



Behold the Marigold

by Idella Moberg

Beauty is in the eye of the beholder. Look at the marigold for example. Marigolds are ubiquitous. They grow everywhere. A gardener may see the marigold as easy to grow in the garden and that its blooms are bright and cheerful whether among vegetables or in a flower bed. A practical person will notice how useful it can be. The marigold is an ancient flower. It is a sacred flower. It's an inspiration for poets. Who you are influences what you see.



lettuce, standing guard against bugs and rabbits. If you are a person who sees marigolds as being so ordinary that they are not really worthwhile, stop to think why they've become so popular.

Marigolds are easy to grow. They like sunshine and good drainage. You can ignore them and they don't seem to mind. They aren't particularly thirsty, or needy for fertilizer. Marigolds are easy to grow from seed. They bloom all summer long, intense orange and red and yellow flowers. When all other flowers have finished blooming, marigolds continue

to provide color to the garden, far into pre-winter, when the days diminish into darkness all too early and the nights last all too long. Marigolds, with their sunny blossoms, are cheerful easy-going additions to any garden. If you like flowers that are easy to grow, you'll appreciate marigolds.

Perhaps you like useful plants. Among vegetables, marigold odor repels bugs like mosquitoes and gnats, and it attracts other insects that eat bad bugs. Marigolds attract bees that pollinate vegetable flowers. Next to your lettuce they may keep the rabbits away. They are good companion plants for tomato, eggplant, chili pepper, tobacco, and potato. Marigolds are cultivated to make dye for clothing, flavoring for food, essential oils, and medicines. Their petals are fed to chickens to make egg yolks a beautiful orange color. Marigolds are used to make perfume for lovers and incense for the shamans. It's an ingredient in drinks and an additive to tobacco. As an oil, extract of marigold is used for massage.

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Ch-ch-ch-ch-changes

by William M. Cook

Everyone knows that the weather changes. As you read this, the weather is probably turning from spring to summer. However, it is increasingly important for anyone who cares about gardens, plants, wildlife, and many other things to also understand the ways that our climate is changing too.

A couple of quick definitions first. Think of weather as day-to-day changes in atmospheric conditions; is it rainy,

sunny, a little warmer, a lot colder than the day before? Climate is much more about averages—how weather changes not from day to day, but from season to season and especially over longer periods of time. Climate questions could include whether droughts are more common than they used to be, whether spring is coming earlier or later on average, or if winters are in general colder or warmer than they have been.

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Call for Volunteers

Want to help serve rootbeer floats at one or more of our 2016 summer concerts in Munsinger Garden?
Contact Elaine Carter at (320) 253-6143 or efcarter@stcloudstate.edu to be added to our volunteer list.

Are you looking for more photos and up-to-date information on the Gardens and our events? We are making it easy by posting all the news on Facebook so you can find out what is happening and share that information with your friends. We hope you will help us—tell everyone how great our Gardens are!

LIKE our Facebook page at Munsinger Clemens Botanical Society



Photography Displays, 2015 Winners
JuneUS Bank, 1015 W. Saint Germain
July (6/29-7/29) ...Paramount Theatre, 913 W. Saint Germain
August-Sept.Saint Cloud Medical Group, 251 County Rd. 120
OctoberWaite Park Library, 253 Fifth Ave. N., Waite Park
NovemberSaint Cloud Public Library, 1300 W. Saint Germain
Winning photos can also be seen at www.munsingerclemens.com.

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Behold the Marigold, continued from page 1

The marigold is an ancient flower. Stephen Buchmann, in his book *The Reason for Flowers*, tells us that in pre-Hispanic Mexico the Aztecs cultivated and planted them in their pleasure gardens. Their poetry praised and described the marigold, along with dahlias, tube roses, zinnias, and other blossoms. In their capital, Tenochtitlan, the island city in the middle of former Lake Texococo, site of modern Mexico City, ancient Aztecs constructed urban gardens for commoners as well as for Aztec nobility. The Aztec expert gardeners cultivated double-flowering marigolds.

