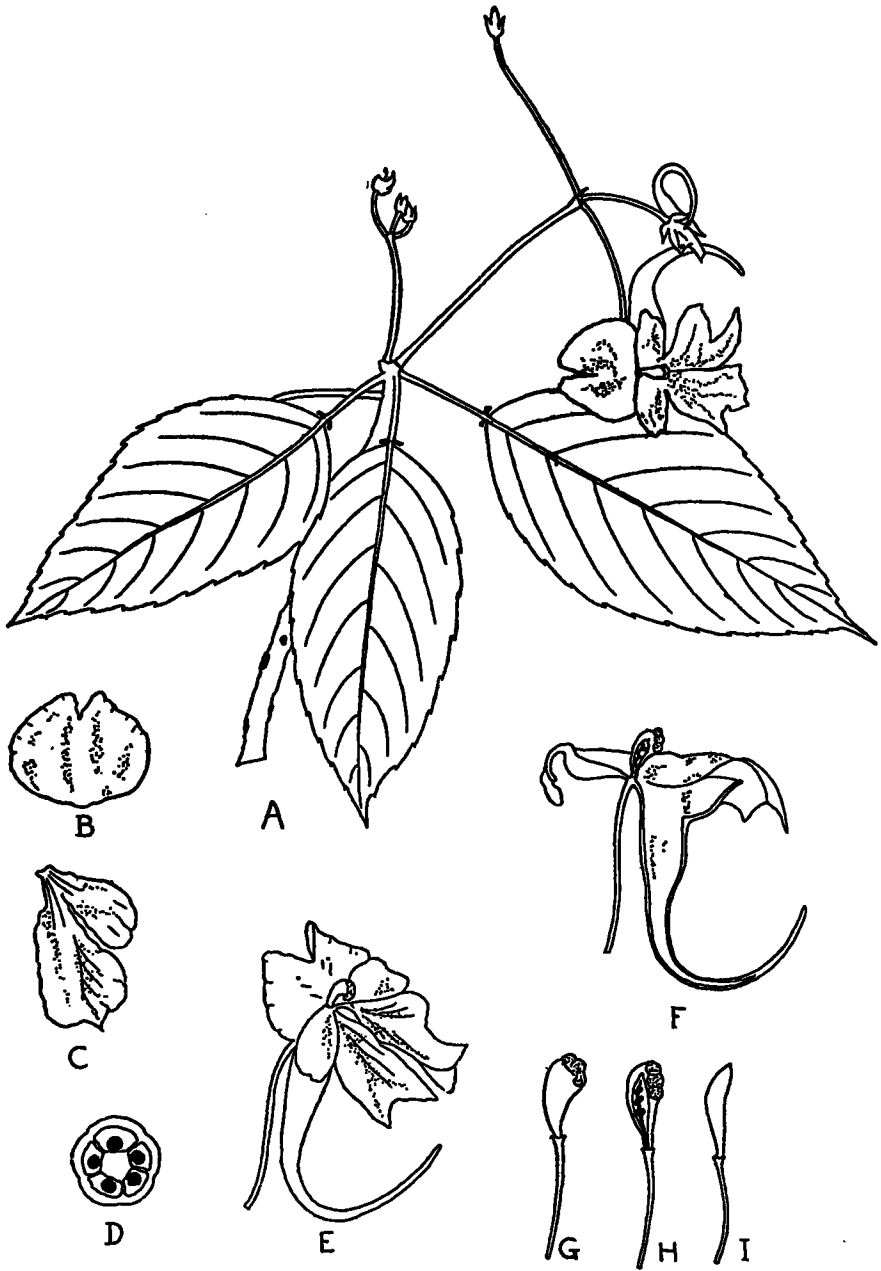


Fig. 1.—*Impatiens Hookeriana*. A. Portion of a branch with flower B. Standard, C. Wings, D. TS of ovary, E. Flower, F. LS of flower, G. Androecium and gynoecium, H. LS of androecium and gynoecium, I. Capsule.

ASTER (CHINA)

COMPOSITAE

Callistephus chinensis

A very popular annual, native of China and Japan. The leaves are deeply lobed, hairy and ovate. In the flower there is a central disc surrounded by ray petals. There are several varieties, whose colours range from white to shades of violet, purple, blue and rose, but there are no yellow flowers. Asters grow from 6 inches up to 2 ft. Propagation is by seeds, and plants flower in about 3 months. China Asters require a rich, loamy soil incorporated with cattle manure and leaf mould. Application of a fertilizer mixture or a liquid manure is recommended.

BALSAM

GERANIACEAE

Impatiens various spp.

The Balsams comprise a number of species, mostly annual and some perennial. The commonest species are *I. balsamina* and *I. sultani*. The former is an annual, while the latter though a perennial, should be treated as an annual when grown for decorative purposes. Both species have a number of horticultural varieties which grow to a height of 2-2½ ft. *I. sultani* is much branched, and is suitable for the annual or perennial border. Both species yield a number of varieties whose colours range from white to pink, rose, red, purple and orange. Propagation is by seeds. In addition, varieties of *I. sultani* may be propagated from cuttings. Balsams are early-flowering, and take only a few weeks to flower.

BROWALLIA

SOLANACEAE

Browallia spp.

Mostly tender blue-flowered annuals, whose native habitat is South America. *B. americana* has hairy leaves, and reaches a height of about 12 inches. The flowers are either blue or purple. *B. grandiflora* has smooth leaves, and light blue flowers, and reaches a height of about 2-2½ ft. *Browallia* species are suitable for beds and borders. The dwarf species are suitable for rock gardens. Propagation is by seeds, and plants thrive well in poor soils. *Browallia* varieties are fast growing and early flowering.

