Growing HOLLIES

Home and Garden Bulletin No. 130
U.S. DEPARTMENT OF AGRICULTURE

Growing Hollies

Hollies are among the most popular ornamental trees and shrubs. Nineteen species are native to the United States; about 37 species are grown in two major areas. The eastern area extends from the Atlantic coast to central Texas and Oklahoma, and south of a line from Boston to central Illinois and Missouri. The western area is the coastal region of Washington, Oregon, and California.

Hollies will not grow in most parts of the Southwest, Rocky Mountains, or Plains States.

Although hollies will grow in various kinds of soils, they grow best in neutral to slightly acid, well-drained loam that is fairly light and sandy.

For success in growing hollies—

- Buy nursery-grown plants.
- Plant them in early spring.
- Select a well-drained planting site, and prepare planting holes carefully.
- Maintain a mulch around the plants.
- Water frequently during dry weather.

DESCRIPTION

From the many species of hollies, you can get any shape or size plant you need. Shrubs range from 1 foot to 20 feet in height, and full-grown trees are 20 to 60 feet tall. Hollies are evergreen or deciduous (leaf-shedding). Leaves may be spiny or spineless.

Hollies can be grown from seed or cuttings. When grown from seed, they may take from 3 to 20 years to flower; the number of years depends on the species. Most hollies are grown from cuttings; these bloom in 2 to 3 years and produce berries in 6 to 8 years. Male and female flowers are borne on separate plants.

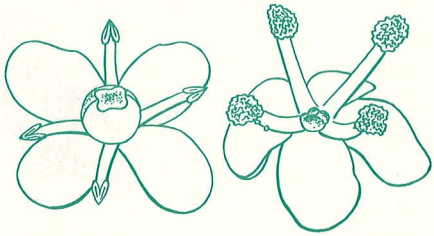
Female hollies produce berries after insects transfer pollen from male to female flowers. Berries are red, yellow, or black; the color depends on the species and variety. Male hollies produce no berries.

KINDS OF HOLLIES

Hollies may be roughly classified into six principal groups. They are: American, English, Chinese, Japanese, miscellaneous evergreen species, and deciduous.

American holly, *Ilex opaca,* is a broad pyramidal tree with dull, olive-green leaves. Most varieties have spiny leaves and red berries, but some forms have spineless leaves and red or yellow berries.

English holly has glossy foliage, and several of its forms have variegated leaves. You can get varieties that pro-



Holly flowers: *Left,* female; *right,* male.

ST–2161–23

American holly, *Ilex opaca.*

duce either yellow or red berries. *Ilex aquifolium* and hybrids between it and *Ilex perado* make up the group. The Oregon hollies of the Christmas trade are in this classification.

Chinese holly, *Ilex cornuta,* has glossy foliage and large red berries. It may have sharply spined leaves, but it is best known by its spineless-leaved form, *Ilex cornuta* "Burford."

Japanese holly, *Ilex crenata,* includes many forms and is the most widely grown of all the hollies. Because of its small spineless leaves, like those of the box plant, and its black fruit, most people do not recognize it as a holly. The dwarf form, *Ilex crenata* "Helleri," is one of several that are widely grown.

The miscellaneous evergreen hollies include the native blackfruited Inkberry, *Ilex glabra,* which is the hardiest of all evergreen hollies; two asiatic species: *Ilex pedunculosa,* which has red berries suspended on long stalks, and *Ilex pernyi,* a slow-growing species with spiny leaves; *Ilex aquipernyi,* a hybrid of *Ilex pernyi* and *Ilex aquifolium;* and *Ilex* "Foster," a hybrid between *Ilex opaca* and *Ilex cassine,* which can be used as a hedge.

The only deciduous holly usually available from nurseries is the native Winterberry, *Ilex verticillata,* which is also called Black Alder. It normally grows in swamplands but will adapt itself to drier garden soils. The Winterberry produces many red berries at Christmas time.

