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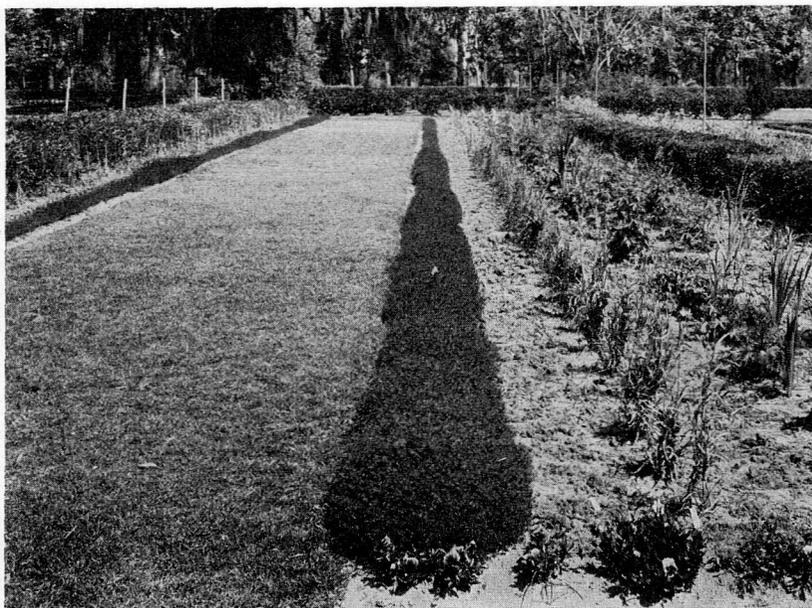
Wilmon Newell, Director

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GROWING ANNUAL FLOWERS

By JOHN V. WATKINS
Asst. Horticulturist, University of Florida
College of Agriculture



U.S.D.A. Photo

Fig. 1.—Dahlborg daisy (*Thymophylla*) is becoming very popular as a winter edging plant. The border above is in the College of Agriculture flower gardens.

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ANNUAL FLOWERING PLANTS FOR SPECIAL USES

ANNUALS FOR CUTTING

Aster, baby's breath, blanket flower, blue-eyed African daisy, blue lace-flower, Browallia, butterfly flower, calendula, California poppy, calliopsis, candytuft, carnation, chrysanthemum (annual), clarkia, cornflower, cosmos (both species), delphinium, Flora's paintbrush, floss flower, gilia, godetia, globe amaranth, hunnemania, larkspur, leptosyne, lupine, marigold, mignonette, mourning bride, nasturtium, orange African daisy, painted tongue, pansy, phlox, pinks, poppies, strawflower, scarlet flax, snapdragon, stock, statice, sunflower, Swan River daisy, sweet pea, zinnia.

ANNUALS THAT READILY RE-SEED THEMSELVES

Alyssum, blanket flower, blue-eyed African daisy, California poppy, calliopsis, Chinese forget-me-not, cosmos (sulphureus), floss flower, globe amaranth, larkspur, marigold, Moroccan toadflax, moss rose, nicotiana, petunia, phlox, poppies, sunflower, torenia, zinnia.

ANNUALS FOR WINDOW BOXES OR PORCHES

Alyssum, balsam, carnation (Marguerite), double English daisy, floss flower, lobelia, mignonette, moss rose, nasturtium, pansy, petunia (dwarf), phlox, torenia, verbena.

ANNUALS FOR THE ROCK GARDEN

Alyssum, butterfly flower, California poppy, candytuft, double English daisy, Flora's paintbrush, floss flower (dwarf), lobelia, mignonette, Moroccan toadflax, moss rose, orange African daisy, pansy, petunia (dwarf), phlox, pinks, snapdragon (dwarf), stock, torenia, verbena.

ANNUAL VINES

Cypress vine, gourd, morning glory, nasturtium (climbers), sweet pea.

ANNUALS FOR EDGINGS

Alyssum, calendula, double English daisy, floss flower (dwarf), phlox, snapdragon (dwarf), torenia, Tagetes, Thymophylla, lobelia, marigold (dwarf), Moroccan toadflax, moss rose, pansy, zinnia (lilliputs and Mexican hybrids).

**PLANT THESE ANNUALS IN THE FALL FOR
WINTER AND SPRING BLOOM**

Alyssum, baby's breath, blanket flower, blue-eyed African daisy, Browallia, butterfly flower, calendula, California poppy, calliopsis, candytuft, carnation, Chinese forget-me-not, clarkia, cornflower, delphinium, double English daisy, Flora's paintbrush, gilia, godetia, hunnemania, larkspur, leptosyne, lobelia, lupine, mignonette, Moroccan toadflax, mourning bride, nicotiana, orange African daisy, painted tongue, pansy, petunia, phlox, pinks, poppies, scarlet flax, snapdragon, stock, statice, Swan River daisy, sweet peas, Thymophylla.

**PLANT THESE ANNUALS IN THE EARLY SPRING FOR
SUMMER BLOOM**

Aster, balsam, blue lace-flower, celosia, chrysanthemum (annual), cosmos (both species), cypress vine, floss flower, globe amaranth, gourd, marigold, morning glory, moss rose, nasturtium, strawflower, sunflower, Tagetes, torenia, verbena, zinnia.

**PLANTING GUIDE WILL BE FOUND IN THE
BACK OF THIS BULLETIN**

GROWING ANNUAL FLOWERS

By JOHN V. WATKINS

Annual flowering plants—those which grow from seeds, produce flowers and seeds and then die in one growing season—comprise one of the most showy, dependable groups of plants grown. Annuals are especially valuable in Florida, many of them are in bloom during winter months, contributing splendidly toward a colorful garden and producing endless blossoms for home decoration.

Other more tender annual species are depended upon to give us flowers during the trying months of June, July, August, and September, persistently blooming through the heat and heavy rains that usually come during summer.

One may literally have a colorful garden and cut flowers every month in the year by judiciously selecting varieties and planting seeds at intervals to give a succession of plants for bedding.

Annual plants may be roughly divided into two groups as to seasonal adaptation. First, and possibly most important, are those hardy frost resisting, cool weather plants, the seeds of which are sown in autumn, that they may take advantage of the temperate climate of the months of November to May.

Second are those tender heat-tolerant, pest-resistant plants that defy the high temperatures, heavy rains and numberless garden pests of summer. Seeds of this second tender group are best planted in the months of February through August in those portions of the state that experience freezing temperatures, but in frost-free areas they are planted at any time of the year.

The uses of annuals are endless. The variety of colors, the differences in height and habit of growth, the ways in which they lend themselves to effective flower arrangements, account in part for the tremendous popularity of this group of blooming plants. Indeed it is a drab garden that does not display annuals as edgings, as bold but incidental color masses in the prominent shrubbery bays or in the bright striking borders that are so essential in our modern gardens.

Although the permanent woody shrubs are always to be preferred for foundation plantings about buildings, and to enclose the garden, sometimes a temporary planting is desirable, and then the annuals, especially the tall growing sorts, will serve the purpose admirably.

As window box materials and porch plants, annuals are indispensable for that necessary touch of color.

If it is not possible to use grass as a ground cover for a sunny piece of ground, one might well consider these hardy, pest-resistant annuals whose seeds may be sown broadcast and forgotten. Many of our flowers such as annual phlox, alyssum, annual blanket flower, coreopsis, and petunia can be used in this manner; they will volunteer each year, supplying endless numbers of colorful blossoms with the least possible care.

SECURING SEEDS

It is an established fact among successful growers that the best seeds one can obtain are the only seeds worth planting. Of course there is no one best source or seed house, but an old reliable concern that has a big turn-over, that buys large quantities of seeds from established producers, can be depended upon to distribute fresh seeds of excellent quality. In many cases, experienced flower growers buy seeds direct from the specialist who produces them and who has spent years of careful work and study developing good strains. Fresh seeds from true-to-name, robust parents contribute in a large way toward a successful garden of annuals.

One is attracted by the glowing accounts describing novelties offered each year by seedsmen, and usually it is worth while to try a packet or so of any new plant or variety that seems especially attractive. It should be borne in mind that perhaps these newer sorts have never been grown in your section and may not be adapted to local conditions, but at the same time, our gardens would certainly be commonplace if no one ever tried a novelty. One should, of course, go in for novelties in a small way, depending upon old and tried varieties for the principal components of the garden.

PLANTING THE SEEDS

The greatest difficulty experienced by most gardeners is getting a good stand of seedlings and protecting them from the dread disease, damping-off. During August, September and October, when most annual seeds are planted, the warm weather is very favorable to the growth of damping-off organisms, and the loss of seedlings is tremendous, if proper precautions are not observed.

There are, perhaps, as many different methods of planting seeds as there are gardeners. The method described herewith has been used successfully at the horticultural grounds of the College of Agriculture for the past 10 years, and though it is not necessarily the best way to plant seeds, it has proven very satisfactory.