CALENDULA

COMPOSITAE

Calendula officinalis

A favourite annual in Up Country gardens, but suitable for medium elevations. The petals of flowers of this species are used for flavouring purposes. *Calendula* plants grow to a height of 1-2 ft. The leaves

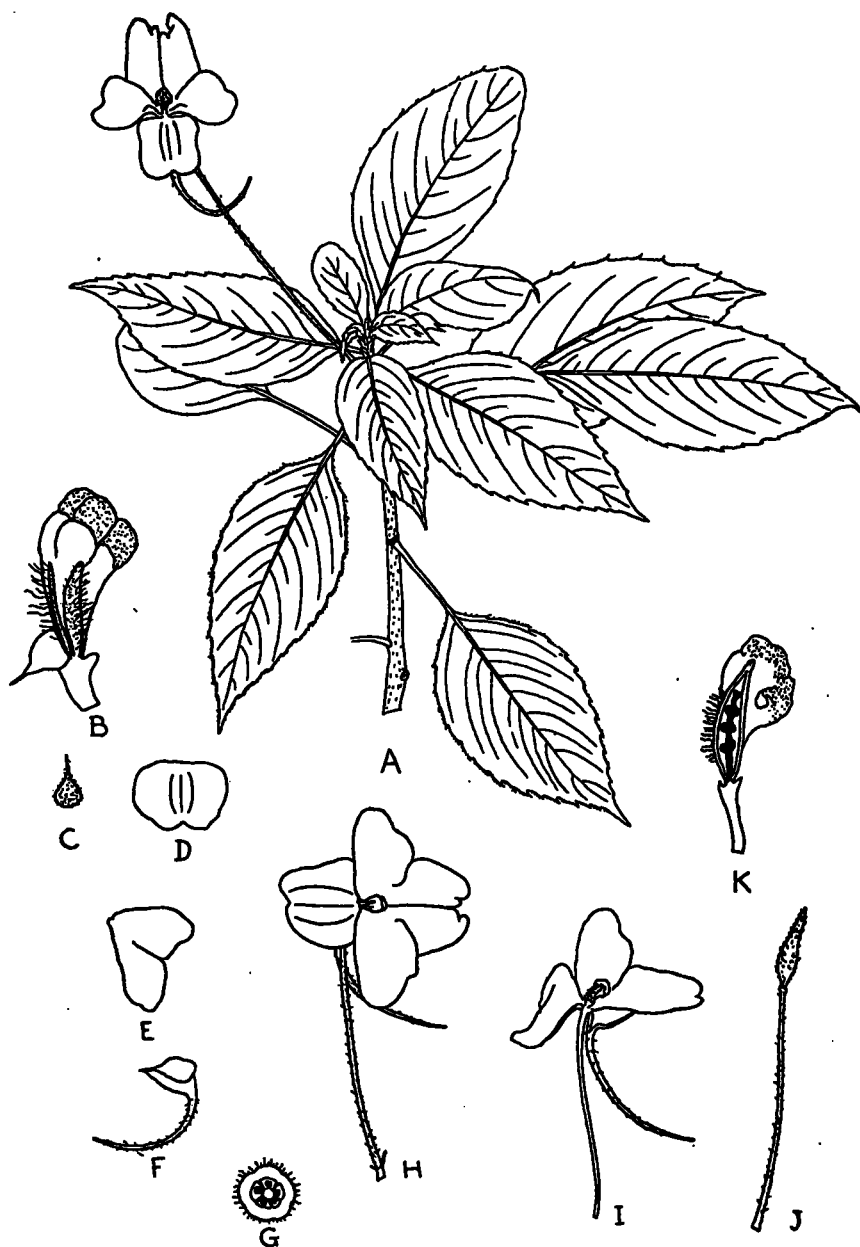


Fig. 2.—*Impatiens Henslowiana*. A. Portion of a branch with flower, B. Androecium and gynoecium, C. Sepal, D. Standard, E. Wings, F. lip and spur, G. TS ovary, H. Flower, I. LS of flower, J. Capsule, K. LS Androecium and gynoecium.

are hairy, and flowers are yellow or deep orange. The petals of flowers close in the evening. Propagation is by seeds, and they may be sown in boxes or *in situ*. *Calendula* requires a loamy soil enriched with cattle manure and leaf mould. This species is suitable for beds, borders and rock gardens.

CANDYTUFT

CRUCIFERAE

Iberis umbellata

A very showy annual, growing to a height of 9-15 inches. The leaves are lance-shaped, and the flowers are in umbels. Each flower has 4 petals of which two are longer. There are varieties with pink, red, white and purple flowers. Candytuft is more suitable for mid-elevations for edging borders, and for rock gardens. Cultivation is easy, and it thrives well in rich garden soil in exposed situations. The seeds are sown in boxes, and later the seedlings are transplanted 6 inches apart. Candytuft takes about 2 months to flower.

CANNA

CANNACEAE

Canna indica

The most important and most popular bedding perennial in tropical countries. There are a large number of varieties whose colours range from white, yellow, orange to pink and deep red. The culture of Cannas is simple and easy. Cannas require a rich, moist soil. The beds should be well dug, and the top soil should be incorporated with cattle manure. The size of the flowers depends on the amount of organic manure used. Cannas are propagated by the division of the root-stock (rhizome). The rhizomes are planted 15 inches apart. Cannas should be regularly watered during the dry season. Each rhizome produces a number of new shoots, and thus, clumps of plants are formed. Shoots should be cut, and removed as soon as they have finished flowering. A Canna bed should be replanted every 6 months to obtain better flowers. Cannas take about 2-2½ months to flower after planting. There are practically no pests and diseases in Cannas except leaf-eating insects, which may be controlled by lead arsenate spray. Beetles and caterpillars sometimes damage rhizomes, and they should be destroyed by watering around the plants with "INTOX 8" or "ALDRIN".

CHRYSANTHEMUM

COMPOSITAE

Chrysanthemum spp.

A genus, consisting of both annual and perennial species, most of which are native to Asia. The leaves in the ordinary garden *Chrysanthemum* are toothed, and plants reach a height of 2 to 3 ft.

