

# Daylilies...Always Room for One More!



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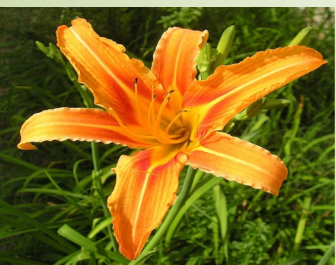


Photo from Blue Ridge Daylilies, Alexander, NC



## Species, Fulva, Kwanso and Beyond...

Chinese oral tradition said that what we know today as the genus *Hemerocallis* was used both for medicinal purposes as well as food from its buds and roots. Confucius first documented it in a poem. The plants remained mostly used for their medicinal properties until brought to Europe in the 1500s.



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**There are over 80,000 registered  
Daylilies!!**



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# Why should I grow Daylilies?

## **New Garden Palette Each Day**

Yes, each flower really only lasts ONE DAY. The word Hemerocallis is derived from two Greek words meaning “beauty” and “day.” The flowering period of an established clump is usually several weeks long. Many cultivars have more than one flowering period! Although not required, many gardeners prefer to “deadhead” spent blooms each day so the plantings look clean and new blooms are able to open unobstructed.

## **All Colors of the Rainbow**

Since the early 1930s, hybridizers throughout the world have made great improvements in daylilies. Originally, the only colors were yellow, orange, and rusty red. Today, we have colors ranging from near-whites, pastels, yellows, oranges, pinks, vivid reds, green, deep crimson, purple, neon pink, nearly true-blue, and many fabulous blends and eye-popping multi-colored patterns.



# Why should I grow Daylilies?

## **Diversity in Size, Color & Form**

Daylilies offer a wide range of bloom sizes, scape height and bloom time. By carefully selecting plants, daylilies will show off in the garden from early May to late October, depending on zone. Some blooms can reach 15” across, while some daylilies grow to be over 60” tall. A trio of daylilies in various sizes and shapes planted together in a mixed bed provides a firework of color throughout the season, while maintaining a good foliage structure.

## **Easy to Obtain, Grow & Propagate**

There are dozens of reliable sources available for every budget and taste through the American Daylily Society Source List and local daylily clubs. Daylilies can thrive in most ordinary top soils without any required fertilizing or insect control measures. Daylily cultivars will generally multiply each year forming a robust clump of fans rather than dying out over time. Additionally, modern varieties do not encroach upon other plants and spread into unwanted areas — they’re perfectly behaved perennials.

**The daylily is sometimes referred to as the perfect perennial because it is:**

- Available in a rainbow of colors and a variety of shapes and sizes
- Able to survive with very little care in a wide range of climates.
- Suitable for all types of landscapes.
- Drought tolerant when necessary, with relatively few pest and disease problems in most gardens. See descriptions of pests and diseases that may be encountered .
- Adaptable to various soil and light conditions.
- Known to bloom from late spring until autumn.



The daylily can be characterized as a clump-forming, herbaceous perennial with fibrous or somewhat tuberous roots. The daylily has four fairly distinct growing parts.

**Roots:** The roots of a daylily are long, slender, and fibrous. Or, they may be enlarged into spindle-shaped tubers with additional roots at their bases. The roots absorb water and minerals for use by the plant, and serve as storehouses for food produced by the leaves.