First of all, the autumn-sown annuals may be divided arbitrarily into two classes—those which transplant readily and those which do not. Seeds of the former are planted in flats, while those of the latter are sown in the open ground where the plants are to stand.

A flat is a shallow box of any convenient size that has plenty of drainage holes or cracks in the bottom to allow water to pass freely out of the soil. Thorough drainage is exceedingly important in soils where tender seedlings are grown, as a sour, water-logged medium is fatal to most young garden plants. In the bottom of the flat should be placed a layer of pine straw, dead grass clippings or other coarse material so that the soil will not wash through the drainage holes.

The soil used in flats may be any good grade of garden soil which contains a fair amount of well-rotted organic matter such as cow manure, oak leaves, peat moss, etc. The older the compost is, the better. Earth that is free from root-knot nematodes is desirable and this may be secured in heavily wooded areas.

Firm the soil to within a half inch of the top of the flat with a brick or a block of wood. Flood this gently packed medium with a solution of one of the organic mercury compounds that are indicated for the control of damping-off. After this solution has drained off, sift the seeds, broadcast, on the wet surface. Cover lightly, by sifting sand or sandy loam through a screen, over the seeds. Covering seeds too deeply is a common error. Generally speaking, if the seeds be just barely hidden, good results may be expected. After the seeds have been covered with soil, place a wet newspaper over the flat. Water should be sprinkled on the paper whenever it becomes dry. In this way, there is no danger of washing the seeds out, and the soil is kept uniformly moist. The wet newspaper should remain on the flat until the seeds germinate. Place the flats on boxes or benches that are protected from ants which often carry away the seeds. Some of the most popular of our autumn-sown annuals, such as pansies, snapdragons, and larkspur, are distinctly cool weather plants and their seeds will not germinate

readily if the temperature is excessively high. For this reason, to assure a fair stand, it is important that the flats should be placed in the coolest possible situation. The north side of a building, under a tree, or under an open shed should do nicely.

After germination, the flats must be placed where the seedlings can get an abundance of light; if they are left in the shade, the seedlings will grow into weak, leggy plants. We have found that a muslin shade, such as is used for celery or tobacco seedbeds, allows sufficient light to penetrate to the young plants.

Shortly after germination, the flats should receive another application of a compound for the control of damping off. Water should be carefully applied through a fine spray.

When the seedlings show about four true leaves, they may be transplanted to well prepared beds where they are to bloom. Choose a cool, cloudy afternoon for transplanting if it is at all possible, and set the plants about 12 to 18 inches apart. Close planting is desirable to assure

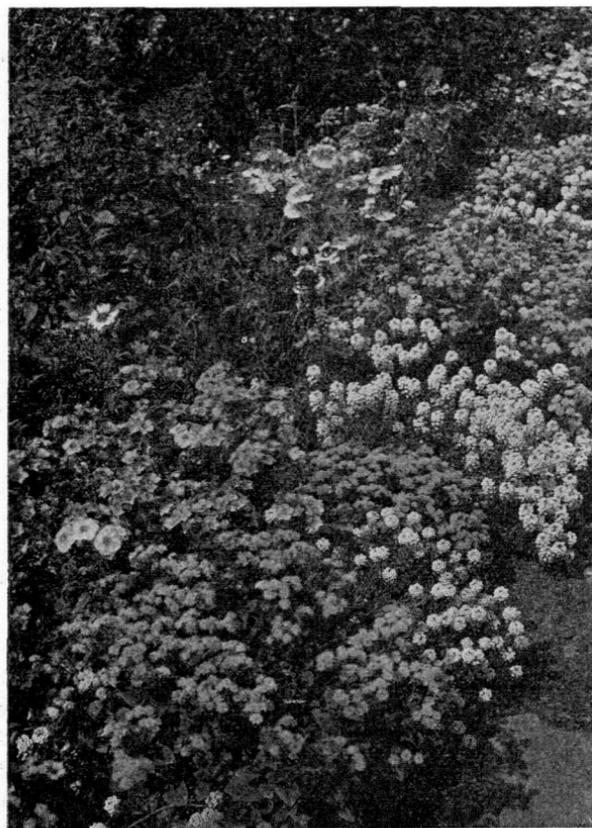


Fig. 2.—A garden of mixed annuals, showing a desirable effect obtained by random planting.

bold color masses. As further insurance against damping-off, it is often a good plan to use the damping-off control immediately after transplanting. Great care should be exercised

in watering the young plants until they are well established. Over-watering can be as harmful as under-watering.

The second class of annuals, those which are planted in the open ground where they are to bloom, may be handled much the same as vegetables. Sow the seeds thinly in shallow drills or trenches. Cover lightly with soil and sprinkle with a damping-off control. The drills or rows may be covered with wet strips of burlap. If this material is used, water will not wash the seeds out of the soil, and the soil stays uniformly moist. If ants are abundant, grits or cornmeal should be sprinkled liberally along the rows. These will be taken in preference to the seeds. As soon as the seeds germinate, the burlap must be removed, and a second application of the damping-off control should be made. When the plants are well established, thin so that they stand about 12 to 18 inches apart.

ANNUALS FROM CUTTINGS

Although the majority of annuals are grown from seeds, it is sometimes desirable to propagate a particularly fine individual by cuttings. Tip cuttings about 3 inches long inserted in clean, coarse sand should root in two or three weeks. A box or flat with plenty of drainage holes may be used to contain the sand. The sand should be kept moist, the cuttings protected from sun, wind or cold. When the roots are an inch or so in length the cuttings may be potted up or planted where they are to bloom. Some annuals that will grow readily from cuttings are carnation, chrysanthemum (annual), petunia, pinks, snapdragons, torenia and verbenas.

CULTURE

Special preparation of the soil is usually necessary if thrifty plants which produce large numbers of flowers of good substance are expected. If the native soil be light, sandy and low in organic matter, it should be built up by using good quantities of rotted manure, rotted leaves, hammock soil, or peat moss. If the native soil, on the other hand, is low and subject to flooding, adequate drainage should be provided. Beds raised about 12 inches with ditches between them should be satisfactory for annuals. The writer is a firm believer in mulching and after the plants are set where they are to bloom, a blanket of peat moss, rotted manure or oak leaves will preserve the moisture, keep the roots cool, and discourage weed growth.

Light bi-weekly applications of a good balanced fertilizer, which supplies nitrogen, phosphorus and potash, are important to insure robust plants and an abundance of blooms. Nitrate of soda or sulfate of ammonia dissolved in water at the rate of one tablespoonful to the gallon is an excellent stimulant for vegetative growth, but these materials should be supplemented with fertilizer which contains phosphorus and potash. Steamed bone meal is an excellent food that will not burn the plants. It becomes available to the plant rather slowly, but its effect is lasting.

VARIETIES AND SPECIES

ALYSSUM (*Alyssum maritimum*)

The several varieties of sweet alyssum, with white or lilac flowers, are among the best of annuals for edging and for planting in the rock garden. Low-growing, seldom exceeding a height of 12 inches, this plant should have a place in every garden, window box or hanging basket.

Of easiest culture, extremely hardy, sweet alyssum may be sown every month in the year, except during mid-summer, and will bloom in four to six weeks. Volunteer seedlings are usually abundant about older plants.

ASTER—CHINA ASTER (*Callistephus hortensis*)

The annual aster as we know it today is a highly developed horticultural form, the parent of which was introduced from China and should not be confused with the smaller flowered perennial aster native to America.

The annual China aster is an old favorite, prized as a cut flower on account of its variety of color and form and its grace in a cut flower arrangement. Unfortunately, a host of insects and diseases prey upon the China aster and for this reason great care should be taken to grow the plant in new soil each year, to give the plants a bit of shade and to keep them in a vigorous growing condition at all times. Even with the most careful grower, asters are all too often a failure. The new wilt-resistant strains promise much toward a more successful culture.

BABY'S BREATH (*Cypsophila elegans*)

The white, rose or carmine flowers of the three varieties of baby's breath are especially valuable in flower arrangements, particularly if sturdy flowers such as blanket flowers, dwarf sunflowers, carnations or pinks are the principal subject of the

bouquet. The tiny flowers on wiry stems add a daintiness, a softness to an arrangement that might be stiff and lacking in gracefulness.



Fig. 3.—Baby's breath adds daintiness and compactness to collections of cut flowers.

Baby's breath blooms quickly from the time of sowing and unfortunately passes quickly into seed production so several plantings at monthly intervals are to be recommended.

BALSAM (*Impatiens balsamina*)

Of easy culture, the quick growing, cheerful balsam is well worth using as a window-box subject, porch plant or as a border in a shady place. The newer kinds of this old favorite are striking in form and color. The seedlings should be pinched several times so as to assure stocky, well-shaped plants.