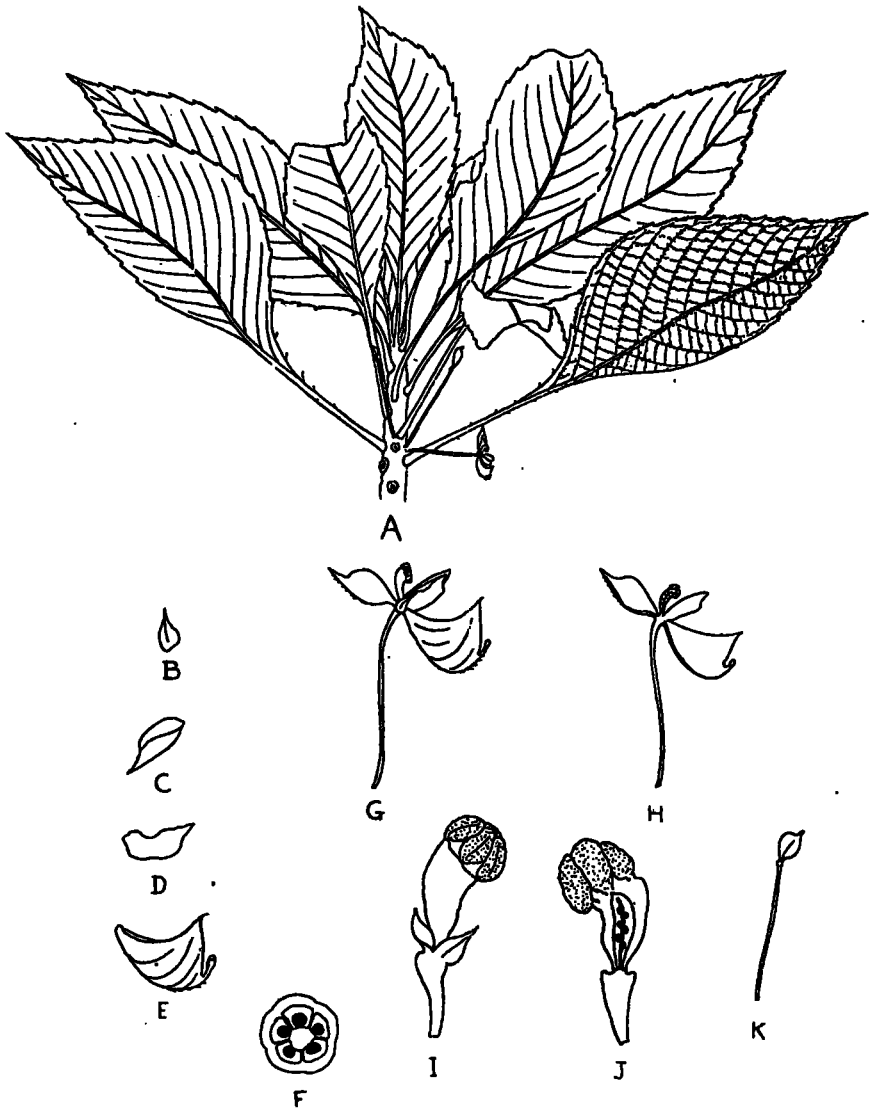


Fig. 3.—*Impatiens Macrophylla*. A. Portion of a branch with flower, B. Sepal, C. Standard, D. Wings, E. lips and spur, F. TS Ovary, G. Flower, H. LS flower, I. Androecium and gynoecium, J. LS Androecium and gynoecium, 10. K. Capsule.

The flowers are borne on heads. The florists' Chrysanthemums are derived from *C. morifolium* and *C. indicum*. The horticultural varieties are obtainable in a number of colours in double and single forms. Unfortunately, the large flowered varieties are not suitable for tropical climates. Only the small-flowered white, yellow and copper-coloured varieties are grown in low and mid elevations.

The garden Chrysanthemums are propagated by division of the root-stock or cuttings. Chrysanthemums require a rich soil which has been well manured with cattle manure and leaf mould. They should be planted in exposed situations. Chrysanthemums are suitable for beds and borders. When the plants are firmly established, the terminal buds should be removed to encourage the formation of lateral branches. Superfluous flower buds may be removed to improve the quality of flowers. Chrysanthemums come into flower in about 2 or 3 months. In addition to outdoor cultivation, Chrysanthemums are suitable for pot culture.

COCK'S-COMB

AMARANTACEAE

Celosia spp.

Very popular annuals in the low and mid-elevations. There are two species which are commonly cultivated, *C. cristata* and *C. plumosa*. *C. cristata* (Cock's-comb) is about 9-12 inches high. The flower spike is crested and resembles a Cock's-comb. Cock's-comb is available in a number of colours like purple, red, crimson and yellow. The flower spikes of *C. plumosa* are feathery, and are crimson, red or yellow.

Propagation is by seeds, which are very small. They are sown in boxes, and transplanted in beds about 12 inches apart. Both species thrive well in ordinary garden soil, and need only very little attention. Cock's-comb flowers in about 2 months.

COREOPSIS

COMPOSITAE

Coreopsis spp.

Popular annuals and perennials in gardens. *C. grandiflora* is a perennial species grown in low and mid-elevations. It reaches a height of 1-2 ft., and has lance-shaped leaves. The flowers are bright yellow. A number of species are annuals, some of which are often cultivated. *C. coronata* has orange flowers with a crimson zone. *C. tinctoria* is also a common garden annual, and has golden flowers with a purple centre. This purple centre is encircled by a crimson zone. This species has a number of forms with numerous colour variations.