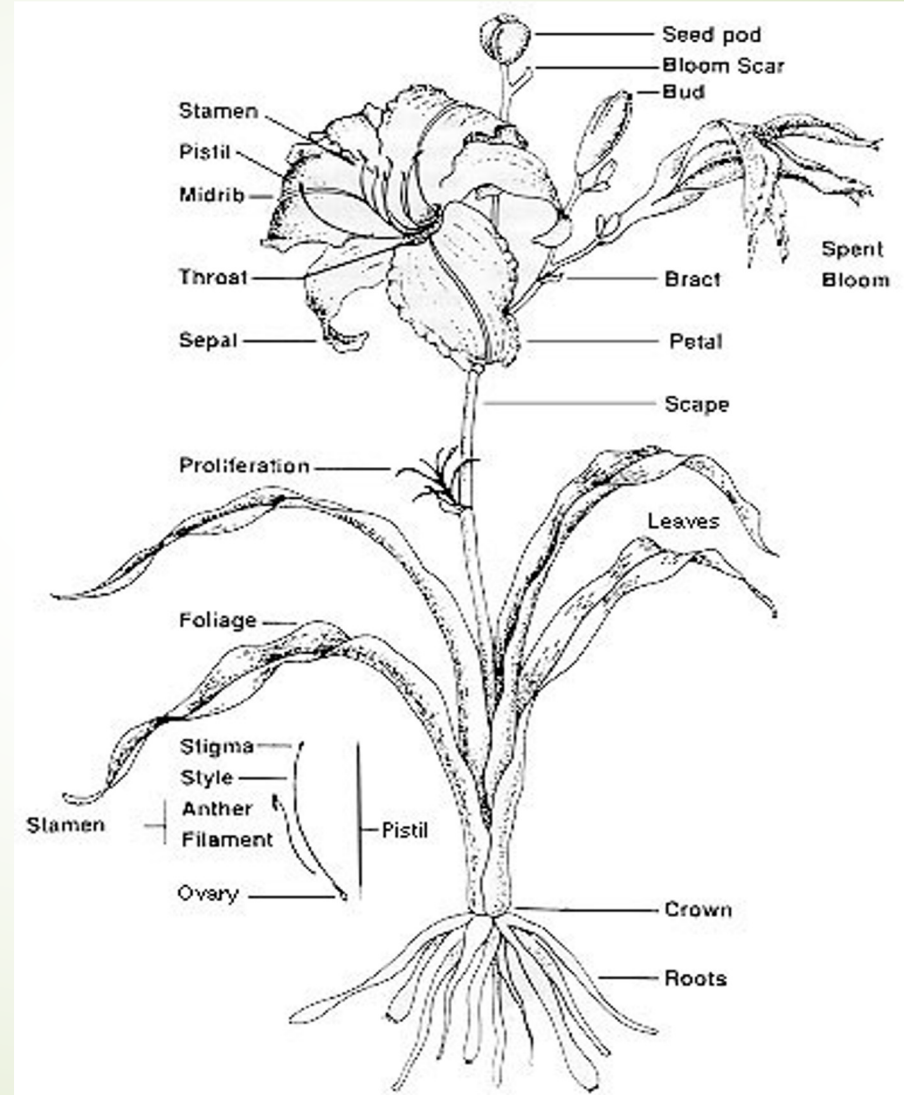
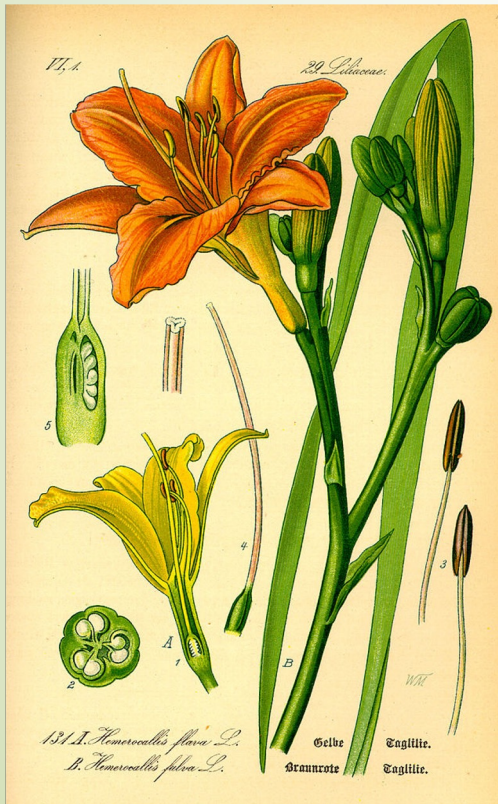
**Crown:** The crown of a daylily is the stem of the daylily plant. It is the solid white core located between the leaves and the roots. The crown produces leaves and scapes from its upper surface. The roots are produced from its sides and lower surface.