The marigold is a sacred flower. In Mexico it has been associated with death. Ancient Aztecs used a powder of marigold as a hallucinogen numbing chemical so that human sacrificial victims would not realize what was happening to them. They believed that the souls of people

who died journeyed for seven years to and from the afterworld looking for food. This was required so that the dead could rest. Each year their souls returned from the afterworld to the land of the living. As they traveled they dropped marigolds to mark the trail they would take the following year. Today in Mexico, on October 31 to November 2, the ancient ritual is relived in the celebration of Dia de Muertos, the Day of the Dead. Huge altars are set up with food and drink for deceased members of the household. To attract the spirits of the dead, marigolds are spread on the altar, along pathways, and in graveyards. Mexicans visit their loved ones' graves and bring offerings. The main offering is the marigold, Flor del Muerto, Flower of the Dead.

You may not share the Mexican connection between marigolds and death. Rather, why not let your inner

poet see the marigold as a metaphor. Shakespeare's Perdita offers flowers that correspond to life span:

The marigold, that goes to bed wi' the sun
And with him rises weeping. These are flowers
Of middle summer, and I think they are given
To men of middle age.
— *The Winter's Tale* (4.4.122-7)

And Robert Graves compares "the constant marigold" with love:

New beginnings and new shoots
Spring again from hidden roots.
Pull or stab or cut or burn,
Love must ever yet return.
—"Marigolds"

The word "behold" comes from Old English *bihaldan*, "to hold thoroughly." Behold the marigold. Hold it thoroughly. See what you can see.

Changes, continued from page 1

The overwhelming scientific consensus, which I am a part of as a biology professor, is that the climate is currently changing and in fact changing more rapidly than usual. The rest of this article is to be devoted to the ways that the climate in our region is changing, with some comments on what effects this is currently having (and will continue to have) on gardens, plants, and wildlife.

One major and well-publicized way that the observed climate of the upper Midwest is changing is that things are getting warmer. However, this isn't something that is evenly spread through the seasons. Summers have gotten a little warmer on average during recent decades, but most of the warming has come from winters (and the colder parts of autumn and spring) getting much warmer. So that means you really can

tell your children and grandchildren, "Back in my day, Sonny, it was so cold that my breath froze before it hit the ground. You whippersnappers have it easy." It's scientifically proven!

But this pattern of warmer winters has more to do with nighttime temperatures than daytime highs. Winter in central Minnesota is still plenty cold, but nights are less so than they used to be. For example according to Bob Weisman's calculations (he is a Saint Cloud State University meteorologist), 7 of the top 15 winters with the fewest nights below zero degrees have happened in the last 20 years, including last winter. It is also true that one of the top fifteen winters with the most nights below zero has also happened recently (three winters ago), but this is indicative of a change in averages. A few observations go one

way, but most of them go the other.

So what does it matter that winters, especially winter nights, are getting less cold? Lakes and the soil will still continue to freeze, but later in the fall (and they will melt earlier, too) and probably to a lesser depth. Central Minnesota used to be considered in USDA Climate Zone 3, defined by the coldest nights of the winter generally being in the -30s F. However, I have lived in Saint Cloud for 11 winters now and have only seen one night as cold as -30. We should more accurately think of our area as Zone 4 now. Warmer and shorter winters with fewer severe cold snaps are easier for some organisms to survive, and with protection we can try to grow a wider range of plants in our garden. Of course, disease and pest

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Photography in the Gardens

November 15, 2015 — November 4, 2016

> Prizes

\$100 Best of Show

\$50 1st place Adult winner in each category

\$20 2nd place Adult winner in each category

\$10 3rd place Adult winner in each category

\$50 1st place Youth-18 winner in each category

\$20 2nd place Youth-18 winner in each category

\$10 3rd place Youth-18 winner in each category

All winners will receive Award Certificates.

> Categories

Landscapes (garden scenery)

Hardscapes (decorative features in the Gardens)

1st, 2nd, and 3rd place winners will be chosen from both age groups and each category.

Any visitor to the Gardens is eligible to enter.

> Submission Fee

\$10 for adults per photo

\$5 for youth-18 per photo

Maximum of 3 entries per photographer.

> Rules

- Tripods may be used.

- Photos will be returned to photographer.

- Photographer retains copyright of photo.