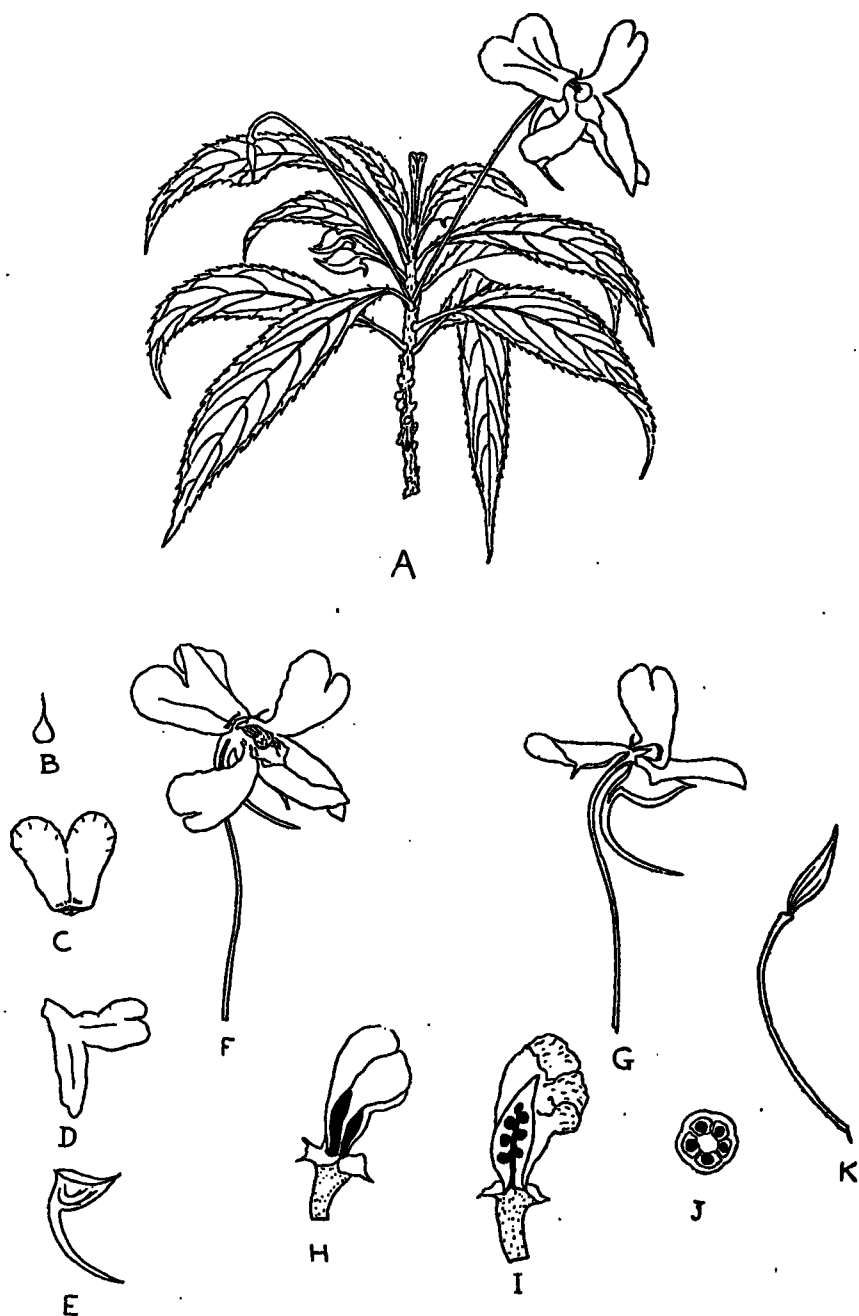


Fig. 4.—*Impatiens cuspidata*. var. *bipartita*. A. Portion of branch with flower, B. Sepal, C. Standard, D. Wings, E. Lip and spur, F. Flower, G. L. S. of flower, H. Androecium and gynoecium, I. L. S. Androecium and gynoecium, J. T. S. ovary, 10. K. Capsule.

Coreopsis is suitable for beds, borders and rock gardens. The perennial *C. grandiflora* is propagated by division while the annual varieties are propagated by seeds. The cultivation of Coreopsis is simple, and it can be grown in any kind of garden soil. Coreopsis is suitable for dry areas.

COSMOS

COMPOSITAE

Cosmos spp.

Cosmos or Mexican Aster is a popular annual grown in low and mid-elevations. There are three species of Cosmos, *C. bipinnatus*, *C. sulphureus*, and *C. diversifolius*. In *C. bipinnatus*, the leaves are deeply cut, and feathery. The flowers are pink, white or crimson in colour. It is an annual, and reaches a height of about 4 ft. *C. sulphureus* grows to a height of about 4 ft., and has leaves about 1 ft. long, and 3-pinnately cut. The flowers are golden-yellow. *C. diversifolius* is a tall perennial, usually treated as an annual in cultivation. It has pinnate leaves, and the flowers are dark purple or crimson in colour.

Propagation is by seeds. Cosmos is more suitable for the back of a border, and its culture is very easy. The soil should be sandy, and it is not advisable to manure the plants heavily. Too much manure may produce more foliage and less flowers. When the plants are about 2 ft. high, the terminal buds should be removed to make the plants bushy.

DAHLIA

COMPOSITAE

Dahlia spp.

A tuberous-rooted perennial genus, commonly cultivated for its magnificent flowers. The genus is related to the common weed found in Ceylon, *Bidens chinensis*. The horticultural varieties have arisen from two species, namely *D. rosea* and *D. juarezii*. The Cactus Dahlia is derived from *D. juarezii*. The original species are native of Mexico. All the old types of Dahlia like Single, Pompon, Fancy and Show types have arisen from *D. rosea*.

The cultivated Dahlia are generally grouped as follows:—

- (1) *Decorative Dahlia*. The rays of flowers are variable.
- (2) *Cactus Single Dahlia*. The flowers are single, and the margins of rays are recurved.
- (3) *Cactus Double Dahlia*. Double flowered, rays with recurved margins.

