Rose: A Brief History
David Trinklein, MU Extension State Floriculture Specialist

Shakespeare once wrote: “Of all flowers, methinks rose is best”. Such sentiment is quite common and throughout history this elegant, symbolic flower has occupied a special place in the hearts and minds of people everywhere. Americans show their reverence for roses by purchasing 1.2 billion cut roses annually. Additionally, it is estimated that 150 million rose plants will be purchased by gardeners worldwide during the coming growing season. Perhaps there is no better time to explore rose history than February and Valentine’s Day, the season of the year when, in the United States alone, an estimated 214 million roses will find their way into the lives of “significant others” everywhere.

Rose belongs to the family Rosaceae and genus Rosa; the latter contains about 150 species. According to Greek mythology, Aphrodite, goddess of beauty, gave the rose its name in honor of her son Eros by rearranging just one letter in his name. In time Eros gave the rose to Harpocrates, god of silence, as a bribe to conceal the weakness of the gods. From there, rose became symbolic of secrecy, silence and love.

Fossil records show rose to be one of the most ancient of flowers. It probably originated in Central Asia but spread and grew wild over nearly the entire northern hemisphere. Two historical geographical groupings of roses can be made: 1) European/Mediterranean roses, which includes the Gallicas, Albas, Damasks, Damask Perpetuals, Centifolias and Mosses,
and 2) Oriental roses, which are represented by the China and Tea roses.

The cultivation of roses likely began in Asia about 5000 years ago and they have been an intimate part of human civilization ever since. Confucius wrote of growing roses in the Imperial Gardens about 500 B.C. and mentioned that the emperor’s library contained hundreds of books on the subject of roses. Later, members of the Han dynasty were so obsessed with roses that their parks devoted to this flower took up so much land as to threaten the food supply, so the emperor ordered some to be plowed under.

Paintings on walls and other artifacts depicting roses were found in 5th century Egyptian tombs. It is said that Cleopatra was a fancier of roses and used them to try and seduce Mark Anthony. Reportedly she had her fountain filled with rose water and her chamber filled with two feet of rose petals in an attempt to win his affection. Additionally, the Persian King Nebuchadnezzar is said to have slept on a mattress filled with rose petals.

Centuries later, rose became synonymous with the lavish excesses often characteristic of the Romans, who associated rose with love, beauty, purity and passion. Roman emperors filled their baths with rose water and sat on carpets of rose petals for their feasts. Rose petals were used as confetti and Nero was said to be especially fond of having them fall from the ceiling at banquets (to the point dinner guest sometimes suffocated in their excess). So insatiable was the demand for roses that peasants often were forced to grow them instead of food just to satisfy the Roman aristocracy.

Early Christians considered rose to be symbolic of paganism and their oppressors, the Romans, and were warned by church leaders not to plant it. This warning (evidently) was ignored and it slowly gained popularity and was used in religious ceremonies. In time, rose became a Christian symbol and has become a rich part of its culture and literature.

Alexander the Great is credited by some with having introduced rose into Europe while others attribute the latter to knights returning from the Crusades of 12th and 13th century. During the dark ages European monasteries preserved the tradition of rose and required that at least one monk be skilled in botany and knowledgeable about the virtues of rose. Later, in 17th century Europe, rose became so prized that roses and rose water were considered a source of legal tender and could be used for paying the debts commoners owed to royalty. It also was during this era that Napoleon’s wife Josephine, a lover of roses, established one of the first extensive collections of roses at Chateau de Malmaison where her garden contained more than 250 rose varieties.

Presumably most of the roses in Josephine’s garden were of the European/Mediterranean type for it was not until the late 18th century that the China group was introduced into Europe. Shortly thereafter the China rose (*Rosa chinensis*) was crossed by hybridizers with *Rosa gigantea* (a...
European/Mediterranean type) to form a new rose. Since some thought the newly-opened flowers of the resultant cross had the fragrance of an exquisite cup of tea, it was given the name tea rose. Decades later another type of rose was developed by crossing Damask rose (a hybrid formed in the Middle East by crossing *Rosa gallica* with *Rosa moschata*) with various species roses. Since the offspring of these crosses rebloomed freely they were given the name hybrid perpetuals and were quite popular through most of the nineteenth century.

A landmark achievement in rose breeding occurred in the mid-19th century when tea roses were crossed with hybrid perpetuals to give us the modern hybrid tea rose. Replete with their large flowers available in a palette of colors and their vigorous plants with glossy, green foliage, they are the most popular type of rose in the world today. Most consider them to be the standard of excellence by which all other types of roses are judged.