**Leaves:** The leaves of daylilies are long, slender, and grass-like. They have a prominent center rib on the underside. The leaves are arranged opposite each other on the crown, giving a flattened appearance which causes the plant to be referred to as a “fan.” Multiple fans of a single plant form a “clump.”

**Scape:** The scape of a daylily is a leafless stalk which bears the flowers. Most have two or more branches, each bearing several flower buds. Below the branches, the stalks have a few leaf-like “bracts.” Sometimes, a small plantlet grows at the junction of a bract and the scape. This is called a “proliferation” and can be rooted to produce another plant.



# Plant Structure





## Color

Modern hybrid daylilies have a remarkably diverse color range, especially considering that the wild types from which they have been bred were only in shades of yellow, orange, fulvous (i.e., dull reddish yellow), and rosy-fulvous. Today, the only colors notably lacking are pure white and pure blue. Needless to say, hybridizers are avidly pursuing these two colors.

### Basic Flower Colors

The outer portion of the daylily flower is considered to be the basic color of the flower. The present daylily color range includes:

- **Yellow** – all shades from the palest lemon, through bright yellow and gold, to orange.
- **Red** – diverse shades of scarlet, carmine, tomato-red, maroon, wine-reds, and blackish-reds.
- **Pink** – from pale pink through rose-pink to rose-red.
- **Purple** – from pale lavender and lilac to deep grape or violet.
- **Melon or Cream-Pink** – from palest cream shades to deep cantaloupe shades.

**Notes:** Buff, Brown, Apricot, and Peach are thought to be variations of pink plus yellow. Near-whites are found among the palest tints of yellow, pink, lavender, or melon.



## Color Continued

### Throat Color

The center area of the daylily flower is called the throat. In most daylilies, the throat color differs from the rest of the flower. Usually it is a shade of green, yellow, gold, orange, apricot, or melon.

### Stamen Color

Like the throat, the stamens may be a different color from the basic flower color and the throat color. Or, the stamens may be of matching color. Usually they are light yellow to greenish. The anthers at the tips of the stamens are often darker in color – sometimes black.

Daylily blooms have a wide array of different forms or shapes. Currently, the AHS officially recognizes the following forms for exhibition purposes: single, double, spider, unusual form, polymerous, and sculpted flowers:

**Single** Daylily flowers that have three petals, three sepals, six stamens and one pistil.

**Double** Double daylilies come in several different forms. 'Hose-in-Hose' doubles have extra whorls (layers) of petals so that there appears to be a flower within a flower. 'Peony type' doubles have petaloid (petal-like) tissue on the stamens inside the normal petal whorl.

**Spider** A flower whose petals have a length-to-width ratio of at least 4 to 1 (i.e., 4:1). Length is measured with the segment fully extended. Width measurement is taken as the flower grows naturally.

**Unusual Form** A class of daylilies based exclusively on the shapes of the petals or sepals. These shapes include Crispate (pinched, twisted, or quilled), Cascade, and Spatulate. One or more of these shapes must be displayed on at least 3 petals or 3 sepals.

**Polymerous** Polymerous is an adjective used to designate a daylily with more than the normal number of segments in each floral whorl, i.e., more than the normal three sepals (usually four or five) in the outer whorl and more than three petals (usually the same number as sepals) in the inner whorl.

**Sculpted** A term used to describe three-dimensional structural features involving or emanating from the throat, midrib or elsewhere on the petal surfaces. Sculpted forms belong to one of three different groups: Pleated, Cristate (formerly Crested) and Relief.