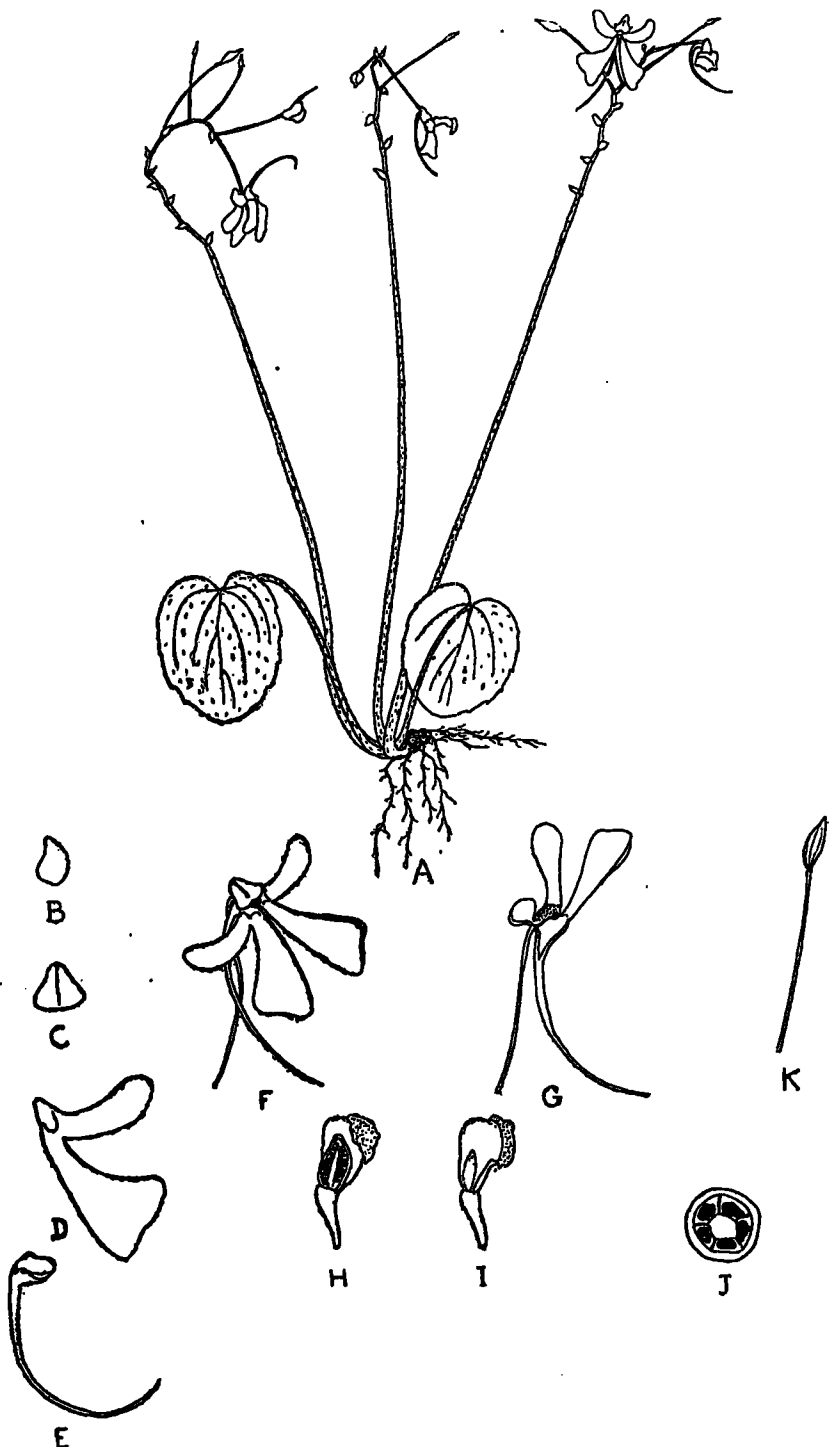


Fig. 5.—*Impatiens acaulis*. A. Whole plant, B. Sepal, X 3. C. Standard, D. Wings, E. lip and spur, F. Flower, G. LS flower, H. LS Androecium and gynoecium, I. Androecium and gynoecium, J. TS ovary, K. Capsule.

- (4) *Fancy Dahlia*. The flower has two or more colours, striped or with edges of a lighter colour.
- (5) *Show Dahlia*. The rays are cupped, the colours single or the edges of the rays darker.
- (6) *The Pompon Dahlia*. Small double-flowered Dahlia with cupped rays.
- (7) *Single Dahlia*. Flowers single and rays are flat.
- (8) *Peony-flowered Dahlia*. The rays are variable in form.
- (9) *The Collarette Dahlia*. The rays are variable in form.
- (10) *Dwarf Dahlia*. Plants are dwarf.

Cultivation of Dahlia. Propagation of Dahlia is by division of roots or cuttings. The most common and easiest method is by division of roots. All Dahlia varieties produce tuberous roots. These roots store large quantities of food material. There are no young shoots (eyes) on the tubers, but they are found on the crown to which all the tuberous roots are attached. To obtain best results, Dahlia tubers should be imported every year.

Dahlias require a very rich soil. They can be grown in ordinary garden soil provided the soil is enriched with farmyard manure and leaf mould. The cattle manure should be well forked into the soil. In addition to organic manure, the following mixture may be applied to the soil.

- 2 parts Sulphate of ammonia.
- 2 parts Superphosphate.
- 1 part Sulphate of potash.

The tubers are best planted about 15 inches apart. However, taller varieties need further spacing. Tubers should not be planted too close to each other. It is best to "start" the tubers before planting out in beds. When the tubers are received, they should be placed in a sand bed and watered. After a few days, the 'eyes' will put out new shoots. During planting, holes are made about 15 inches apart, and the tubers are planted in such a way that the crowns of the tubers are just below the surface of the soil. Dahlia plants grow very rapidly. The soil around the plants should be well tilled. Deep tillage is very essential during the growing period. Forking should be stopped as soon as flower buds appear. Watering Dahlia plants should be done very carefully. Before watering, the soil should be examined to check whether the soil is moist. Excessive watering is injurious to plants. It is best to water them well when the soil is dry.

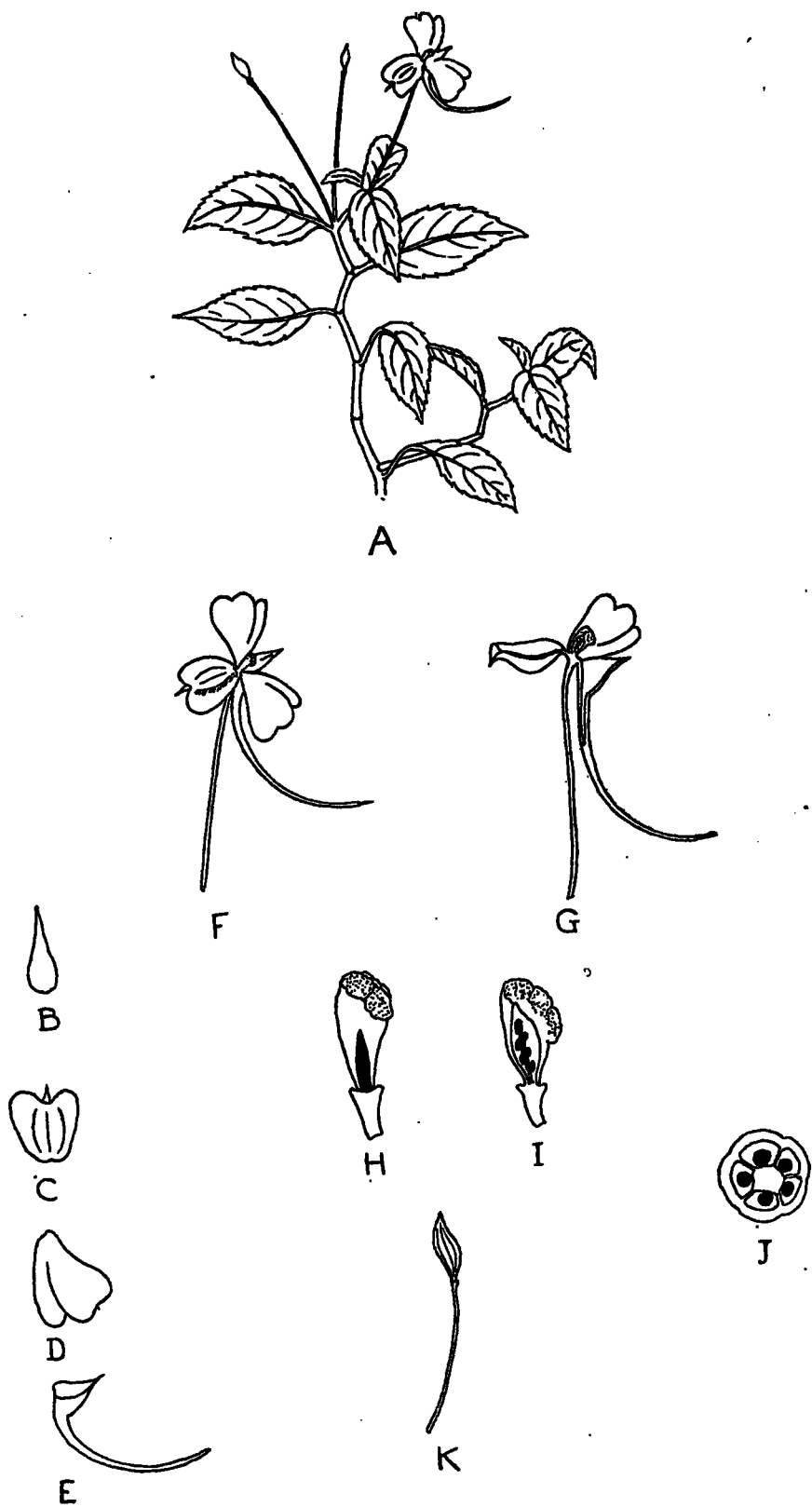


Fig. 6.—*Impatiens leptopoda*. A. Portion of a branch, B. Sepal, C. Standard, D. Wings, E. Lip and spur, F. Flower, G. LS flower, H. Androecium and gynoecium, I. LS Androecium and gynoecium, J. TS Ovary, K. Capsule.