Several species of rose are indigenous to North America and rose was a favorite of many of those credited with shaping American history. William Penn imported 18 rose bushes from England in 1699. George Washington planted roses at Mount Vernon and Thomas Jefferson grew them at Monticello. John Adams is credited with planting the first rose at the White House and the formal rose garden that still exits today was established during the presidential term of Woodrow Wilson.

The American Rose Society lists over 40 different type of roses in its classification system. Generally, they are grouped into Old World Roses (introduced before 1867) and Modern Roses (developed after 1867). Additional to the hybrid tea, other important modern rose groups include polyantha, floribunda and grandiflora. Polyantha roses are shrubby, low-growing roses with clusters of small flowers. They usually are quite hardy and bloom freely throughout the growing season. Floribundas were derived from crosses between hybrid tea and polyanthus roses. They produce large, hardy, shrubby bushes that bloom profusely and produce clusters of flowers. Grandiflora roses are the result of crossing floribundas with hybrid tea roses. Like their floribunda parent, they produce flowers in clusters. However, as their name implies, individual flowers are much larger and favor their hybrid tea parent in size.

It can be seen from the previous that rose lineage is quite complex. Over the centuries breeding efforts have attempted to produce the “ideal” rose, whatever the latter might imply to the developer. In spite of all the progress made in their improvement, rose still represent a formidable challenge to the gardener because of its susceptibility to diseases and cold temperatures. We tend to hold most dearly those things in life that are difficult to obtain. One can’t help but wonder if at least a small part of the fascination people have for roses lies in their fragile nature and the skill it takes to grow them. The next time you admire a rose consider the number of people throughout the course of civilization who also have paid homage to this exquisite flower.
As we grew up in the Sandhills of Nebraska, there were some things which were a right of passage when spring came around. Mom’s sister Aunt Katie lived up by Lisco, Nebraska which wasn’t but a quarter mile from the North Platte River. We would go up to Aunt Katie’s and Uncle Buster’s and pick asparagus. It seemed like it was everywhere. And I assumed back then that asparagus was a weed that we ended up eating. There aren’t many things better than fresh asparagus.

One other right of passage was gathering and eating some lambsquarter. When Mom would pick lambsquarter it was pretty short. At most it was maybe 10 inches tall. Thinking back on it from the old side of 55 years ago it was probably even shorter. Probably the shorter the better. We would find lambsquarter everywhere. It was around the garden or in the corrals or along the fences. It was like it grew everywhere. But thinking back, lambsquarter always grew in good soil that tended to be loose, almost like tilled soil.

Lambsquarter in America is an edible species of pigweed which is commonly called goosefoot. The technical term for lambsquarter is *chenopodium beriandien* or pitseed goosefoot. When you look at the leaves they will have a green side with the other side of the leaf almost looking moldy or dusty and lighter in color. Best way of identifying lambsquarter is to check out some pictures and have someone who gathers and eats it show you.

As a boy growing up lambsquarter reminded me of spinach. Mom would boil the lambsquarter. I can’t remember how she cooked it. But she probably would bring the liquid to a boil and then dump the liquid off. Mom probably put new water on the lambsquarter and reboiled. I really don’t know for sure. All I knew was that we picked it and Mom cooked it. When it’s cooked it looks a lot like spinach. It is a dark green color.

We usually ate our lambsquarter with a little butter on it as well as some vinegar. One of my sisters said she added vinegar and my other sister said no to vinegar. Mom probably put salt on it for sure and maybe a little pepper. Looking back I wouldn’t be surprised if Mom didn’t put a spoon or two of bacon grease in it as well. Mom always had a bacon grease container handy that you could use on whatever. I know I enjoyed it!

A friend of ours from Northern Nebraska, Karen Cobb, said she would make a rue with melted butter and flour. She said she then added milk until she got the consistency she wanted and then melted cheese in this. Once the cheese was melted she poured it over the lambsquarter. Man this does sound good. For those who like things with heat you could probably toss in some hot peppers in the rue and cheese sauce.