- Use of the photo is granted to MCBS and credit will be given to photographer.

- Contest allows for only normal manipulation of an image.

> Entries Due

November 4, 2016 from 4:30 to 6:30 p.m.

November 5, 2016 from 10:00 a.m. to 2:00 p.m.

at the **Lake George Municipal Complex**
1101 7th Street South, St. Cloud, MN

Winners will be notified.

Download the entry form from our website
www.munsingerclemens.com

July 10, Harper's Chord. Drawing from their love of folk, blues, roots, Americana, and country music, Harper's Chord captivates audiences with strong, three- and four-part harmonies and easy-listening acoustic songs. Lead vocalist Jill Moore and musicians Paul Drinkwine, Roger Fink, and Micah Barrett are busy gracing the stages at Pioneer Place, Great River Arts Center, and Summertime by George. The music of Harper's Chord has a grass-roots, back porch, organic feel, offering an eclectic mix of songs that tell stories of personal journeys and let these diverse musicians showcase their talent.

July 24, Dennis Warner. Recognized for his crafty wit and skillful musicianship, Folk/Americana musician Dennis Warner captivates audiences in over 100 cities each year with his smooth vocals and six- and twelve-string guitars. In addition to being a gifted musician, he is an outstanding entertainer, cleverly blending up-tempo songs, ballads, audience participation, and humor into a memorable concert. He is noted for his warm stage presence and ability to connect with his audience. For his songwriting talents, Warner was honored with an invitation to perform in concert at the Kennedy Center for the Performing Arts in Washington DC.

August 7, Brendon Bushman Woodwind Trio. Saint Cloud Symphony Orchestra principal oboe Brendon Bushman and his woodwind trio (oboe, clarinet, bassoon) will perform an eclectic mix of old and new music for this uncommon instrumentation.

August 21, Pachanga Society. The Stearns County Pachanga Society (SCPS) combines the participatory musical spirit of Cuban Cabildos, Brazilian Samba clubs, and Spanish Charangas, with danceable rhythms from all over the globe and a certain psychedelic rock-n-roll ethos. The Saint Cloud Times has called the Pachanga Society the "hottest gig in town," and KVSC-FM's Minnesota Music expert John Drake chose the group as 2002 "Rookie of the Year" on the Minnesota music scene.

Butterfly Release, July 24



The 5th Annual Memorial Butterfly Release will take place in **Munsinger Gardens on Sunday July 24, 2:00-3:00 pm.**

As a symbol of transformation and hope, the butterfly brings joy in remembrance of loved ones. The release event is sponsored by Quiet Oaks Hospice House and Respite Care (www.quietoakshospicehouse.org). The Munsinger Clemens Music in the Gardens concert with Dennis Warner will follow at 3:00 pm.

Photography Awards

November 19, 2016, 3:00 p.m., public reception at the **Saint Cloud Public Library** to present awards. Gallery will open at 2:30 p.m.

Tenth Annual Art Fair in the Gardens

Thursday July 21, 2016, 10:00 am—7:00 pm

**Munsinger Clemens Gardens
13th St. SE and Kilian Blvd., Saint Cloud MN**

Free Public Event

Sponsored by Munsinger Clemens Botanical Society

Mark your calendars and plan to attend the 10th Annual Art Fair in the Gardens on Thursday July 21 from 10:00 am to 7:00 pm. Shop for high quality artwork for your home and garden: jewelry, weaving, pottery, painting, sculpture, and more. Artist booths are arranged throughout the Gardens so you can enjoy the flowers while you shop. Food and beverages are available on site from Erbert & Gerberts, Kettle Licious Kettle Korn, and Westside Liquor. Music will be performed on stage by Pushing Chain, Cristina Seaborn, and Cathie English. Carlos Quinche will be performing all day in the upper gardens. (Note to artists: We are always looking for new artists for the Art Fair. If you are interested, email us at eventinquiries@munsingercllemens.com for more information on how to exhibit at the Art Fair.)

Art Fair Performers

Pushing Chain, 11:30 am—1:30 pm

Formed in 2012 by Boyd Blomberg and Adam Moe. The duo has been performing together since 1997, playing Folk-Tonk music featuring Boyd on guitar and vocals and Adam on the fiddle and vocals. Strong songwriting, tight harmonies, and a gonzo approach have been winning fans for Pushing Chain across the Midwest and beyond.