A few days after the tubers are buried in beds, young shoots grow from the crown of the tubers. All these shoots should not be allowed to grow into adult plants. The weak shoots should be removed leaving a single strong shoot. By this practice, the food material is diverted to a single shoot. When this shoot has produced 3 or 4 pairs of leaves, the apical bud of this shoot should be pinched off to encourage the production of lateral branches from the base of the stem. Branches produced from the base of the main stem produce larger flowers. Most Dahlia varieties need support when in flower: this particularly applies to plants which produce very large heads of flowers. Staking the plants should be neatly done, as poor staking is very unsightly. Dahlia takes about 1½-2 months to flower in the low and mid-elevations of Ceylon.

After flowering, the plants should be allowed to die back. Watering should be cut down to the minimum. When the plants are dead, the tubers should be lifted, and they should be allowed to dry up in a shady place. It is best to store the tubers in a box or barrel, covering the tubers with some saw dust or very dry sand. However, the quality of the flowers tends to degenerate in successive generations.

Pests and diseases in Dahlia. Common pests are caterpillars, greenfly and other aphids, red spider and beetle larvae. Caterpillars and other leaf-eating insects feed on leaves, flower buds and flowers. Greenfly and other aphids attack the young shoots. Red spider is a troublesome pest during dry weather: it lives on the lower surface of leaves. Dahlia tubers are liable to be attacked by beetle larvae. The above pests are destroyed by using the methods outlined in the section dealing with pests and diseases.

Unlike pests, diseases are not very common in Dahlia. In wet weather, diseases like black spot may appear. Such diseases are controlled by using copper fungicides.

DIANTHUS (PINK)

CARYOPHYLLACEAE

Dianthus spp.

A genus consisting of a number of species, most of them of perennial habit, but best treated as annuals in the garden. The stems are jointed, leaves are grass-like, and flowers are terminal. *Dianthus barbatus* is the common Sweet William. In this species, the stem is 4-angled, and petals of flowers are toothed and bearded. There are a number of horticultural varieties producing red, purple, pink, maroon and white flowers. *D. chinensis* is the Chinese or Indian Pink, native of Central

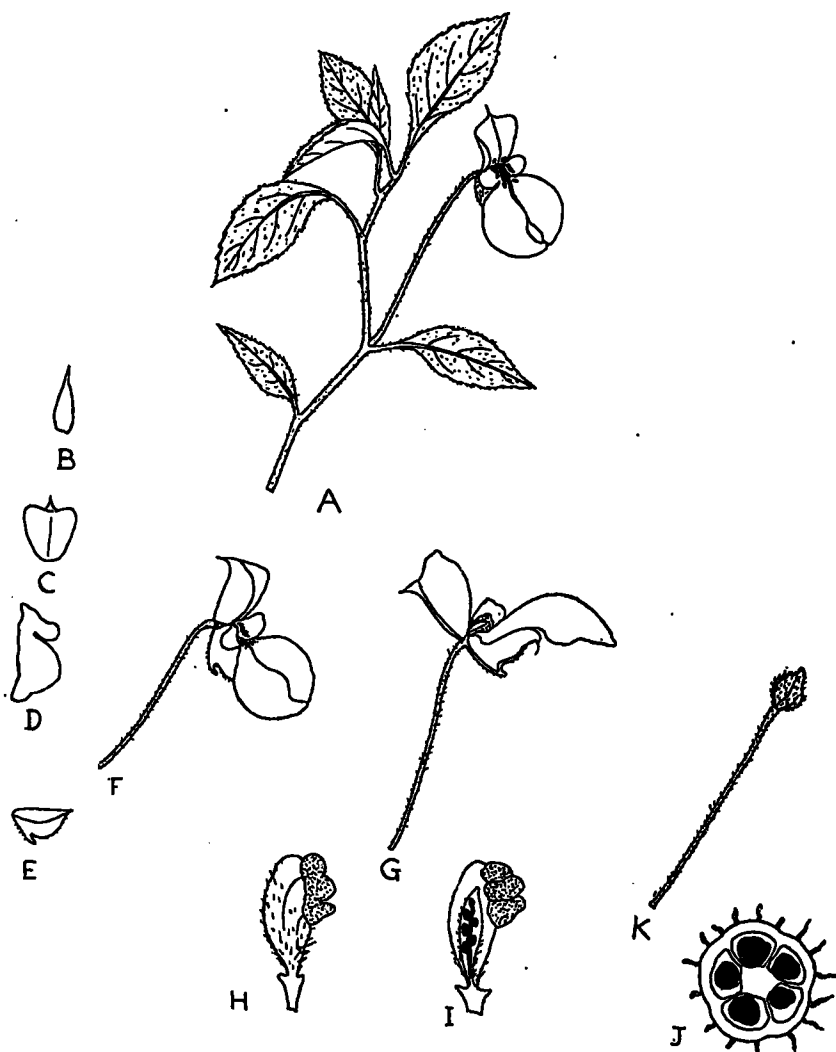


Fig. 7.—*Impatiens truncata*. A. Portion of a branch, B. Sepal, C. standard, D. Wings, E. Lip and spur, F. Flower, G. LS flower, H. Androecium and gynoecium, I. LS androecium and gynoecium, J. TS ovary, K. Capsule.

Asia. The Indian Pink reaches a height of about 9 inches. The flowers are scented, and their petals have frilled edges. Varieties are obtainable with colours ranging from white to pink and also scarlet.

Propagation is by seeds or cuttings. Dianthus prefers a well drained loamy soil. The seedlings should be planted about 9 inches apart in beds or borders. Dianthus takes about 3 months to flower from seeds.

GERBERA (Barborton Daisy)

COMPOSITAE

Gerbera jamesonii

Gerbera is a favourite flower among florists. Barborton Daisy has become a very popular cut flower due to its lasting qualities. It is a stemless, hairy plant, the leaves are numerous and pinnatifid. The flower heads are solitary, and are borne on long and slender stalks. The rays of the flowers are strap-shaped. There are single as well as double flowered varieties. Their colours range from white, amber, orange to deep red.