**Multiform** This term is used where the daylily in question has been registered correctly as exhibiting 2 or more of the forms spider, unusual form, polymerous, or double. Examples of a multiform daylily would be one that is both a spider and an unusual form, or a polymerous double.



*Other descriptive terms of daylily form or shape characteristics are:*

**Circular** When viewed from the front of a bloom, the flower appears round. Segments tend to be short, wide and stubby, and generally overlap, giving a full appearance. See also: Recurved

**Flat** When viewed from the side of a bloom, flowers are perfectly flat except for the concave throat.

**Informal** When viewed from front of bloom, flower segments have no definable shape. Segment placement may be irregular, widely spaced or floppy.

**Recurved** When viewed from the side of a bloom, flower segments flare, but the ends of some segments roll back or tuck under. When the sepals are all recurved, and the petals are not, the result is a triangular form, when both sepals and petals recurve, the result is often the round form.

**Star** When viewed from front of bloom, flower segments tend to be long and pointed. There is space between the segments, and the shape looks like a three-pointed or six pointed star.

**Trumpet** When viewed from side of bloom, flower form resembles a true lily. Segments rise from throat in an upward pattern with little flare.



## Blooming Sequence

Daylilies bloom from early spring until frost, depending on the coldness of the climate. To indicate when a particular cultivar blooms during the season, daylily growers use the following terms and abbreviations (or symbols):

- **Extra Early (EE)** – These daylilies are the first to bloom, and vary from March or April in the extreme South, to May or June in the North.
- **Early (E)** – These daylilies bloom three to five weeks prior to the mass of bloom at midseason.
- **Early Midseason (EM)** – These daylilies bloom one to three weeks before the height of bloom of most cultivars.
- **Midseason (M)** – These daylilies bloom at the peak of the daylily bloom in your own garden. This ranges from May in the South to July in the North.
- **Late Midseason (LM)** – These daylilies bloom one to three weeks after the height or peak of bloom in your garden.
- **Late (L)** – These daylilies bloom when most others have finished blooming, usually four to six weeks after the peak of the season.
- **Very Late (VL)** – These daylilies are the last to bloom, often late in the summer in the South, fall in the North.
- **Rebloomer (Re)** – These daylilies bloom more than one time during a single season. Some of these bloom early (e.g., May or June) and then repeat in the fall. Others have a succession of bloom periods, one shortly after another for several months.

Plants all have a basic complement of chromosomes. Most plants are diploids. They have two identical sets of chromosomes in each cell. Polyploids are plants with more than two sets of chromosomes. A tetraploid is only one of a whole series of polyploids. Triploids have three sets of chromosomes, tetraploids have four sets of chromosomes, et cetera.

**Tetraploid** daylilies are heralded by some growers as having a number of advantages over diploids. In the tetraploid:

- Flowers tend to be larger.
- Colors of the flower tend to be more intense.
- Scapes tend to be sturdier and stronger.
- Substance of both flower and foliage tend to be heavier.
- Vegetative vigor in leaf, stem, and flower tend to be greater.
- Breeding possibilities tend to be greater because of an increased number of chromosomes

**Diploid** daylilies continue to charm growers with their exquisite flower form, grace, and color.

- Good pink daylilies are still more prevalent in the diploid ranks.
- Spider and double daylilies are still more prevalent in the diploid ranks.
- Diploid daylilies are easier to cross than tetraploids.
- Many diploid daylilies have been converted to tetraploids, thus advancing the tetraploid lines.
- There are more diploids than tetraploids.



The wise daylily gardener will apply a proper cultural program which includes watering, fertilizing, mulching, possibly spraying, grooming, controlling weeds, and sanitation.

Water is essential for good daylily performance.