Cristina Seaborn, 2:30 pm—4:30 pm

A violinist and fiddler with over thirty years of experience. In symphonies, quartets, jazz ensembles, and folk/rock bands, Cristina's musical background includes influences in classical, jazz, Celtic, bluegrass, and Texas swing fiddle. Expert at fiddling and jazz improvisation, she holds a Bachelor of Music degree in jazz violin performance from Berklee College of Music in Boston, and a Masters in Conducting for Orchestra from Saint Cloud State University. She has produced an instructional video for fiddling through Mel Bays entitled "Anyone Can Play Country Fiddle," CDs entitled "Inside the Heart of a Musician," and many arrangements of fiddle music, jazz, Celtic, Scandinavian, Cajun, and original compositions for string orchestra.

Cathie English, 5:00 pm—7:00 pm

A folk singer/songwriter who dwells in Central Minnesota. Cathie is a self-taught guitarist who did some performing in college, then put music aside to raise a family. Once the

nest was empty she again found her passion. Cathie had the good fortune to find a friend and mentor in Minnesota's folk singer/song writer Peter Mayer (blueboat.net) from whom she learned the finer points of the American Fingerstyle guitar. She can now be found playing at festivals and a variety of venues throughout Saint Cloud, Minneapolis/Saint Paul, and Northern Minnesota. Cathie released her first CD "Mary's Garden" in January 2014.

Carlos Quinche, all day in upper gardens

A music artist from Ecuador, South America, who currently lives in Minnesota. His music ranges from traditional melodies from his country to contemporary American. Quinche uses traditional Andean instruments made from bamboo. In some recordings, he uses instruments from Native American culture.

Music in the Gardens

June 12 & 26, July 10 & 24, August 7 & 21, 3:00 pm

Munsinger Gardens, Riverside Drive SE & 13th Street SE

"Music in the Gardens" is a Sunday afternoon concert series in Saint Cloud's Munsinger Gardens, arranged by Munsinger Clemens Botanical Society. Bring a lawn chair and meet at the gazebo down by the Mississippi River to enjoy live music by favorite local groups. MCBBS also sells rootbeer floats for \$1.00. Check our website at munsingercllemens.com or our Facebook page, Munsinger Clemens Botanical Society, for directions and other information about this event or about the Gardens.

Music in the Gardens Players

June 12, Charlie Roth. Americana, Folk, Blues, Country, Celtic—Charlie Roth is a blend of all these genres. He is best at telling a story with his rich baritone vocal, acoustic guitar, rack harmonica, and foot percussion. His fifth album "Broken Ground" reached #6 on the Euro Americana charts and continues to get air play all over the world. A consummate showman, an entertainer with countless gigs under his belt, Charlie has mastered the art of playing and singing from his heart, exuding the sheer joy of making great music.

June 26, Muggsy Lauer and Monday Night Jazz. They started out as a bunch of guys getting together every week to let loose and play music they love. They all began playing jazz at a young age. The group formed in 2004 when they started playing at the former Tavern Bar in downtown Saint Cloud. In 2005 the Tavern closed down and they moved to Pioneer Place. The group is led by Jeff Engholm and Muggsy Lauer.

Changes, continued from page 2

organisms are also more likely to survive milder winters, so this is something of a mixed bag.

Shorter and warmer winters will have many effects on plants and wildlife. Birds will probably migrate away later in the fall and return earlier in the spring. Plants will break dormancy and grow sooner following winter. The number of frost-free days will increase, allowing a longer period in summer for farmers to grow food. But we may also have more very dry conditions in early spring, leading to wildfires that have become familiar in recent years. Moderate to warm temperatures will last later in the fall, which may be welcome to many.