BLANKET FLOWER (*Gaillardia pulchella picta*)

The annual forms of the blanket flower, single, semi-double and full double, are of great value in any garden. The red and yellow daisy-like blossoms are desirable for cutting on account of their cheerful colors, long stiff stems and excellent keeping quality. The blanket flower is cosmopolitan, happy in almost any type of soil, volunteering annually and producing abundant flowers persistently, even on the poor light sands of the seashore.

BLUE-EYED AFRICAN DAISY (*Arctotis grandis*)

Graceful, light blue, daisy-like flowers about 2½ inches across with steel blue centers are profusely borne by the plants of *Arctotis*. One of the most easily grown of the hardy annuals, like the blanket flower, it succeeds in trying situations, volunteering each year. The flowers close in the afternoon, so it is best not to put the blue-eyed African daisies into a flower arrangement that is to be used in the evening.

BLUE LACE-FLOWER (*Trachymene caerulea*)

The globular blossoms of the blue lace-flower are composed of many tiny light blue florets and resemble a sky blue scabiosa flower. The plants are not attractive as garden subjects. Merit lies solely in the blossoms as cut flowers which are rather out of the ordinary and lend themselves well to attractive arrangements. Apparently sometimes difficult to grow, the blue lace-flower is not at all widely planted.

BROWALLIA (*Browallia* in several species)

This genus contains several species that have long been popular with professional gardeners. Of easiest culture, *Browallias* grow from seeds or cuttings and blossom in a very short while. Admirably suited to pot culture and to massing for color effect. The plants should be kept stocky by pinching. Staking may be necessary if the plants receive shade. Volunteers often occur about old plants.

BUTTERFLY FLOWER (*Schizanthus pinnatus*)

This delicate, graceful plant, when properly grown, is covered with tiny, orchid-like blooms and always attracts a great deal of attention. Perhaps because it requires constant care and the most favorable conditions and because it is easily injured by slight cultural mistakes, the butterfly flower is not often seen in Florida gardens.

CALENDULA (*Calendula officinalis*)

A universal favorite, the calendula is one of our most important winter-blooming annuals. The charming double flowers in shades of orange and yellow are not only excellent as part of the garden picture but they are unsurpassed as cut flowers. If the seeds are sown in August and the seedlings are protected from the direct sun for a month or so before bedding out, blos-

Fig. 4.—The calendula is a universal favorite as a winter flower for cutting.



soms may be cut in December and throughout the winter into the early spring, provided that extremely low temperatures are not experienced. The plants will stand considerable cold; even though the blossoms are blasted by the heavy frosts, others will quickly open with the advent of warmer weather.

CALIFORNIA POPPY (*Escholtzia californica*)

The California poppy is especially effective when grown in

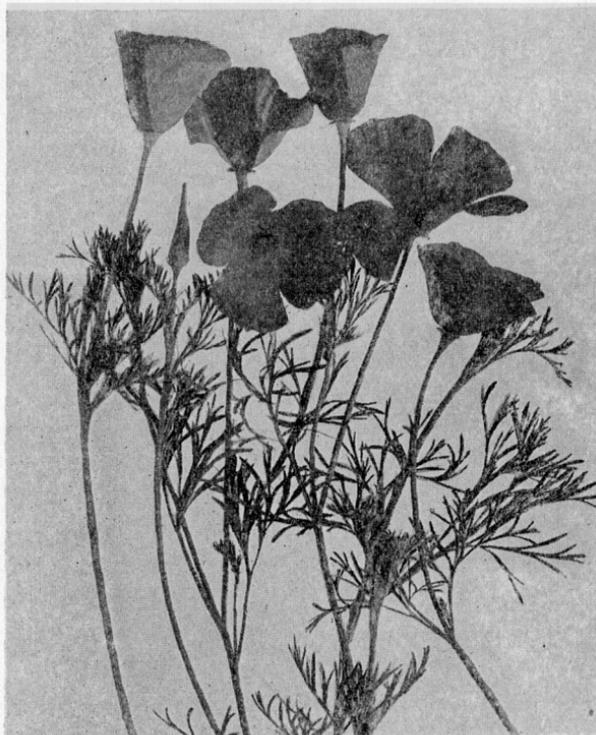


Photo by Harold Mowry

Fig. 5.—California poppy furnishes an abundance of warm tones of yellow and orange throughout early spring.

large groups in a sunny garden. Recently seedsmen have offered varieties in creams, white and reds that are striking deviations from the typical yellows. Very hardy, easily grown from broadcast seeds, the California poppy should have a place in every garden. The blooms are excellent as cut flowers when arranged in low containers with their own foliage. Unfortunately the flowers close in the evening.

CALLIOPSIS (*Coreopsis*—several species)

The calliopsis or coreopsis is another type of the numerous daisy-like flowers that play so important a part in an annual border. The flowers in shades of yellow, some varieties with maroon or terra cotta, are borne in profusion on stiff, wiry stems, and are valuable both in the garden and in bouquets. Of easy culture, growing in difficult places and often naturalizing in large colonies, the calliopsis can be most highly recommended.

CANDYTUFT (*Iberis* in two species)

Candytuft in its varieties with white, lilac, crimson umbels of flowers, is a good subject for edging, for the rock garden or for cutting. It is similar to sweet alyssum, but is a taller plant and the flowers are larger. Hardy and not difficult to grow, the candytuft can fill the need, as does sweet alyssum, for a hardy, dwarf, much branched flowering annual.

CARNATION (*Dianthus* in several species)

The hybrid annual carnations which have recently been developed by plant breeders, will supply everything save size, for which the perfect florist carnations are prized. The delightful spicy fragrance, the charming variety of colors, the way in which the flowers lend themselves to arrangements certainly makes the annual carnation worth growing.

CELOSIA (*Celosia* in several species)

The red or yellow plumes of the celosias or cockscombs, borne on robust, quickly growing plants, are often seen in summer gardens and occasionally as dried bouquets. Tender, but of easiest culture, the celosias succeed during the summer months. However, root-knot is a serious pest to these plants and will sometimes take a heavy toll of the seedlings growing on soil infested with nematodes.

CHINESE FORGET-ME-NOT (*Cynoglossum amabile*)

For blue flowers in the late spring garden, one should certainly consider the Chinese forget-me-not. Although it is injured by frost, it is easy to grow, volunteers readily and blooms in a comparatively short time. This charming annual deserves a place in everyone's garden. Possibly its greatest use is for blue color masses in the spring border, because the flower spikes usually wilt badly when they are used as cut flowers.

CHRYSANTHEMUM—ANNUAL (*Chrysanthemum*—several species)

The perennial chrysanthemums are among the most important of the flowers for cutting, and for blossoms that come earlier than the perennial sorts, we might take advantage of the annual varieties. These are tender and are best planted when there is no danger of frost. The plants, which attain a height of 2 or 3 feet, should furnish during the summer months abundant yellow, white or banded, small daisy-like flowers that are admir-

able for cutting. As the plants are robust growers, they should be thinned to a stand two feet apart.

CLARKIA (*Clarkia* in two species)

Native to the Western United States, hardy and comparatively easy to grow during the cool weather of the winter and early



Fig. 6.—Cornflower is an excellent source of blue in the early spring garden.

spring, the *Clarkia*, although seldom seen in Florida gardens, is worthy of trial. The plants, attaining a height of about two feet, produce spikes of single or double flowers in shades of white, pink, salmon or red, that are worthwhile additions to the annual border and to flower arrangements.

CORNFLOWER (*Centaurea cyanus*)

The cornflower has long been a favorite and somehow seems characteristic of the old-fashioned garden. The single and double flowers of white, pink, red, blue and purple borne

in profusion in early spring, contribute beautiful clear colors to the border and are excellent for cutting. Especially pleasing

color combinations may be obtained by planting good seeds in separate colors. Soil-borne diseases in the late spring sometimes are fatal to the plants and for this reason it is well to sow the seeds early and thus have plants that bloom before the advent of hot weather. Except for this trouble, the plants are of easy culture, germinating promptly, transplanting well, and withstanding considerable frost.

COSMOS—EARLY (*Cosmos bipinnatus*)

Single, crested or double daisy-like flowers in white, pink or red that are particularly good for cutting, may be had during June and July if the seeds of the early cosmos are planted in March. Tall growing, tender and seldom very attractive as a garden plant in Florida, the chief value of the cosmos lies in the excellence of its blossoms in summer flower arrangements. The seeds germinate easily, especially in the single varieties, the plants grow rapidly and bloom quickly. Staking and careful tying are recommended to prevent the wind from blowing the plants over or breaking off the heavy branches.