- Water, supplied in sufficient amounts, almost certainly increases the number and size of daylily blooms.
- For daylilies, watering is most important in spring when the plants are making scapes and buds, and in the summer during the bloom season.
- Daylilies benefit more from deep watering, which reaches 8 to 10 inches into the soil, than from a succession of brief, surface waterings.
- Caution 1: Overhead watering during the heat of the day will cause any open blooms to spot and/or wilt.
- Caution 2: Watering in the evening can also cause spots on the next day's blooms.
- Caution 3: Be careful not to over water.





## Fertilizing

Daylilies grow in a wide range of soils and conditions.



- To determine the nutrient needs of your soil, take a soil sample and have it analyzed. Contact your local county agricultural agent for instructions.
- Daylilies can do well over a relatively wide soil pH range and adjustment of pH need only be considered if the plants appear to be doing poorly. A soil test as recommended above should always be conducted before amending with sulfur or lime.
- In the average home garden, a single fertilizer application in the spring is usually sufficient, although even that may not be necessary every year.
- In extremely poor soils or on light or sandy soils which tend to leach badly, more frequent application may be required. Consult with your local agriculture office for recommendations suitable to your soil and climate.

**Mr. Bill's Spring Fertilizer for Daylilies**

One application a year (March/April) of each of the following:

- Blood Meal
- Cottonseed Meal
- Alfalfa Pellets (no salt added)
- Dried Cane Molasses
- Milorganite
- Cow Manure, aged



Pull back mulch. Clean up debris. Layer a handful of each element around each plant. Cover all with cow manure layer. Water.

These elements will decay and feed the plant allowing the plant to absorb its quick need for nitrogen and other elements break down more gradually.

Do not use on newly planted daylilies.

# Mulching & Grooming

## Mulching

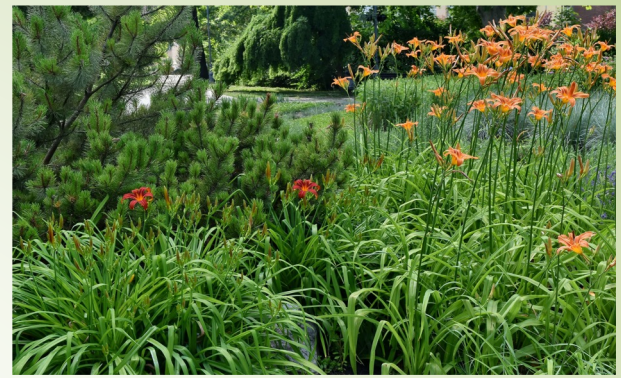
Mulching, although not essential in every area, generally does contribute to better daylilies by improving the soil and helping retain moisture.

## Grooming

Keep your garden neat and tidy.



- Many gardeners remove the day's blooms at the end of the day to give their gardens a pristine appearance.
- If you hybridize, expect to leave the pollinated blooms on the plants until the blossom sheds and the tiny seed pod is formed.



# Controlling Weeds & Sanitation

## Controlling Weeds

The most effective weed control measures for the home garden are mulching and hoeing.

## Sanitation

Proper sanitation measures lead to healthier daylilies.

- In the spring, dead foliage and debris should be cleared away from around your daylilies.
- During the growing season, damaged or diseased foliage should be removed.
- At the end of the bloom season, cut off the bloom scapes to within a few inches of the ground unless you are hybridizing.

# Daylily Pests & Diseases

Daylilies do have some pests, but many do only minor damage. Some diseases also affect daylilies, they too are listed below.

**Aphids** Daylilies have their own specific aphid which feeds only on daylilies.

- Aphids are most active in cool weather – spring and fall in temperate zones, and all winter long in the subtropics.
- Controlling daylily aphids is not as easy as with other kinds of aphids, which are usually vulnerable to such soft controls as soaps.
- In order to reach daylily aphids inside the fans, a pesticide with at least a mildly systemic action is needed.
- Do not use the pesticide Kelthane, which is known to harm daylilies.

**Spider Mites** Spider mites are among the most common daylily pests.

- Spider mites are most active in hot, dry weather.
- You can get some control of spider mites just by hosing them off as needed.
- Again, do not use the pesticide Kelthane; it is known to harm daylilies.