I did some checking on the internet and found out some interesting tidbits. Lambsquarter grows both in the US and in Canada. Some who have tried it compare the taste to chard. If you like kale or Swiss chard or collards you will probably like lambsquarter. You can pretty much eat anything on the plant in moderation. The seeds contain a toxin so should be eaten in moderation. Each lambsquarter plant can produce up to 75,000 seeds according to one source. That is a lot of seeds. If you
Outdoor flowering plants and Ornamentals

- Take geranium cuttings now. Keep the foliage dry to avoid leaf and stem diseases.
- Seeds of slow-growing annuals like ageratum, verbena, petunias, geraniums, coleus, impatiens and salvia may be started indoors now.
- Dormant sprays can be applied to ornamental trees and shrubs now. Do this on a mild day while temperatures are above freezing.
- Finish up on any major pruning on ornamental woodies.

Indoor Plants

- To extend the life of Valentine flowers, recut the stems underwater with a sharp knife. Remove any stem foliage that would be underwater. Use a flower preservative.
- Repot any root-bound plants before spring arrives and vigorous growth starts. Move plants up to a container no bigger than one inch larger than the present container.
- Late February is a good time to air-layer house plants such as dieffenbachia, rubber tree, and dracaena or corn plant.
- Check all five growing factors if your house plants are not growing well. Light, temperature, nutrients, moisture, and humidity must be favorable to provide good growth.

Vegetable Gardening

- Before working an area in the garden for early spring planting, check the soil. It should be dry enough to crumble in your hand before you work it.
- Season extending devices such as cold frames, hot beds, cloches and floating row covers will allow for an early start to the growing season.
- Check any vegetables you have in storage. Use or dispose of any that show signs of shriveling or rotting.

Fruits and Nuts

- Begin pruning fruit trees. Start with apples and pears first. Peaches and nectarines should be pruned just before they bloom.
- If you want to raise fruit in your garden, try grapes, raspberries or strawberries. It is much less difficult to succeed with them than with tree fruits, and you will get much faster results.
- Grapevine pruning's can be made into attractive wreaths. Decorate them with cut-out hearts, dried flowers, or bird nests, or shape them into a heart over a wire frame for use as Valentine gifts.
- Fertilize fruit trees as soon as possible after the ground thaws, but before blossoming begins.

Repotting Houseplants

As daylight hours increase, plant growth increases and time to consider repotting rootbound plants. Select a pot that is 1 to 2 inches larger in diameter than the current pot.

Place a small piece of broken clay pot over the drainage hole to prevent soil from washing out.

Place enough potting mix in the bottom of the pot so that the top of the rootball is within 1 inch of the top of the container.

Do not add soil above the original level on top of the rootball.

Fill in around the rootball and gently press the soil with your fingers. Do not pack it.

Water thoroughly and drain out. Be careful not to overwater for about two weeks. Give the roots time to start penetrating the new soil.
Invasive Plant Alert: Heavenly Bamboo (*Nandina domestica*)
Sarah Denkler, MU Extension Horticulture Specialist

A new alert for a Missouri invasive plant species has been released. Nandina has been reported to be escaping in the Springfield, MO area and has already spread widely in Arkansas and Tennessee. Keep an eye out for it and kill it fast! Please do not plant this new pest.

Very hard to remove manually: roots are very difficult to pull up and even a tiny piece of root left will resprout. It stands 6 to 8 feet tall or 3 to 4 for dwarf varieties. Shrubs can be foliar sprayed with Glyphosate when other plants are dormant. Triclopyr is also effective as a foliar spray (though probably not during the dormant season) or can applied to cut stems any time other except during spring sap rise.

It grows in sun or shade and will become thick in the forest understory, like bush honeysuckle.

**Berries contain cyanide and have been documented to kill birds.** Since it is from Asia, American birds did not evolve with it and don’t recognize it as toxic. **Acute toxicity is related to the amount of berries consumed:** cedar waxwings were killed by it because of their voracious eating habit. When birds eat only a few berries, they survive and spread the species. Also dangerous for pets and livestock (or children!) if they eat too much of it.

*Figure 1 is Nandina in fruit (courtesy Chris Evans, University of Illinois, Bugwood.org). Figure 2 is Nandina in flower (courtesy James H. Miller, USDA Forest Service, Bugwood.org) and Figure 3 shows Nandina plant in its natural form (courtesy James H. Miller, USDA Forest Service, Bugwood.org).*

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Winter Bloom: Hellebores
Donna Aufdenberg, MU Extension Horticulture Specialist

In the gloomy months of winter, the sight of something blooming is a kind reminder that spring is around the corner. One of these winter bloomers is the hellebore. In many years, it’s blooms can be found peeking out of the snow on a cold winter’s day.

Hellebores bloom early in the year. Here in the southern part of Missouri, they can be blooming in January during our milder winters. Typically, they can stay in bloom from February through June with a single bloom lasting 4-6 weeks in many cases. **Traditional varieties have blooms that droop.** This is a survival mechanism to the snow, sleet and rain.