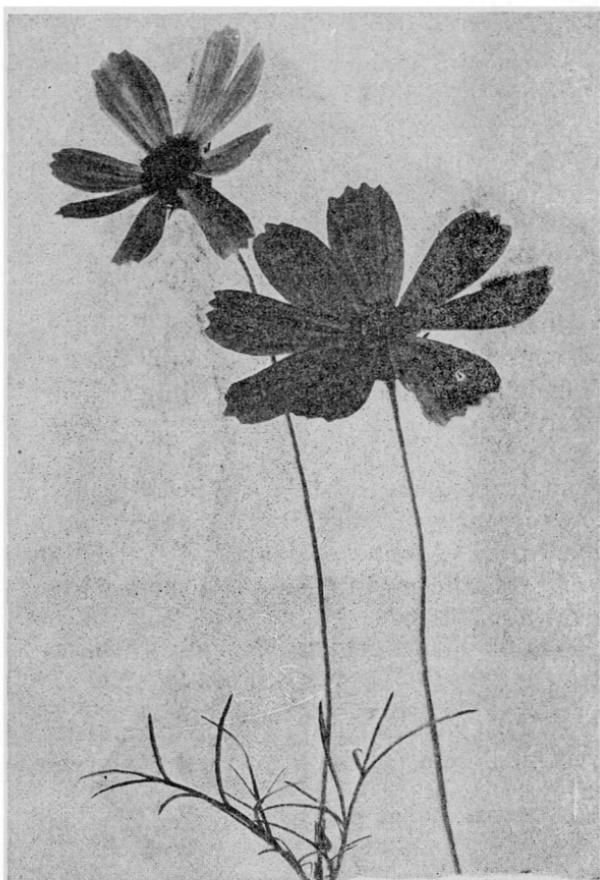


Photo by Harold Mowry

Fig. 7.—Early cosmos is desirable as a cut flower, lending itself very well to flower arrangements.

COSMOS, Late or Klondyke (*Cosmos sulphureus*)

Yellow flowers are produced in the autumn by many members of the Compositæ or Daisy family, and with us, one of the most dependable of this class is the Late or Klondyke cosmos. Volunteering year after year, the vigorous, rank growing plants are covered with delightful single yellow blossoms in October. This cosmos is apparently not at all particular as to its requirements, as it succeeds without any care whatsoever, thriving in abandoned dooryards or very often escaping from cultivation. The variety Orange Flare, earlier and smaller, has become extremely popular.

CYPRESS VINE (*Ipomeae quamoclit*)

A graceful vine whose finely cut foliage and attractive tiny blossoms of white, red or salmon make it a good subject for temporary small screens or trellises. It is said that the seeds are so hard that they do not germinate readily unless they are scarified, but given fair conditions, volunteers often grow where the vine has seeded.

DELPHINIUM (*Delphinium* in several species)

During the last few years we see more and more plantings of several species of Delphinium as annuals. The so-called Belladonna, Bellamosum and Chinensis are coming in for considerable popularity. Fresh seeds, comparatively cool weather, a constant moisture supply, and a soil that is free from diseases seem to be essential to a good stand of healthy seedlings. If sown in early autumn, Delphinium should be blooming in March and April. Always popular in flower arrangements and as subjects for the spring border, Delphiniums are certainly worth growing.

DOUBLE ENGLISH DAISY (*Bellis perennis*)

Although the English daisy or *Bellis* is really a perennial, in Florida usually it will not thrive after the advent of warm weather in May and is grown as a winter annual so that it may enjoy the cool growing season. For edgings or for rock gardens the English daisy is excellent. The plants are merely flat, tight rosettes of shining green leaves from which the flower stems arise. The charming double flowers of white, pink or red are borne singly on stems about four inches long. If plants are properly grown and set in close masses, the effect is particularly delightful.

FLORA'S PAINTBRUSH (*Emilia flammea*)

Clusters of gay scarlet, tassel-like or brush-like flowers on stiff stems about 18 inches long are produced by Flora's paintbrush in the spring. The flowers are rather small and loosely arranged to be of great value in the garden picture, but they are valuable in a flower arrangement if scarlet is wanted. They will furnish a light airiness to a bouquet which might otherwise be heavy or coarse.

FLOSS FLOWER
(*Ageratum conyzoides*)

For blue flowers during the summer, nothing surpasses the floss flower or ageratum. Equally desirable as garden material or for cutting,

the soft lacy flowers are an adjunct to every garden and lend themselves very well to color combinations and special effects. There are dwarf sorts as well as tall varieties in white, pink, or shades of blue. The plants are of easiest culture, seedlings usually volunteering in abundance about old plants. They are injured by frost and should be grown after the danger of cold has passed.



Photo by Harold Mowry

Fig. 8.—Flora's paintbrush is valuable in a flower arrangement where a gay scarlet is wanted.



Fig. 9.—The floss flower withstands considerable cultural difficulties, including heat. It volunteers readily and is easily established from cuttings.

GILIA (*Gilia* spp.)

Another blue flower of merit that blooms in the late spring is *gilia*. The foliage is lacey, fern-like and is an attractive feature in itself. The flowers are rough, globular heads, about

Fig. 10. — *Gilia* produces small, globular blue flowers in profusion. Should be more widely planted, especially where blue is desired in the spring garden and for cutting.



an inch in diameter, and are borne in profusion all over the plant. As yet something of a novelty in Florida, the gilia has proven its ability to thrive here and should be tried in everyone's garden.

GLOBE AMARANTH (*Gomphera globosa*)

As this plant is sometimes called batchelor's button, it should not be confused with the cornflower (*Centaurea*) which also goes by that common name. The globe amaranth thrives during hot weather, producing myriads of white or red, globular flowers that resemble clover heads. In texture they are harsh, woody, like strawflowers or statice and are used for permanent or dried bouquets. Tender but of easy culture, volunteering in great profusion, the globe amaranth can be depended upon to succeed under almost any conditions during the summer.

GODETIA (*Godetia* spp.)

Although the Godetia or satin flower, like the gilia, is not often seen, it will succeed in Florida, especially in a partially shaded situation, and it undoubtedly deserves consideration as a spring flowering annual. The open, primrose-like flowers of white, rose or red are borne on spikes about 18 inches long.



Fig. 11.—Small fruited gourds are used extensively for table decoration.

The seeds germinate well in the autumn and the young seedlings, which closely resemble snapdragon plants, grow off quickly and the losses from transplanting are negligible.

GOURD

The gourds in their many varieties are too well known to warrant descriptions or discussions. Interesting, unusual fruits of multitudinous shapes are borne on the annual vines which are exceptionally vigorous and free from pests, except root-knot. For temporary screens during the summer or to cover stumps

or small buildings, they are very useful. The seeds should be planted when danger of frost has passed.



Photo by Harold Mowry

Fig. 12.—Hunnemanian, with flowers of pure, clear, sulfur yellow, resembles the giant California poppy.

HUNNEMANIA (*Hunnemanian* *fumariaefolia*)

The hunnemanian, sometimes called tulip poppy, resembles a sulfur-yellow California poppy of giant size, coarser and of greater substance. The plants, about two feet in height, are very prolific, hardy and easy of culture after germination. Dif-

iculty in getting a good stand is the general rule. Like the poppies, the seedlings do not transplant readily and for this reason the seeds should be sown where the plants are to bloom. The hunnemanian is excellent as a source of sulfur yellow color in the late spring border and as a cut flower because of its sprightly color and attractive tulip-like form.

LARKSPUR (*Delphinium* spp.)

The well known larkspur is so popular, so widely grown, that it seems hardly necessary to describe this most valuable annual. Single and double flowers of white, buff, rose, blue, lavender and purple are borne on tall, erect spikes during the early spring. Some of the newer creations, named varieties having very double flowers of clear colors, are very charming, and should find places in every garden. These are especially desirable if color combinations are to be worked out. Frequently larkspur seeds fail to germinate if they are planted

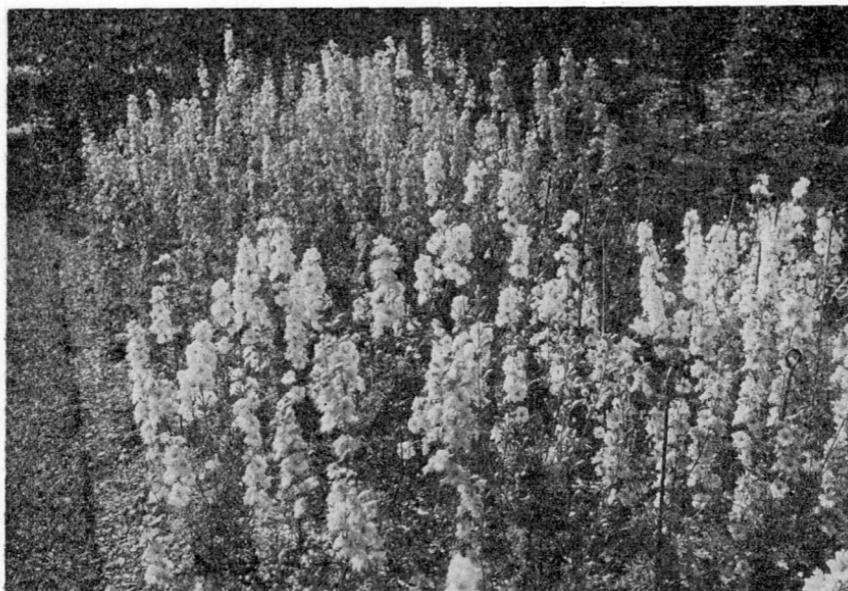


Fig. 13.—Annual larkspur is one of the most striking, yet dependable garden flowers for spring.

early in the fall. Because this is a distinctly cool-weather plant, it is probably best to wait until November, then sow the seeds thinly in shallow drills, firm them into the ground and water with a fine spray without covering. Volunteer seedlings are usually numerous where the plants bloomed the previous season. These seedlings, however, usually produce single flowers in colors that are not so clear nor so attractive as are the flowers produced from new seeds from the specialists. The young plants are hardy, transplant very readily and react very favorably to good care.