Barborton Daisy is suitable for edging beds and borders. It is also suitable for interplanting with other flowering plants like Gladioli. Gerbera requires a rich well drained soil enriched with cattle manure and leaf mould. Propagation is by division. Barborton Daisy takes about 2-2½ months to produce a crop of flowers.

GLADIOLUS

IRIDACEAE

Gladiolus spp.

The members of this genus are corm-bearing herbs, native of Africa, Europe and Western Asia. The leaves are erect, and they are sword-shaped. Thus, Gladiolus is sometimes referred to as the Sword Lily. The flowers are funnel-shaped, and are borne on long spikes. The modern horticultural varieties are derived from a large number of species, the most important ones are *G. primulinus*, *G. cardinalis*, *G. byzantinus*, *G. gandavensis*, *G. colvillei*, and *G. childsii*. The original species have been modified in recent years by hybridization. Today, Gladioli are available in a large number of colours such as white, yellow, pink, rose, red, scarlet, magenta and purple.

In Ceylon, Gladioli are more suitable for cultivation in the medium and higher elevations, although they could be grown fairly successfully in low elevations. Gladioli are suitable for beds and borders. In beds, Gladioli may be interplanted with other varieties like Barborton Daisy.

Propagation is by corms, which are imported mainly from Holland. Gladioli thrive well in ordinary garden soil, but a sandy loam is preferable. Before planting out, it is best to 'start' the tubers in a sand bed. When the corms are sprouted, they are planted out in beds 9-12 inches apart. The corms are planted in holes provided with a layer of river sand at the bottom. Tillage is very essential during the growing period. A dressing of bone meal is also recommended during this period. Gladioli take about 60 days to flower in the low and mid elevations of Ceylon. During the growing period, the old corm is used up, and a new one is formed. After the flowers are withered, the flower spikes should be cut, and the corms should be allowed to ripen. Watering should be restricted, and when the leaves dry off, the corms should be lifted, and stored in dry sand or wood shavings for about two months.

GYNANDROPSIS

CAPPARIDACEAE

Gynandropsis speciosa

A tender annual, suitable for borders, and growing to a height of 2-4 ft. There are two varieties, one with white flowers and the other with pink flowers, the stem and petioles are hairy, and are armed with thorns.

Propagation is by seeds. *Gynandropsis* does not require a rich soil, a sandy soil is preferable. The seedlings should be planted out at the back of a border. *Gynandropsis* takes about 1½-2 months to flower.

MARIGOLD

COMPOSITAE

Tagetes spp.

A native genus of South America, and a popular annual in gardens. The annual 'French' and the 'African' Marigold are derived from *Tagetes patula* and *T. erecta* respectively. The 'French' Marigold is a very hardy annual reaching a height of 1-1½ ft. The leaves are fern-like, and the flowers are yellow or red in colour. The flowers are borne on long flower stalks. The horticultural varieties of *T. patula* have a colour range from yellow to orange and red. The 'African' Marigold is also a hardy annual, which attains a height of 2 or 3 ft. The leaves are pinnate, and flower heads are born on solitary flower stalks. The 'African' Marigold has a single colour which is bright yellow.

Marigolds are very hardy, and their flowers can stand heavy rain. They are suitable for beds, borders and rock gardens. Propagation is by seeds, which should be sown in boxes. The dwarf varieties

should be planted 9-12 inches apart, while the tall Marigolds are best planted 18-24 inches apart. Marigold takes about 1½-2 months to flower, but the tall 'African' Marigold may take a little longer time. There are practically no pests or diseases in Marigold.

MICHAELMAS DAISY

COMPOSITAE

Aster spp.

A herbacious, perennial genus, consisting of a number of species cultivated for their brightly coloured flowers. Michaelmas Daisies comprise the garden varieties of *A. amellus*, *A. novae-angliae* and *A. novi-belgii*. Their colour range varies from white to shades of pink, blue, purple, red and intermediate hues. Plants reach a height of 2-3 ft.

Michaelmas Daisies are suitable for beds, borders and rock gardens. Propagation is by division, and they require a rich, well drained soil. Michaelmas Daisies are planted 9-12 inches apart, and they take 1½-2 months to flower.

NASTURTIIUM

GERANIACEAE

Tropaeolum majus

Tropaeolum majus, commonly but wrongly called Nasturtium, is a climbing perennial. The leaves are round or kidney-shaped. The flowers have spurs, and are about 2-2½ inches across. The flowers are yellow or orange in colour. There are a number of varieties, single or double-flowered, whose colours range from orange to pink and red.

Propagation is by seeds or cuttings. Suitable for rock gardens, banks and borders. Nasturtium takes about 2-2½ months to flower from seeds, but cuttings flower early. It grows in poor soil. Nasturtiums are suitable for mid-elevations.

NICOTIANA

SOLANACEAE

Nicotiana alata,
var. grandiflora

Nicotiana alata, *var. grandiflora* is the common flowering tobacco of Brazil and Chile. In gardens, it is usually treated as an annual. The leaves are sessile, and the basal leaves are longer than the terminal ones. The stem grows to a height of about 2-5 ft. In the species, the petals are white on the upper surface and light purple on the lower surface. The horticultural varieties have colours such as pink, mauve, cream and crimson. The flowers are sweet scented.

The flowering tobacco plant is suitable for the back of a border. Propagation is by seeds. When raised from seeds, *Nicotiana* takes about 2½-3 months to flower. It prefers a fairly rich, loamy soil.

PETUNIA

SOLANACEAE

Petunia hybrida

A straggling, perennial garden plant, usually grown as an annual. The common *Petunia* is derived from two S. American species namely, *P. axillaris* and *P. violacea*. The stem and leaves are hairy, flowers are showy, white, red, purple, rose or crimson in colour. Some varieties have flowers in which the petals are deeply fringed.

Petunia is suitable for beds, borders and for rock gardens. Propagation is by seeds or in the case of fancy types by cuttings. The seeds are minute, and should be sown in boxes or pans. *Petunias* grow in ordinary garden soil provided the soil is well treated with organic manure. Excessive manuring should be avoided. If the soil is very rich, more foliage may be produced, and this may result in the production of less flowers. *Petunia* seedlings should be planted 12-15 inches apart in sunny situations. In the shade, plants produce only a few flowers. *Petunia* takes about 2½-3 months to flower. Insect pests and diseases are rare in *Petunia*.