I did say summers are getting warmer too, though less so than winters. This also manifests itself greatly in terms of warmer nights. Summer days that hit 100 degrees are still rare, but mid-summer nights are more often in the 60s rather than in the 50s. And we always have had the occasional week when it was tropically hot and humid, but those weeks are coming more often and lasting longer than they used to. I generally don't turn the air conditioning on until it has been hot (upper 80s or higher) and humid for at least three days, but I expect this to happen more often. Tropical dew points (a measure of humidity) are becoming more common, whereas the hot days used to come more often with hot but dry air. These tropical episodes are unpleasant to humans but also stress plants and wildlife, and also encourage plant diseases that *really* don't get going until it is really humid for a long time. So, unfortunately you need to add more fungal diseases to the problem list for your garden.

The last big change in our climate I would like to discuss is the change in precipitation. The total annual precipitation in central Minnesota is increasing over time, and this is also mixed up in the changes in temperature and humidity described above. An increase in total precipitation over a year is mostly caused by an increase in rain during the warmer months. Although we frequently have significant amounts of snow during the course of the winter, most snow is fluffy and doesn't add up to that many inches of liquid precipitation. When the winter is shorter that means the warmer weather lasts longer commensurately, and more warm weather is associated with more rain. (Another factor adding to this is that warmer winters mean more days near freezing, and most snow falls when the temperature is within range of 32 degrees.)

This also means that autumn and spring will be wetter in general, because they will be warmer and perhaps longer. However, a perhaps counterintuitive feature of this precipitation change is going to be that while more liquid may be falling out of the sky, there is likely going to be more droughts in summer and less snow cover in winter. So how would that work? In winter, warmer temperatures mean that snow cover will melt more often, in addition to the season simply being shorter. Also, in several years recently the large snowfall has disproportionately come towards the end of the winter, which obviously means it couldn't have been on the ground earlier. In summer, we are expected to have overall greater rainfall. However, this increase is expected to take the form of more large thunderstorms that dump 1" or more at a time, and warmer temperatures overall

would allow things to dry out more in between storms. And more great thunderstorms means more opportunity for flooding.

What effects might these precipitation changes have on plants and wildlife? Less snow cover means foraging is easier for animals that look for food on the ground, but other species that are adapted to snowpack as protection may suffer. Trees and shrubs are probably less likely to suffer winter injury, but plants dormant at ground level and below benefit from snow cover and may paradoxically have a harder time during warmer winters because they are less protected. And unfortunately, the entire Laurentian mixed-forest ecosystem that occupies northeastern Minnesota will probably slowly shrink away to the north, and be eventually replaced by habitats now found in this region here. The North Woods is adapted to very cold winters, deep snow and cool summers, and we are predicting all of those will wane in Minnesota.

The climate of Minnesota is changing, as it has many times before during the long history of the planet. I will not dwell on the causes of these changes here, but contrary to what you see in the media the scientific consensus that humans are a major cause is as strong as is the agreement that climate is changing in the first place. We have a general idea of what is going to happen in the future, though there is still much uncertainty surrounding how strong these patterns will be, and how fast they will become established. To a certain degree, we will need to prepare but also to wait and find out.

What's Up in the Gardens

by Joan Andersen

Tulips were up everywhere, a rainbow of colors in the Gardens the first week of May!

Nia Primus, Gardens Supervisor, has been busy hiring seasonal Gardens staff and getting them through required orientation and training so they can start their jobs. All new hires must attend sessions that cover the regulations for the Saint Cloud City Parks Department, Munsinger Clemens Gardens, and City and Parks Department safety and respectful work environment. They also have "Right to Know" training that covers OSHA information and potential hazards. Next, the new hires will work alongside experienced seasonal staff as they begin their duties in the Gardens.

Nia and the staff are also finishing up the outside cleanup to get the beds ready for planting. Mulch is removed, perennials are tidied up, and the roses are pruned. New potted perennials have been moved outside to get acclimated to the weather before they are planted in their permanent homes. Many containers of annuals have been designed and planted and will grow in the greenhouse for several weeks before being moved to their outside locations.

I asked Nia how she keeps track of the 100,000 annuals in the greenhouse. She observed that it was a big change to go from growing plants in hoop houses to a spacious greenhouse. She has a system that assigns a number to each table in the greenhouse—8 rows wide and 6 long rows going back. She admits she is a bit of a control freak because she needs plants to be on their assigned table to assure that they are in the optimum place to grow and that she can locate them quickly when planting begins.