LEPTOSYNE (*Leptosyne* spp.)

Two varieties of annual leptosyne will produce their yellow flowers during the early spring in Florida. Good for cutting, they are unusual, worthwhile annuals, although seldom seen.

LOBELIA (*Lobelia erinus*)

Lobelias, in their beautiful shades of blue, may be had in the dwarf compact form, which is so desirable as an edging and also in the trailing or hanging form which is used in rock gardens, pots, boxes and baskets. The charming dwarf plants, under six inches in height, of many tiny branches, are covered with tiny blue flowers throughout the blooming season. Unfortunately, they demand cool weather, but cannot stand freezing, so they must be grown during the winter and receive protection on cold nights. The seeds germinate well and quickly produce good stands of robust plants. For good color effects the plants should be set no farther than 4 to 6 inches apart.

LUPINE (*Lupinus* spp.)

As subjects for a tall border, the annual Lupines are very effective, and they are no less striking as cut flowers. Their



Fig. 14.—Annual lupine, one of the tallest growing annuals, is desirable for borders and for cutting.

keeping quality is excellent. Long spikes of pea-like flowers of white, pink and shades of blue are numerous in the spring. Sow the seeds where the plants are to stand and thin the seedlings to 12-inch intervals in the row. Usually the plants will need staking at blooming time.

MARIGOLD (*Tagetes* spp.)

The African marigold is tall, erect, attaining a height of three feet and bears large globular flowers that range in color from lemon yellow to orange. This type is valuable at the back of borders where height is desired. If the typical marigold odor is not found objectionable, the blossoms are among the best of the early autumn annuals for cutting.



Fig. 15.—Marigolds are dependable for color during September and October, when most other annuals are out of bloom.

The French and Mexican marigolds are compact, dwarf, rarely exceeding 16 inches in height, and are good subjects for edging and for positions in front of other, taller plants.

In late September through October, when most annuals are out of season, the marigolds, in their many forms and varieties, contribute their striking yellow and orange flowers to our gardens whose brightness has begun to wane. Withstanding heat and

drought, thriving where many plants would perish, free from pests, the marigolds are exceedingly useful both in the garden and in the home. Recently several new sorts have been introduced by the seedsmen and these are all worthy of wide trial. Seeds germinate well and quickly, and the seedlings are easy to handle.

MIGNONETTE (*Reseda odorata*)

Its delightful fragrance has won for mignonette a place in everyone's heart. The dwarf plant which bears the odd flower trusses of this old favorite should have a place in every garden. Of no particular beauty so far as color or design is concerned, the chief value of mignonette is its use in bouquets of flowers which have no odor of their own. Difficulty is often encountered in getting the seeds to germinate and hot weather is fatal to the plants.

MORNING GLORY (*Ipomoea purpurea*)

As an annual vine, nothing can surpass the morning glory, a vigorous rapid grower which is covered with glorious flowers throughout the summer and fall. Seeds of the better kinds offered by the seedsmen will produce plants that bear large flowers of beautiful clear colors. Volunteer seedlings usually have flowers of inferior quality. The morning glory is excellent material with which to make a screen or as a covering for unsightly objects during the summer.

MOROCCAN TOADFLAX (*Linaria maroccana*)

Since its introduction into Florida gardens some 10 years ago, this little toadflax from Morocco has gained the popularity it so rightfully deserves. It is a dwarf grower of exceeding hardiness that bears its spikes of tiny snapdragon-like flowers throughout the winter and early spring. The small dark green leaves are narrow, delicate in texture; the flowers are white, lemon, pink, blue and purple. The plant self-sows and volunteers most readily, apparently not deteriorating as regards the quality or the color of the flowers even though the chance seedlings are used as planting stock year after year.

Blooming profusely, even during frosts, in poor sandy soil, the toadflax is very much at home with us and can be most highly recommended for edgings, borders, and for rock gardens. Some of the larger seed houses are offering the seeds in improved strains.

MOSS ROSE (*Portulacca grandiflora*)

For a summer edging or rock garden plant, probably nothing surpasses the moss rose. The leaves are narrow, thick, succulent, and are completely hidden in a blanket of gay colors in the mornings when the flowers open. Shades of buff, salmon, pink and red are characteristic of the double and single blossoms. The flowers are about an inch and a half in diameter, the plants attain a height of about four inches.

Always extremely popular, flourishing under the most trying conditions of heat, drought and poor soil, this little plant is one of the most satisfactory for summer gardens. The seeds germinate best during warm weather, the young plants can be moved with very little loss. Volunteer seedlings, although numerous, should not be used because of the possibility of mixing in plants of the wild type which have inferior flowers. Seeds of the best double strains will give the most satisfactory color effects. As the blooming season is short, it is well to have small plants available by sowing seeds at monthly intervals during the summer.



Fig. 16.—Moss rose, probably the best low edging plant for the summer.

MOURNING BRIDE (*Scabiosa atropurpurea*)

The globular, tufted flowers of the mourning bride or pin-cushion flower furnish a range of color found in no other annual.

From white, through yellow, blue, rose, red, maroon, to an almost black purple, the colors are most charming, and are, of course, always harmonious. The plants, which attain a height of about three feet when well grown, are prolific, thrifty and almost indispensable in the spring garden. The keeping quality of the blossoms is good, the long stiff stems make for artistic flower arrangements.

NASTURTIUM (*Tropaeolum* spp.)

Nasturtiums, if planted after the danger of frost has passed, in the early spring, will furnish an abundance of delightful color for a period of about two months. The many flowers of yellow, orange and maroon make an attractive addition to

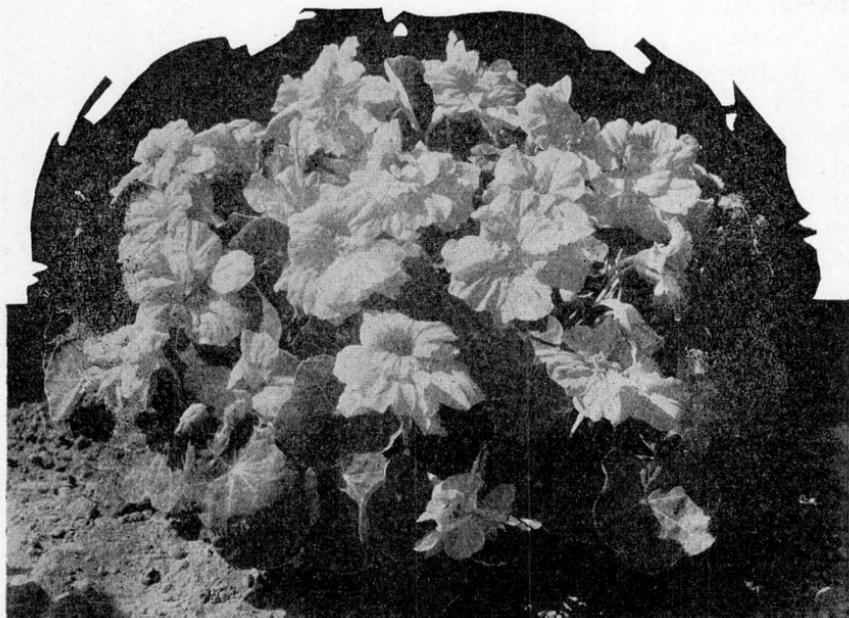


Fig. 17.—Nasturtiums in varied colors and vast quantities are easily produced, and make attractive table decorations.

the garden and are good for cutting. A new race of double flowers has met with considerable favor. Climbing varieties make good screens, although only for a short time. Free from pests, and enjoying light soils, the nasturtium well deserves its popularity.

NICOTIANA (*Nicotiana* spp.)