**Thrips** Several species of thrips are known to infest daylilies.

- Control thrips by starting early in the growing season with a pesticide having either a systemic or long residual action.
- To repeat, do not use the pesticide Kelthane.

**Slugs and Snails** Slugs and snails feed on the young, tender tissues, causing ragged edges and holes.

- They feed at night and hide during the day in cool, moist places, such as in mulch, under rocks and bricks, and in dead foliage.
- Sanitation helps to control slugs and snails. Otherwise, control requires using pesticides which are targeted specifically at these pests.

**Hemerocallis gall midge**

- A small fly – *Contarinia quinquenotata*
- Known in Europe since the 1800's, first identified in North America in 2001
- Eggs are laid on developing daylily flower buds causing rotting and distortion
- Pick off and destroy affected buds as soon as noticed
- Purchase bare-root instead of in pots, and remove scapes on new plants if present



**Daylily Leafminer**

- A small fly – *Ophiomyia kwansonis*
- First reported in North America in 2006
- Larvae create meandering whitish lines in daylily leaves
- Carefully inspect new plants for mines, removing and destroying affected leaves

**Other Pests**

There are other pests that attack daylilies.

- Other insect pests which have been reported affecting daylilies include cutworms, tarnished plant bugs, cucumber beetles, wasps, Japanese beetles, grasshoppers, and periodical cicadas.
- Bulb mites may be involved in the transmittal of crown rot.
- Deer will sometimes eat daylily flower buds.





## Diseases in Daylilies

Most gardeners with a mix of different plants intermingled in their gardens should have little trouble with diseases in daylilies. However, large collections with many plants of a single genus are more likely to encounter problems, especially if those plants are acquired from a large number of different sources.

Environmental conditions and gardening practices inevitably play a role in the development of diseases. Some cultivars may also be less adaptable to different conditions/climates, or less resistant to certain diseases, than are other cultivars.

Older, inexpensive daylily cultivars that remain in wide circulation may be a better starting choice for the inexperienced gardener/daylily enthusiast than more recent introductions not yet tested under a wide range of conditions in many different gardens.

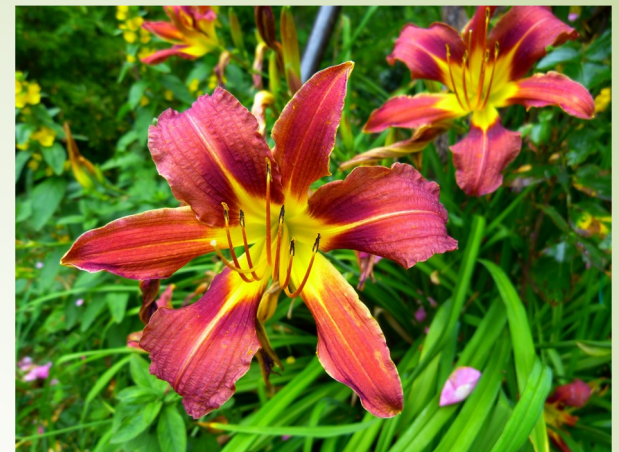
Some daylily diseases and disorders are relatively easy for the home gardener to identify. Others, such as the various forms of crown and root rots, are more difficult and if these become a concern it is advisable to seek a professional laboratory diagnosis. It is important also to know what is normal, for instance a new daylily collector may mistake “summer dormancy” for plant death or disease.