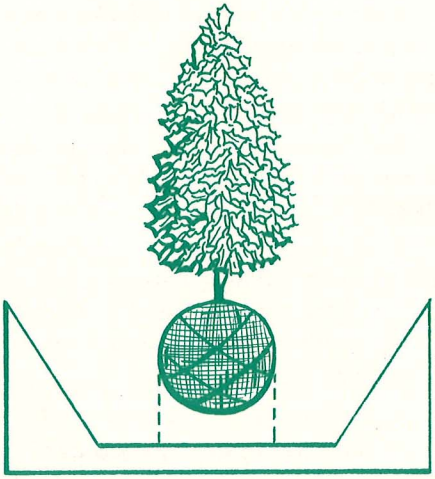
SELECTING TREES

Some kinds of hollies will grow in colder temperatures than others. Ask a reliable nurseryman, your county agricultural agent, or the horticultural department of your State agricultural college to recommend species or varieties best suited to your area.

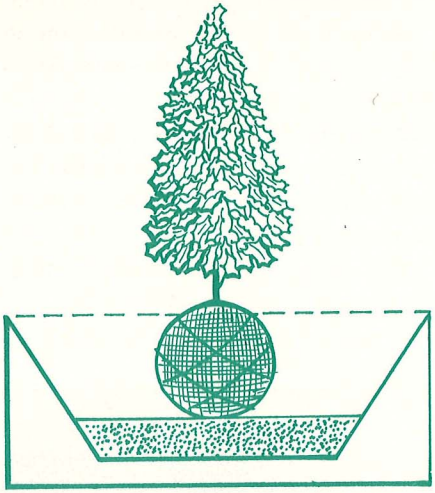
Buy the plants from a nursery. Most dealers sell hollies planted in a can or in a ball of soil wrapped in burlap.

ST–2161–21

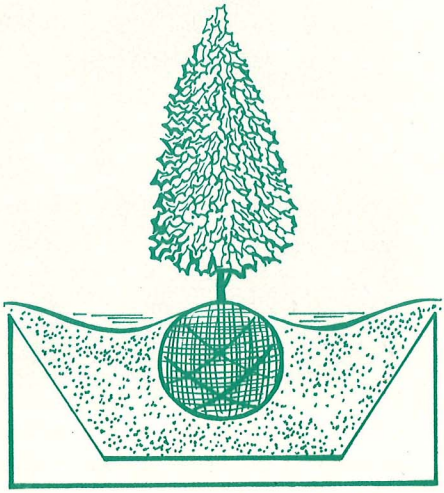
Japanese holly, *Ilex crenata* "High Light."



Dig the planting hole twice as wide and slightly deeper than the size of the rootball.



Place the tree in the hole and pack soil under the roots until the top of the rootball is slightly above the level of the ground.



Fill the hole with good soil and pack the soil firmly around the rootball. Leave a slight basin at the top to hold water.

Transplanting hollies from the woods is usually unsuccessful. They are hard to keep alive because most of the roots are cut off when the plants are dug. Also, you have no way of knowing the sex of wild hollies when they are small enough to dig. Male and female hollies look alike until they reach flowering age. When you buy nursery-grown stock, the sex of the plants is known.

PLANTING

The best time to plant hollies is in early spring before growth starts. However, fall planting has been successful in warm regions.

Select a well-drained site that will provide sufficient room for the full-grown plant. Hollies need space if they are to retain their lower branches.

Dig the planting hole twice as wide and slightly deeper than the size of the rootball. Refill the hole one-half its depth with good soil. If the soil is heavy, mix it with sand and organic matter such as leaf mold or well-decayed manure. Tamp the soil to provide a firm base for the tree.

If the roots of the holly are wrapped in burlap, you need not remove the burlap before setting the plant in the hole. After the plant is set, you can cut the twine around the top of the rootball and fold back or cut off exposed parts of the burlap.