Because the long, funnel-shaped flowers of most kinds of ornamental tobaccos remain closed and are of little beauty during the day, the principal value of this plant is for its perfume which is delightful when the flowers open in the evening. Very much like commercial tobaccos, the ornamental forms are large, coarse annuals, to three feet, that succeed during the late spring and summer. Several different colors are available.

ORANGE AFRICAN DAISY (*Dimorphotheca aurantiaca*)

Daisy-like flowers, about two inches across, in shades of yellow, are produced in considerable abundance by the dwarf spreading plants of *Dimorphotheca*. The plants do not always succeed and the flowers close in the evening. Hybrids, having flowers of different colors, are available.

PAINTED TONGUE (*Salpiglossis sinuata*)

The striking, highly-colored, gold-banded and veined flowers of the painted tongue resemble ornate petunias. A wide range of bright, bizarre colors is exhibited by these funnel-shaped blossoms, which unfortunately are not particularly numerous on plants, that are, at best, rather difficult to grow. Germination of the seeds is satisfactory in cool weather, but even under good cultural conditions, the small plants perish in such large numbers that continual replacement is necessary. Painted tongue is probably most successful in the northern and western parts of the state on the heavier soils.

PANSY (*Viola tricolor*)

Nothing can approach pansies for edging or for bedding in the late winter and early spring. The newer, highly-developed strains are characterized by gigantic flowers of most striking brilliance and endless variety of design. The pansy is distinctly a cool weather plant, seeds will not germinate well in the warmth of late summer, the young plants that are produced are sickly and slow-growing. However, if fresh seeds are planted in a cool, shaded place in late autumn, no difficulty should be experienced. Set the plants 6 to 8 inches apart so as to obtain a continuous border without breaks. A stock of plants should be kept on hand for a while so that dead or unthrifty plants in the edging may be replaced. The loss from moving, if properly done, is negligible. Pansies will ordinarily stand considerable cold without injury.

PETUNIA (*Petunia axillaris*)

No garden would be complete without petunias. The humble, small single sorts are valuable for color effects, while the more pretentious, single and double fringed and veined giants always attract a great deal of attention because of their unusual texture, size and colors.



Fig. 18.—No spring garden is complete without petunias. This is the single, bedding form. Strikingly beautiful double forms are available.

The small single varieties are very easily grown from seeds, if the flats are protected from ants. Seeds of the large, fringed types are rare and expensive, especially in the double flowered varieties, because they are the result of hand pollination. Not only are the seeds expensive, but germination is often slow and uncertain. Poor stands of small, weak plants usually result from the sowing of the seeds of the giant fringed petunias unless the greatest care is observed in planting, watering and transplanting. The smaller single sorts are more hardy than are the giants, which should be protected when sub-freezing weather is expected. The full, double-fringed varieties are propagated by placing tip cuttings in coarse sand in order to secure plants that are identical with the parent.

PHLOX (*Phlox drummondii*)

Annual phlox is one of the easiest of all plants to grow from seed. A wide variety of color is offered by the trusses of charming little flowers that cover the dwarf, spreading plants throughout the early spring. Excellent as an edging, for ribbon beds, as a ground cover for a sunny expanse, and for naturalizing. Delightful effects are obtained by using a solid color as an edging. Self-sown volunteers are numerous in the vicinity of old plantings and even in places where discarded plants have been piled. If true, rich, clear colors are wanted, it is best to plant fresh seeds rather than to rely on volunteer seedlings, because the colors deteriorate after about two years.



Fig. 19.—Phlox is a low annual, easily established, especially suitable for ground cover in expansive, sunny areas.

Annual phlox is relatively free from pests, transplants most easily, and succeeds in dry, light, sandy soils. The star phlox, with its irregular, pointed petals, is an unusual and interesting novelty that should be more widely grown. New strains of the standard type bear gigantic flowers and are most highly recommended.

PINKS (*Dianthus* in several species)

Pinks are very much at home with us, numerous kinds thriving as annuals, very often as perennials if they are cut back in the early summer and fertilized for a second period of bloom.

No attempt will be made to distinguish the species or hybrids of *Dianthus*, but it is suggested that different kinds be tried, so that the gardener can select those which are best suited to his conditions. The hardiness of the plant, the old-fashioned

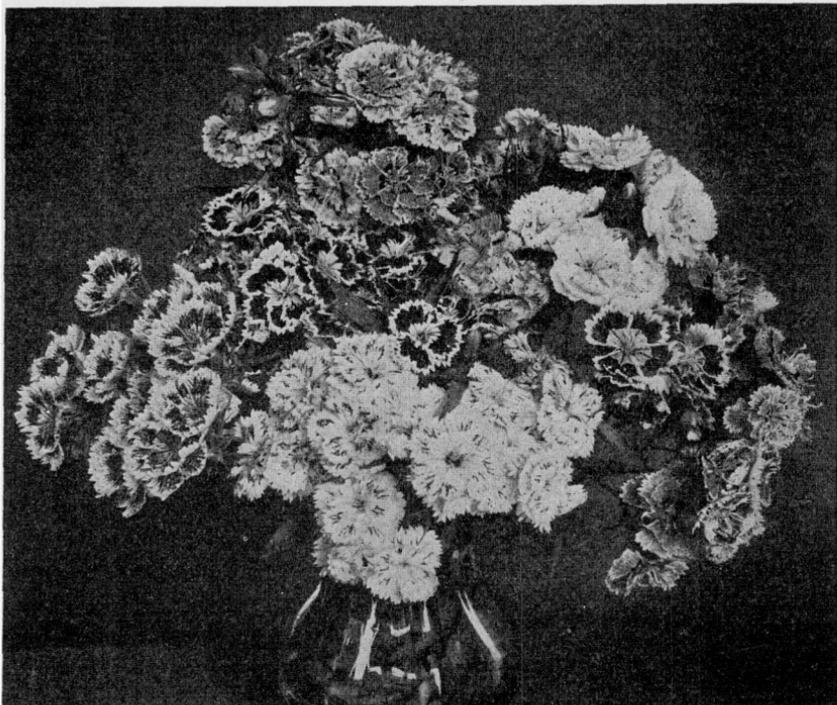


Fig. 20.—Annual pinks in many kinds are well adapted to Florida. Attractive in the flower arrangement.

quaintness of the fragrant blossoms, in their many colors, the ease with which the seeds sprout and grow, commend the annual pinks to everyone who has a garden. Several new hybrid *Dianthus* are charming annuals of considerable merit.

POPPY (*Papaver* in several species)

Poppies have long been garden favorites, and certainly they can never lose the universal popularity they have always enjoyed. The bold, bright colors of the hybrids of the opium poppy and the fragile, fine-textured, delicately tinted flowers of the Shirley group, offer us variety in substance, color and design. The poppies do not transplant well, the seeds do not sprout in hot weather; hence, it is best to sow the seeds in

November, where the plants are to grow. As ants are very fond of poppy seeds, grits should be sprinkled along the rows, so that the seeds will be unmolested. Thin the seedlings to stand a foot or a foot and a half apart. Some of the varieties of the opium poppy volunteer so readily that they occupy the same garden spot year after year.

SCARLET FLAX (*Linum grandiflorum*)

This red-flowered, annual variety of flax that is gradually gaining popularity as a garden subject in Florida deserves every gardener's consideration. A hardy, bushy annual, to two feet,



Fig. 21.—Scarlet flax adds a beautiful, clear red to the garden in the spring. Of easy culture, it should be found in more Florida gardens.

of exceedingly graceful habit, it is covered with charming red open flowers throughout the spring. The clear color is good in the border or in a flower arrangement. Seedlings are easy to grow and can be moved with little or no loss.

SNAPDRAGON (*Antirrhinum majus*)

Although the snapdragon is really a perennial, in Florida it is treated as an annual because it rarely survives the high

temperatures and heavy rains of our summers. Like the pansy and the larkspur it is distinctly a cool weather plant and is really successful only when it is grown through the winter and early spring months.



Fig. 22.—The snapdragon is one of the very best winter annuals for cutting.

The tiny seeds should be sown in a cool, shady place which is protected from ants. After germination, culture is easy, as the seedlings transplant and grow off readily, producing their spikes of delightful blossoms in the early spring. Invaluable as a cut flower, as well as a border subject, the snapdragon in its highly-developed colors is well worth growing. The rust-resistant strains are worth while if snapdragon rust has been prevalent in a given area.

STATICE (*Statice* in several species)

The annual kinds of statice are well adapted to our gardens, thriving, if necessary, under difficulties. *Statice sinuata* has, in the spring, tall spikes of blue or white flowers arising from dwarf, tight rosettes of lobed, spatulate leaves. *S. bonduelli* is very similar in habit, but produces yellow flowers, while *S. suworori*, the rat-tail statice, bears tall graceful spikes of delicate pink flowers. This last-named species deserves wider trial

as it is especially good, and receives favorable comment wherever seen. All of these kinds are desirable garden plants, excellent for fresh bouquets or as everlasting. Like the strawflowers, they are hung in bundles, blossom end down, to dry before being used. Germination is slow, but the plants are easily handled, once they become established.