Hellebores are an evergreen perennial with shiny dark leaves which grows USDA zones 5-9. They put on their best show in partial shade in areas with well-drained soils and plenty of organic matter. They are long-lived and are typically trouble-free once established. They are deer resistant.

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Witch hazel is a unique plant that has two species native to Missouri. The name comes from its use as a divining rod or witching stick for finding water. It is a deciduous shrub or small tree noted for its yellow fall leaves and the odd blooming times. They are popular ornamental plants, grown for their clusters of bright yellow to orange-red ribbon-like flowers which bloom throughout the winter.

Common (Eastern) witch hazel and vernal (Ozark) witch hazel are the two Missouri native species. Common witch hazel is a slow grower that tolerates dryness, reaching a height of about 25 feet with a rounded crown of interesting branch architecture. It prefers sun or partial shade and light, moist soil. It’s flowers are bright yellow with ribbon shaped petals that bloom from October to December. The fruit ripens the following September or October in a hard, woody capsule that forcibly discharges the seed up to 30 feet. It naturally occurs in moist woods on north or east facing slopes or in wooded valleys along stream. Common witch hazel has been cultivated since 1736.

Vernal witch hazel is a dense upright shrub, growing up to 9 feet tall. One of its common uses is for windbreaks or screens because it will often send up sprouts from the base. Its natural habitat is in gravel or rocky streambeds, at the base of rocky slopes along streams and rarely on wooded hillsides in rocky draws. It flowers from January to April and can be yellow to dark red. It can be grown in sun or shade and will tolerate higher pH and clay soils fairly well.

Most people are familiar with witch hazel from its medicinal uses. The twigs, leaves, and bark are the basis of witch hazel extract. It has anti-inflammatory and astringent properties and was used in historical healing and in modern day shaving and medicinal lotions.

Witch hazel is an interesting plant that can brighten up your winter landscape and perfume your garden. It is definitely a plant I would recommend for your garden and is a good conversation starter.
When thinking about providing a pollination source for various bee species, it is important to look at what a bee needs in their diet. They require pollen with at least 20% protein. This type of discussion usually comes up when talking about pollination of commercial vegetable crops that require bees. If the pollen on the vegetable is lower source of protein than surrounding plant species then the bees will eventually move to the higher source. This discussion could also come in handy when thinking outside of the box on sources that could be supplied as an apiary for bees. The table shows the type of plant species that bees may be attracted to as a food source and how that source ranks when looking at the health of the overall hive.

This becomes important when thinking about the weeds that we desire to remove from yards. Likely one of the least favorite on the list is the dandelion. This plant may be more important than others because it is one of the first to bloom in the spring. When few other sources of pollen are present in the landscape, bees are able to survive with the help of this little yellow bloomer. In addition, the protein source outranks many other perennial plants making it a staple food source for pollinators.

Before you work so hard to eliminate all early flowering weeds from the yard, think about the pollinators that are gearing up for the spring and summer, using these food sources, and save a few patches for them.

<table>
<thead>
<tr>
<th>Plant</th>
<th>Protein Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buckwheat <em>Fagopyrum esculentum</em></td>
<td>Good</td>
</tr>
<tr>
<td>Squash <em>Cucurbita pepo</em></td>
<td>Good</td>
</tr>
<tr>
<td>Apple <em>Malus sylvestris</em></td>
<td>Very good</td>
</tr>
<tr>
<td>Horsechestnut <em>Aesculus hippocastanum</em></td>
<td>Good</td>
</tr>
<tr>
<td>White Clover <em>Trifolium repens</em></td>
<td>Good</td>
</tr>
<tr>
<td>Dandelion <em>Taraxacum officinale</em></td>
<td>Very good</td>
</tr>
<tr>
<td>Henbit <em>Lamium amplexicaule</em></td>
<td>Poor</td>
</tr>
<tr>
<td>Poppy <em>Papaver somniferum</em></td>
<td>Very good</td>
</tr>
</tbody>
</table>

Musings: Lambs Quarter
Rennie Phillips, Scott County Master Gardener

You can pretty much use lambs quarter like you do kale. You can put it in a juicer, dry the leaves like kale or even blanch the leaves and freeze them. Some dry the leaves and then use them in soups later in the year. Mom never froze hers. We had lambs quarter in the spring and that’s about it. But honestly we had lambs quarter growing around our place here in Scott City up till the last hard freeze. Since lambs quarter contains oxalic acid it is best to eat raw lambs quarter in small amounts. Cooking removes this acid so you don’t have to worry. If you are curious next spring, say towards the middle to end of May, give me a call and we’ll go pick some. Once you see the plant and learn how to identify it you will have an endless supply of greens.
Upcoming Events

The following Master Gardener meetings are held each month. All are welcome to attend. Please contact your local extension office to confirm location if you did not attend the previous meeting.