### Daylily Rust

- Caused by a fungus (*Puccinia hemerocallis*)
- Orange-yellow powdery spots on leaves and scapes
- Orange-yellow spores mark white tissue when leaves wiped
- Leaves may die back but the plant as a whole should survive
- Some cultivars more susceptible than others, but since this is a new disease in North America this information is currently being collected
- Provide good air circulation and planting distances and minimize overhead watering
- Avoid excessive nitrogen and inadequate potassium nutrition
- Unlikely to persist where all foliage dies back in winter (or roughly Zone 6 and colder) although may be able to do so where there are plants of the alternate host, patrinia
- Appropriate fungicides may be used





### Crown and Root Rots

- Plant yellows and may collapse, leaves may pull out easily, affected tissue is often mushy and plant may die. Signs of a fungus may be visible, e.g. “shoestrings” for Armillaria rot, and “mustard seeds” for southern blight (*Sclerotium rolfsii*), otherwise exact diagnosis requires submission to a diagnostic laboratory
- Foul smell may, or may not, be present
- May involve a combination of factors such as nematodes, bulb mite or other pest damage, fungal and/or bacterial pathogens (disease causing agents), weather conditions, gardening practices, soil aeration and moisture conditions
- Some cultivars may be more susceptible than others
- Of particular concern in warmer climates but may also occur elsewhere
- Ensure adequate soil aeration and drainage
- Avoid or correct areas of poor air circulation
- Avoid too much or too little water and don't overestimate water needs in periods of high humidity (check soil moisture before watering)
- Avoid over-fertilizing-Avoid over-amending with high water-retentive organic materials
- Remember that high temperatures increase transplanting stress and try to avoid if possible
- Don't plant too deep
- Let wounds from dividing air-dry in the shade before replanting
- Remember that plants in pots are subject to more extreme root/crown temperatures (and therefore stress) than those in the ground
- Treatment differs according to causative agent/s so get laboratory diagnosis of persistent rot problem

### Leaf Streak

- Caused by a fungus (*Aureobasidium microstictum*)
- Brown spots, yellow streaking, and die-back of foliage but not death of plant
- May require injury such as pest or frost damage in order to infect
- Appropriate fungicides may help



### Spring Sickness

- Foliage is twisted, bending, stunted and discolored on some fans in early spring
- Affected fans may, or may not, recover and bloom normally that season
- Exact cause is unknown
- Probably not a disease
- Not caused by cold damage following shoot emergence
- May involve a combination of contributing factors possibly including, but not necessarily limited to, bulb mites and the leaf streak fungus.

## How Do I Dig, Divide and Plant?

Dig, Divide and Plant

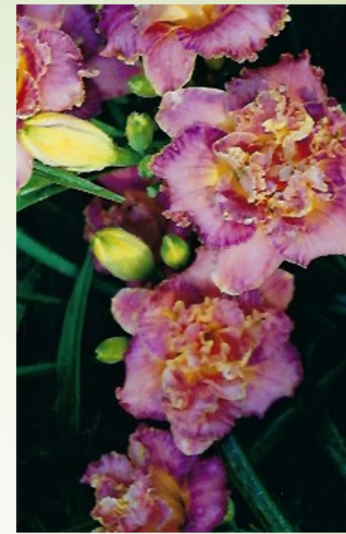


<https://www.youtube.com/watch?v=-Ffz02YoltI>

Screwdriver Method

Daylily Splitter

[https://videos.files.wordpress.com/IgXNhvwU/img\\_0834.mp4](https://videos.files.wordpress.com/IgXNhvwU/img_0834.mp4)



## Join the American Hemerocallis Society

Join the AHS and learn more about daylilies.

- Receive quarterly the [\*Daylily Journal\*](#) and view color photographs and read timely articles about daylilies.
- Read the [AHS publications](#) which provide much information about daylilies.

## Join a Local Daylily Group

Determine which [AHS Region](#) you live in and join a local daylily group.

- Local daylily groups hold informative meetings throughout the year and most hold daylily shows and sales and publish newsletters.
- Each Region holds an annual Regional Meeting and publishes a newsletter.
- From meetings and personal contacts at the local and regional level and from reading local newsletters, you can gain valuable knowledge about daylilies.

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What questions do you have for me?



Credits -

Photos - Online Stock and  
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Content - ADS and Bill Hurt