If the holly is in a can, cut away the side of the container with metal shears and remove the rootball carefully. Do not pull or knock the rootball from the can.

Place the holly in the hole and pack soil under the roots until the top of the rootball sits slightly above the level of the ground. Then fill the rest of the hole with soil.

Pack the soil tightly around the rootball. Leave a slight basin at the top to hold water. Then water the plant thoroughly to settle the soil around the roots.

CARE

Mulching

After planting, mulch the soil beneath the branches with a 3-inch layer of peat moss, leaf mold, or forest litter. Spread the mulch so that it extends beyond the tips of the branches. To reduce damage by mice and decay, place the mulch about a foot away from the trunk of the plant.

Maintain the mulch continuously. It protects the shallow roots from alternate freezing and thawing, reduces weed growth, and holds moisture in the soil.

ST–2161–7

Mulch is being applied to a Chinese holly, *Ilex* hybrid "Nellie R. Stevens."

ST–2161–18

A Chinese holly, *Ilex chinensis*, is being pruned to shape the tree.

Watering

Normal rainfall usually provides enough moisture for hollies except in areas where irrigation is necessary throughout the growing season. During dry weather, soak the root area thoroughly at weekly intervals. Be careful not to drown trees growing in poorly drained soil.

Weeding

Ordinarily, a mulch will keep weeds from growing. But if they do grow, pull them by hand or remove them with a hoe. If you use a hoe, be careful not to injure the shallow roots.

Fertilizing

Fertilize hollies in mid-March or late fall. The kind of fertilizer you use will vary with the type of soil. Generally, a fertilizer specially prepared for acid-loving broadleaf evergreens is satisfactory.

Spread the fertilizer on the soil around the tree to about 1½ feet beyond the tips of the branches. Do not let the fertilizer touch the trunk. Normally, you will need one-half pound of fertilizer for a tree that has a trunk diameter of one-half inch or less at the base. For larger trees, use 1 to 2 pounds of fertilizer for each inch of trunk diameter.

After applying fertilizer, water it thoroughly into the soil.

Pruning

Hollies usually need little pruning except to train a leader or to remove dead, diseased, or damaged branches. You may prune hollies anytime during the dormant season. A good time to prune is at Christmas when you remove branches for decorations or just before new growth starts in the spring.

If several stems develop where you want only one leader (main stem), remove the rest. If part of a leader is dead or injured, cut it back to healthy wood just above a bud or leaf. If the entire leader is dead, cut it back to the nearest whorl of branches.

You can control the direction of a branch by pruning it back to the proper bud. The bud points the direction that the new shoot will grow.

Prune hollies only to shape the plant and to remove dead or injured parts. If you cut a branch completely back to the trunk, or cut a twig back to a branch, new growth may not appear. Unless you want to remove an entire branch or twig, cut it back only to a bud.

Coat pruning cuts over one-half inch in diameter with an asphalt-base tree-wound dressing. Treatment of smaller wounds usually is unnecessary.

FAILURE TO FRUIT

Most hollies must be pollinated before they will produce berries. The only commonly grown holly that will produce berries without pollination is *Ilex cornuta.*

If your hollies fail to produce berries, the reason may be—

- The plant is male.
- The plant is too young to flower.
- The plant is female and has no nearby flowering male to pollinate it.
- The plant is female, but nearby male plants do not blossom at the same time as the female. A male plant of the same species as the female is the best pollinator.
- Late spring frosts or cold weather injured the flowers.
- Cold, rainy weather prevented insects from spreading pollen effectively.

DISEASES AND INSECTS

Only a few diseases and insects attack hollies in the United States. Poor appearance of trees is often caused by improper planting, dry weather, alternate freezing and thawing of the roots, and planting varieties that are not adapted to the area.

You can prevent much damage from diseases and insects by giving hollies plenty of growing space and pruning out crowded twigs and branches. You should see your county agricultural agent or State agricultural experiment station for information on how to control diseases and insects.