PHLOX

POLEMONIACEAE

Phlox Drummondii

This genus has both annual and perennial species, but the species suitable for our climate is *Phlox Drummondii*, which is an annual. It is an erect, branched, herbaceous plant with lance-shaped leaves. The flowers are in clusters, and in the original species, the flowers are rose red. However, its horticultural varieties have colours such as red, crimson, pink, purple, mauve, white, yellow and their combinations. Variety *cuspidata* has star-like flowers, and is called Star Phlox.

Propagation is by seeds. *Phlox* is a very showy bedding plant for Low Country. It is also suitable for troughs and window boxes. *Phlox* thrives well in a sandy loam which has been well manured with organic manure. The seeds should be sown in boxes, and they take 2-3 weeks to germinate. The seedlings should be exposed to the morning sun regularly. The seedlings are planted 9-12 inches apart. When the seedlings are well established, their terminal buds should be pinched off to encourage the formation of lateral branches. The branches should be pegged down to protect them from strong wind.

At this stage, it is extremely useful to treat the plants with a liquid manure or a fertilizer mixture. Phlox takes about 2½–3 months to flower. It continues to flower for a very long time, and this could be prolonged if the old flowers are removed from time to time.

PLUMBAGO

PLUMBAGINACEAE

Plumbago spp.

A genus consisting of straggling shrubs, commonly cultivated in tropical gardens. Plumbago is suitable for beds, especially the perennial border. *P. capensis* is the most common species. It is a semi-climbing species with oblong or spatulate leaves, and bears blue flowers in clusters. *P. capensis*, var. *alba* has white flowers. *P. rosea* has a climbing habit with purplish red flowers. *P. rosea*, var. *coccinea* has scarlet flowers.

Most Plumbago species have a climbing habit, but they could be trained to a height of 2–2½ ft. by regular pruning. Plumbago species thrive well in ordinary garden soil. Propagation is by cuttings or division. After flowering, the plants should be cut back, and the soil should be manured. It is better to replant Plumbago species once a year. Mealy bugs are troublesome pests in Plumbago. The infested plants should be treated with a suitable insecticide.

PORTULACA

PORTULACACEAE

Portulaca grandiflora

A prostrate, trailing herb native of Brazil. It is also called the Sun Plant or Rose Moss. The stem and leaves are fleshy, and plants reach a height of 6–9 inches. The flowers are about 1 inch in diameter, and are red, pink, purple, yellow or crimson in colour. The flowers open in the morning when the sun is bright, and close in the evening. Portulaca is suitable for all dry districts of Ceylon.

Propagation is by seeds or cuttings. The seeds should be sown in boxes. Portulaca is suitable for carpet beds, rock gardens and for edging beds and borders. Plants raised from seeds take about 2–2½ months to flower.

SALVIA

LABIATAE

Salvia spp.

A very popular shrubby, perennial genus cultivated in gardens for their showy flowers. A number of species are cultivated in our low and mid-elevations. *S. coccinea* is an annual or perennial with scarlet flowers, native of S. America and West Indies. *S. farinacea* is a

perennial about 2 ft. high, the stem is hairy, and leaves lance-shaped. The flowers are blue in colour, var. *alba* has white flowers. *S. leucantha* is a small shrub about 2 ft. high, the branches are woolly-white. The leaves are lance-shaped, hairy above, and woolly-white beneath. The flowers are purple in colour. *S. splendens* commonly called Scarlet Sage is a shrubby perennial, treated as an annual in cultivation, the Scarlet Sage reaches a height of over 2 ft. The leaves are glabrous with serrated margins. The flower spikes are terminal on branches, and the flowers are scarlet in colour. *S. splendens* has a number of varieties producing white, purple or dark scarlet flowers.

Propagation of *S. coccinea* is by seeds, while *S. farinacea* and *S. leucantha* are usually propagated by division or cuttings. *S. splendens* is propagated by seeds, cuttings or division. *Salvia* species thrive well in ordinary garden soil. The soil should be enriched with cattle manure before planting. All four species are suitable for beds, borders and rock gardens. *S. splendens* is a favourite bedding plant in low and mid-elevations of Ceylon. In fact, it may be regarded as the most attractive scarlet-flowered bedding plant suitable for these elevations. Plants raised from seeds take about 2-2½ months to flower, but plants raised from cuttings or division come into flower earlier.

TORENIA

SCROPHULARIACEAE

Torenia Fournieri

Torenia Fournieri is a common garden annual, reaching a height of 6-9 inches, the stem is 4-angled, and the leaves have serrated margins. The flowers are 2-lipped, and are dark purplish-blue and pale blue in colour. One lobe of the flower is marked with a yellow blotch. Variety *alba* has white flowers.

Torenia is suitable for carpet beds, rock gardens and for edging borders. Propagation is by seeds, which are very small. *Torenia* thrives well in ordinary garden soil, and it requires very little attention.

VERBENA

VERBENACEAE

Verbena spp.

An annual or perennial genus with a number of species producing very attractive flowers. It is best to treat the perennial species as annuals for decorative purposes. The plant is creeping in habit with dissected leaves. The flowers are terminal, and are borne on broad heads. The modern Verbenas have arisen from four species namely,

V. bonariensis, *V. venosa*, *V. hybrida* and *V. canadensis*. The colours of the modern Verbenas vary from white to rose, pink, red, purple and dark purple.

Verbena is an excellent plant for carpet beds, rock gardens and for edging borders. Propagation is by seeds or cuttings. Verbenas thrive well in ordinary garden soil, and it is best to manure the soil with organic manure before planting. Verbena prefers dry weather, and hence this plant is not suitable for growing during wet weather. Seeds should be sown in boxes, and later transplanted. The seedlings or rooted cuttings should be planted 9-12 inches apart. Seedlings flower in about 2-2½ months, while cuttings take a little shorter time.

ZINNIA

COMPOSITAE

Zinnia elegans

Zinnia elegans is an annual, native of Mexico. It is an erect, stiff plant reaching a height of 2-3 ft., and provided with ovate leaves. The flowers are daisy-like, and in the original species they are purple or lilac in colour. The modern horticultural varieties are either single or double-flowered with colours ranging from white, yellow to orange, scarlet, crimson and almost every colour except blue.

Zinnias are suitable for beds and borders in the Low Country. They are not very suitable for cultivation in humid districts. Zinnia prefers a sandy loam enriched with cattle manure and leaf mould. Propagation is by seeds, which should be sown in boxes, the seeds take about three days to germinate. Zinnias are fast growing, and the seedlings should be transplanted when they are about 3 inches high. Zinnias flower in about 6 weeks.

Wilt is a very common disease of Zinnia. Diseased plants should be removed, and destroyed immediately, otherwise the disease may spread to healthy plants.