STOCK

(*Matthiola incana*
annua)

Stocks are old favorites that have developed wonderfully at the hands of plant breeders. Full double varieties in many delightful colors belonging to different strains, the plants of which vary in habit and time of bloom, are offered by the seed houses. The seeds give a good stand and in transplanting it should be borne in mind that the smallest plants are often those whose flowers will be most double, while the robust, thrifty seedlings tend to produce the less desirable single blooms. The plants should stand 8 to 12 inches apart. Aphids or plant lice are fond of stocks and are sometimes very troublesome. A tobacco spray or dust is used in controlling these pests. Several soil-borne diseases that are prevalent during warm weather in old garden sites, may be reduced by the use of soil-sterilizing compounds.

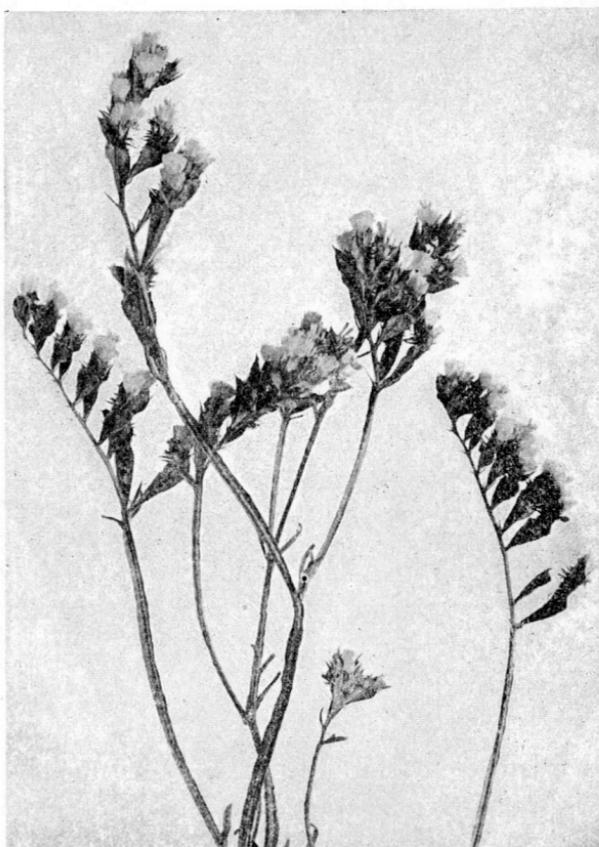


Photo by Harold Mowry

Fig. 23.—*Statice* succeeds easily and can be used either fresh or dried.

STRAWFLOWER (*Helichrysum bracteatum*)

Tall, robust annuals which may attain a height of three feet



Photo by Harold Mowry
Fig. 24.—The strawflower is used principally in dried, permanent bouquets.

if well grown, the strawflowers will supply attractive material for dried bouquets. Cut the flowers when they are about half open, strip off the leaves, and hang in bundles, blossom end down, in a shady place until they dry. A range of gay colors is available. The plants will stand some cold, but are best set out after the danger of frost has passed. Strawflowers are of some value in the garden scheme, but there are so

many plants that their chief merit give greater returns as regards color, that seems to lie in their use as dried bouquets.

SUNFLOWER (*Helianthus* in several species)

Great variation in height, habit and size of blossoms is available in this group of heat-tolerant annuals. They are good material for screens, boundaries and for cutting during the months of May through September if successive sowings of seed are made. These should be sown where the plants are to stand, and the seedlings should be thinned to two or three foot intervals, depending upon the habit of the variety. Refined types are being sold by the seedsmen that are a far cry from

the old-fashioned, coarse kinds. Mildew attacks some varieties but does little harm, apparently. It can be controlled by dusting with sulfur.

SWAN RIVER DAISY (*Brachycome iberidifolia*)

An annual of very fine texture whose blossoms are admirably adapted to use in miniature arrangements is available in the Swan River daisy. The plants grow about a foot in height and bear daisy-like blossoms that are blue, white or rose in color. The plant may be used as an edging subject, but it is probably best adapted to cutting.

SWEET PEA (*Lathyrus odoratus*)

Sweet peas are, without doubt, among the most important of our winter and spring blooming annuals. Their fragrance, delicacy of texture and design have won for them a place in everyone's heart, but at the same time it must be conceded that the host of pests which prey upon them are most alarming and often most difficult to control.

The Spencers, now the most popular group, have reached a remarkable state of perfection. Winter flowering or "early" strains planted in the early fall should start blooming in December if conditions are favorable, and the spring or "late" flowering strains, if planted in the winter, should produce a wealth of bloom in March, April or May. The list of varieties is long—no kinds can be recommended as being preferable to others, one must try different sorts in order to discover which are best for his purpose, or be content with the "mixed packets".

There are many ways of planting sweet pea seeds, many ideas, often at variance, as to how to prepare the seedbeds. The method described herewith, although not necessarily the best, has proven satisfactory. If the soil is light, sandy, infested with root-knot, remove it from a trench two feet deep where the trellis is to stand. In the bottom of this trench place six inches of rotted cow manure, fill to the ground level with a good compost of rich hammock soil. Root-knot will probably not be troublesome for the first season if the soil is taken from a heavily shaded, wooded hammock. It is important to treat the bed with a soil-sterilizing compound. Plant the seeds in a staggered double row, so that the trellis may be erected between the rows. When the seedlings emerge treat the bed with the soil-sterilizing compound to control damping-off. It is best

to thin the plants to stand a foot apart. When the plants are six inches high apply steamed bone meal so as to make the ground white, then stir it in lightly. A mulch of oak leaves or peat moss is valuable in conserving the moisture. When tendrils appear some sort of support must be provided. This may be poultry netting stretched between posts, a trellis of cotton cords running vertically over horizontal bars at top and bottom, or a line of brush stuck firmly into the ground between the rows.

Frequent cutting of the blooms is essential to prevent formation of seedpods which will materially reduce the period of flowering. When the stems begin to get short, apply nitrate of soda in a water solution at the rate of one tablespoonful to the gallon.

Aphids, frequent visitors to sweet peas, are controlled by tobacco sprays, and red spiders are forestalled by dusting with sulfur or syringing the vines with water under high pressure. Sweet peas are hosts to diseases whose effects are most discouraging. Little is known about their control. Remove and burn badly infected plants and continue to use soil disinfectants.

The vines will stand considerable cold but the flower buds are so easily injured that protection on cold nights is suggested after the plants have commenced to blossom.

TAGETES (*Tagetes signata pumila*)

This little marigold relative seems to have been overlooked by Florida gardeners. As a tender but heat-tolerant edging plant, it should be a valuable form to take the place of the pansies when they are removed from the garden in May. The plants, about 12 inches tall, are covered with endless numbers of tiny, single yellow blossoms. Of easiest culture this little *Tagetes* may be grown with perfect success from seeds and from tip cuttings.

THYMOPHYLLA (*Thymophylla tenuiloba*)

This little weed (Fig. 1) is an edging plant par excellence. Native to Texas and Mexico, an escape from cultivation in parts of Florida, the *Thymophylla* creates a very favorable impression wherever it is seen. Tiny plants of excellent habit are covered with half-inch yellow daisies throughout the spring. Apparently free from insects and diseases and of easy culture, this annual cannot be too highly recommended to Florida gardeners. Germination of the seeds takes about 15 days.