Diseases in the East

Tar spot

Tar, or black, spot causes considerable damage to American hollies, especially in the Southern States. A fungus, *Phacidium curtisii,* attacks the plants during prolonged wet weather. Leaves and berries turn black.

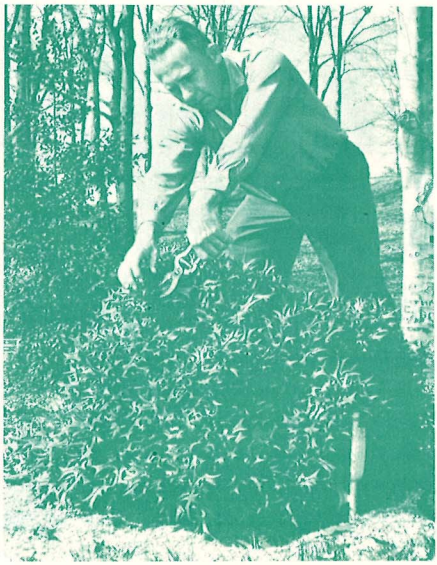
Root and twig diseases

Fusarium dieback and a few other root and twig diseases attack hollies in the East but damage usually is slight. These diseases cause canker in the bark and dieback of new twig growth. Cut out the damaged parts and destroy them.

Diseases in the West

Phytophthora leaf and twig blight

This is the most widespread disease of hollies in the West. During cool, rainy weather, dark spots appear on leaves and black cankers form on branches. Later, the infected leaves fall off and the black cankers turn brown. Young trees may die.



ST–2161–12

A damaged twig is being pruned from a Chinese holly, *Ilex cornuta "Rotunda."*

Sooty mold

Sooty mold fungi form a dark green or black layer of mold on the upper surfaces of the leaves. The fungi grow on honeydew that scale insects deposit on the leaves.

You can prevent sooty mold by keeping trees free of insects.

Leaf spots

Several kinds of fungus leaf spots can damage hollies.

Small, circular swellings or large, reddish swellings sometimes form on the undersides of leaves. The cause is unknown.

Large, purple-red spots may appear on the upper surfaces of leaves. Frost damage or insect and spine punctures cause these spots.

Plant food shortages may turn leaves yellow or white. This disease is common in spring when new growth starts and in late summer after berries have formed.

Insects in the East

Holly leaf miners

Holly leaf miners attack English and American hollies. Adults are black flies about 1/16-inch long. They lay their eggs on the undersides of young leaves in May. The larvae are greenish yellow and grow to about 1/8-inch long.

Adults puncture the young, tender leaves as they feed, causing brown puncture marks and distortion of the leaves. Larvae tunnel and feed in the leaves during summer and fall and overwinter in the leaves as larvae or pupae. Blotches or serpentine mines appear on the upper surfaces of infested leaves.

Southern red mite

Southern red mites damage many holly shrubs in the South. The adult females are spiny, nearly black, and about 1/50-inch long. Eggs and young mites are red.

Mites feed on both the upper and lower surfaces of the leaves. They are most abundant in spring and fall. Infested leaves turn gray or brown and fall from the plants.

Insects in the West

Holly leaf miners

These insects are discussed under "Insects in the East."

Soft scale

Soft scales are flat, soft, and yellowish-green or greenish-brown insects about 1/8-inch long. They live on the stems and leaves of hollies throughout the year.

Infested plants become weakened and stunted. Honeydew and sooty mold appear on the leaves.

Holly bud moth

Adult holly bud moths are grayish insects mottled with brown and have a 1/2-inch wing spread. They lay their eggs in July and August on leaves and twigs.

Larvae hatch in the spring. They are yellowish to greenish gray and are about 1/2-inch long. Leaves infested by the larvae turn brown. The larvae pupate in leaves on the ground; rake and destroy the leaves of infested plants.

Information for this publication was furnished by Crops Research Division and Entomology Research Division, Agricultural Research Service
Washington, D.C.
Issued November 1967