Parkland MGs - 1st Monday at 6:30pm, Horticulture Classroom at MAC, Park Hills

Poplar Bluff MGs - 1st Tuesday at 6:00pm at Fist Episcopal Church in Poplar Bluff, MO (Do not meet in January)

Ste. Genevieve MGs - 2nd Thursday, at 6:30pm, Ste. Gen. County Extension Center

Cape Girardeau MGs - 3rd Thursday at 7:00pm, Cape County Extension Center

Perry MGs - 4th Monday at 6:30pm, Perry County Extension Center

February
9-10 Gateway Small Fruit and Vegetable Conf., O’Fallon, IL
13 Perryville Garden Symposium, Perry Higher Ed Center in Perryville, MO
13-15 Midwestern Herb and Garden Show at the Times Square Mall in Mt. Vernon Illinois
16 Master Gardener Training begins in Rolla, MO
24 Master Gardener Core Training at Butler County Extension Center in Poplar Bluff, MO
27 Fruit Tree Pruning Workshop, Malden, MO

March
5 Parkland Garden Symposium, Mineral Area College
10 Farmers’ Market Workshop in Jackson, MO
12 Cape Girardeau Master Gardener Spring Seminar

April
7 Advanced Beekeeper Training for established Beekeepers. NRCS office in Dexter, MO

Time to Start Your Onion Seeds!

Jessica Griffin, Madison County Master Gardener

Ten to twelve weeks prior to transplanting your onion plants outside, you need to start your seeds. The planting dates for onion bulbs in your garden are around mid-March on average for Missouri.

I start all my seedlings under fluorescent lights on metal shelves. I use peat pots. However, seedlings can be started in all kinds of containers!

I do not use heating mats for my cooler plants, including onions. I usually get excited and start my onion seeds a little earlier than I should just because I am ready to see seedlings in January! Per the book Sustainable Market Farming by Pam Dawling, onion seedlings are ready to transplant when they are bigger than a pencil lead but smaller than a pencil.

Onions are divided into long-day, short-day, and day-neutral varieties. These names refer to the number of hours of daylight required by the onion to form bulbs. However, it is actually the hours of darkness that affect the bulbing process. Long-day onions need 14-15 hours of daylight. Short-day varieties need 10 hours of daylight, and day-neutral are not affected by the number of hours of daylight. Here in Missouri, we can plant a mix of these three types. Seed catalogs should tell you the type of onion variety.

If you have not grown your onions from seeds, it is an easy process. I love trying different varieties of onions, and the best way I have found to discover my favorite varieties is to grow them from seed. So, order some onion seeds and start your seedlings now to plant into your Spring garden!
Those people who have planted hellebores in their gardens know that they are slower starters. They will sit for a couple of years after being planted before starting to bloom. They may take up to 5 to 8 years for well established, thick clumps. They are a little more expensive than the average perennial and don’t always look good in the nursery pot but once these guys are established and start blooming for you, they are definitely worth it.

Once planted, they can be heavy feeders especially in areas where limited organic matter exists. They need most of their nutrients in the spring and summer right after blooms have died. Time released fertilizer or organic fertilizers will do a good job carrying the plants all year.

Take caution - Hellebores do not divide well or transplant well. Also, during severe winters and periods of severe drought, the foliage may scorch or turn brown. Gardeners can prune damaged leaves by removing the whole leaf and stem from the base of the plant.

Three main varieties can be found in stores and catalogs.

- *Hellebore argutifolius* (Corican Hellebore) has blue green sharply divided leaves pale green cup shaped flowers.
- *Hellebore niger* (Christmas Rose) has dark green leaves with 7 to 9 lobes and has white clusters of flowers that turn pinkish with age.
- *Hellebore orientalis* (Lenten Rose) is the most popular hellebore. The leaves have 5 to 11 lobes sharply toothed leaves with very little stem. Flowers can range from pinks, pale greens, creams, and purple. Many of the varieties have dark purple spots on the flower petals.
- Newer varieties tend to be more vibrant in color, single or double blooms, and flowers more visible and upright.