TORENIA (*Torenia fournieri*)

As an edging or rock garden subject that will withstand heat and succeed with little attention, the *Torenia* deserves consideration. The plants, not over a foot tall, are covered throughout the summer with masses of unusual white or lavender, yellow blotched flowers. The habit of this sun-tolerant annual is creeping, the runners or stems rooting where they come into contact with the ground. The rooted tips, of course, may be separated and used as new plants. Chance seedlings are present under

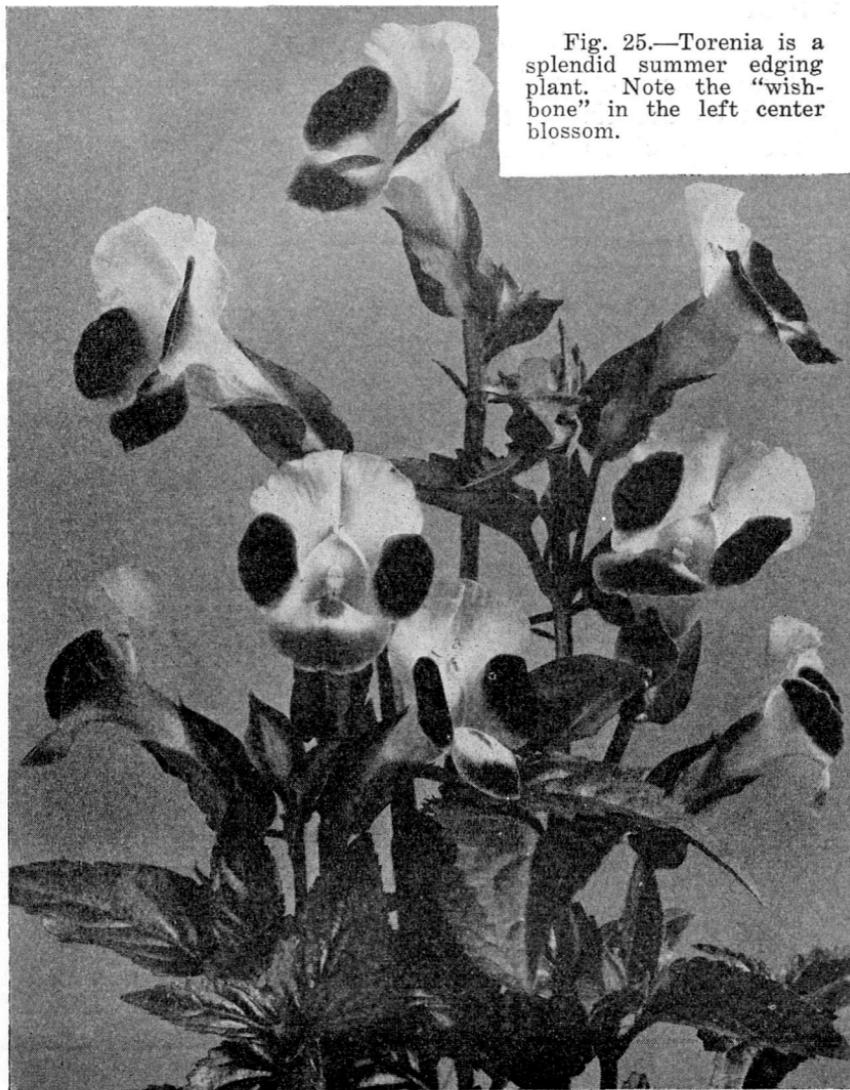


Fig. 25.—*Torenia* is a splendid summer edging plant. Note the "wish-bone" in the left center blossom.

favorable conditions. It is hoped that *Torenia* will receive wider trial in Florida gardens.

VERBENA (*Verbena hybrida*)

The modern verbena, with its globular heads of large individual flowers, is a particularly desirable garden subject. Although ordinarily a perennial in Florida, it may be treated as an annual. Strong, clear colors are characteristic of this hardy, low growing herb. If no particular color is wanted, the plants may be grown from seeds, however, propagation of choice kinds should be by cuttings.

ZINNIA (*Zinnia elegans*)

When one considers the remarkable thriftiness, the heat tolerance of the zinnia, the facility with which it grows in adverse conditions, it must be awarded a place of importance



Fig. 26.—The zinnia is a leading cut flower for the summer months.

on our list of summer blossoming annuals. It is easily realized that our gardens, from July to November, would be colorless, indeed, if it were not for this most admirable of flowers.

Plant breeders have worked long and patiently with the zinnia and now we may have many charming clear colors, in blossoms that range in size from tiny Mexican hybrids to giant dahlia-flowered kinds that are, perhaps, eight inches across. There are pompom sorts, curled and crested, picotes, quilled and others that contribute variety to the flower arrangement.

The seeds may be planted either in flats or in the garden after danger of frost has passed. Sowings should be repeated every six weeks so as to have a succession of new plants to replace those which have ceased blooming. The lilliput kinds should stand a foot apart, while the dahlia-flowered giants should not be set closer than two feet, if they are to receive proper care. Abundant plant food and water should be available to these gross feeders. As garden subjects, as well as for cutting, the zinnias cannot be excelled during the summer and early fall months. The Mexican hybrids and lilliputs are especially good as edging plants.

PLANTING GUIDE

Name	When to Sow	Approximate	Tender or	Page
	Seeds	Time in Bloom	Hardy	
Alyssum*	Aug.-Jan.	Oct.-June	Hardy	10
Aster	Feb.-April	July-Aug.	Tender	10
Baby's Breath	Aug.-Dec.	Jan.-June	Hardy	10
Balsam	Feb.-April	April-Nov.	Tender	11
Blanket Flower*	Sept.-Dec.	April-Aug.	Hardy	11
Blue-Eyed African Daisy*	Aug.-Jan.	March-June	Hardy	12
Blue Lace-Flower	Feb.-April	July-Aug.	Tender	12
Browallia	Aug.-Oct.	Dec.-May	Hardy	12
Butterfly Flower	Aug.-Feb.	April-June	Tender	12
Calendula	Aug.-Oct.	Dec.-June	Hardy	12
California Poppy*	Sept.-Dec.	March-June	Hardy	14
Calliopsis	Oct.-Dec.	April-June	Hardy	14
Candytuft	Aug.-Dec.	March-June	Hardy	15
Carnation	Aug.-Dec.	March-June	Hardy	15
Celosia	Feb.-April	May-Sept.	Tender	15
Chinese Forget-Me-Not*	Aug.-Feb.	April-July	Hardy	15
Chrysanthemum (annual)	Feb.-March	May-July	Tender	15
Clarkia	Sept.-Nov.	April-June	Hardy	16
Cornflower	Aug.-Oct.	Dec.-June	Hardy	16
Cosmos (<i>bipinnatus</i>)	Feb.-April	May-Aug.	Tender	17
Cosmos (<i>sulphureus</i>)*	May-Aug.	Oct.-Nov.	Tender	18
Cypress Vine*	March-May	July-Sept.	Tender	18

Name	When to Sow Seeds	Approximate Time in Bloom	Tender or Hardy	Page
Delphinium	Oct.-Nov.	March-May	Hardy	18
Double English Daisy	Sept.-Oct.	March-May	Hardy	18
Flora's Paintbrush*	Aug.-Dec.	March-June	Hardy	19
Floss Flower*	Feb.-April	May-Aug.	Tender	19
Gilia	Sept.-Dec.	April-June	Hardy	20
Globe Amaranth	March-April	May-July	Tender	21
Godetia	Sept.-Dec.	April-June	Hardy	21
Gourd	Feb.-April			22
Hunnemania	Nov.-Dec.	April-June	Hardy	22
Larkspur*	Oct.-Dec.	March-May	Hardy	23
Leptosyne	Aug.-Nov.	March-June	Hardy	24
Lobelia	Sept.-March	Nov.-May	Tender	24
Lupine	Aug.-Dec.	March-June	Hardy	24
Marigold*	Feb.-May	Sept.-Nov.	Tender	25
Mignonette	Sept.-Nov.	March-May	Hardy	26
Morning Glory	Feb.-April	May-Nov.	Tender	26
Moroccan Toadflax*	Sept.-Nov.	Dec.-May	Hardy	26
Moss Rose	Feb.-July	May-Oct.	Tender	27
Mourning Bride	Sept.-Dec.	April-June	Hardy	27
Nasturtium	Feb.-March	April-June	Tender	28
Nicotiana	Aug.-Nov.	March-June	Hardy	29
Orange African Daisy	Aug.-Feb.	April-July	Hardy	29
Painted Tongue	Aug.-Nov.	April-May	Hardy	29
Pansy	Aug.-Nov.	Jan.-May	Hardy	29
Petunia*	Aug.-Jan.	Jan.-July	Hardy	30
Phlox*	Aug.-Feb.	March-July	Hardy	31
Pinks	Aug.-Feb.	Jan.-July	Hardy	31
Poppies*	Nov.-Dec.	March-May	Hardy	32
Scarlet Flax	Sept.-Nov.	April-June	Hardy	33
Snapdragon	Aug.-Dec.	Feb.-June	Hardy	33
Statice	Aug.-Dec.	April-Aug.	Hardy	34
Stock	Aug.-Dec.	Feb.-May	Hardy	35
Strawflower	Oct.-April	Feb.-Aug.	Tender	36
Sunflower	Feb.-April	June-Aug.	Tender	36
Swan River Daisy	Sept.-Nov.	Jan.-April	Hardy	37
Sweet Pea	Sept.-Nov.	Jan.-April	Hardy	37
Tagetes	Feb.-April	April-July	Tender	38
Thymophylla*	Sept.-Nov.	Feb.-June	Hardy	38
Torenia*	Feb.-May	April-Sept.	Tender	39
Verbena	Aug.-Dec.	Feb.-July	Hardy	40
Zinnia*	Feb.-Aug.	May-Oct.	Tender	41

*Re-seed and volunteer readily.