Nia is entering her fifth year as Gardens Supervisor and she has learned more every year about the needs of plants. When little plants are transplanted into their larger pots for growing, the greenhouse is loaded from the back. Care is taken to give each type of plant the best space in the greenhouse to make it grow well. Most of the plants going in Munsinger Garden are shade plants so they are grouped on the east side of the greenhouse where they receive cooler morning sun. The plants going into sunny Clemens Garden are grouped on the west side where they receive hot afternoon sun. Some plants like to be on the dry side, so a special "dry table" is set up to ensure that plants like this are not overwatered.



Nia is committed to growing plants and maintaining the Gardens using the principles of Integrated Pest Management (IPM). This begins with growing a plant in a place suited to it instead of trying to get the plant to adapt to conditions it does not like. Many plant problems can be prevented by growing disease resistant varieties in the right location. Plants are monitored frequently for signs of insects or disease. If treatment is needed because the damage has exceeded an acceptable level, the safest, most environmentally sound action is used. For example, aphids occasionally show up in the greenhouse and they are washed off with

water instead of using chemicals. Pesticides are used only if necessary to remove the targeted pest. The goal is to preserve beneficial insects such as bees and other pollinators.

On another happy note, Nia loves getting up in the morning and going to work. She enjoys the outdoors and the mental and physical challenge of managing everything. She keeps track of her steps and always gets over 10,000. The day I talked to her she had recently logged a day with 19,000 steps; her daily record is 23,000.

Now the wait begins for the weather—especially the night temperatures—to be warm enough to plant. Staff is starting to plant perennials and cold hardy annuals. There are many urns and planters too heavy to move to the greenhouse that will be created on site. When the weather looks good, gardeners will plant the warm season annuals and tropical plants. Let the season—and the color—begin!

To give additional support to Music, ArtFair, or the Gardens, complete the form below and mail to:
MCBS, PO Box 7594, St Cloud MN 56302

Name _____

Address _____

Email _____

Event supported _____ Amount \$ _____

Or visit our website to give at www.munsingerclemens.com

Garden Crop Families

by Beth Berlin, University of Minnesota Extension, Guest Writer

Knowing your plant families is important when it comes to crop rotation and avoiding continuous disease or virus issues, and soil fertility in your vegetable and fruit gardens. Many diseases and pests will impact multiple crops in the same family. It is also critical to know the ornamental and weeds in the same family as the vegetable and fruit crops, for they can harbor the same problems.

Here is a breakdown of many popular garden crop families followed by a list of some of the ornamentals and weeds in the same family:

- **Brassicaceae: Crop:** horseradish, cabbage, cauliflower, broccoli, kale, Brussel sprouts, turnips, radish, rutabaga, and bok-choi. **Ornamentals:** alyssum, stock, candytuft. **Weeds:** shepherd's-purse, field pennycress.
- **Chenopodiaceae: Crop:** beet, Swiss chard, spinach. **Weeds:** lamb's quarters.
- **Cucurbitacea: Crop:** cucumbers, melons, squash, pumpkins, and gourds. **Ornamental or Weed:** None noted.
- **Fabaceae: Crop:** beans, and peas. **Weeds:** vetches, clovers, black medic.
- **Poaceae: Crop:** corn. **Ornamental:** ornamental grasses. **Weeds:** brome, wild oats, crabgrass, orchardgrass, quackgrass, foxtail.

Who Pays for the Gardens and What's in the Future?

by Joan Andersen

Munsinger Clemens Gardens are the pride of the community and attract many visitors from our country and around the world. Visitors sometimes ask who pays for the upkeep of the Gardens. There is no fee for admission or parking, which is very unusual for a public garden. It really takes a partnership of the City of Saint Cloud and private groups to keep things beautiful.

Recently I spoke with Scott Zlotnik, City Parks Director, about how the Gardens are financed. In 2015, the taxpayers of the City of Saint Cloud contributed \$320,000 through property taxes. Visitors contributed about \$30,000 through the local hotel/motel tax. Rentals, leases, and special events at the Gardens brought in revenue of about \$19,000. An additional \$145,000 was received from private groups including the Clemens Family Foundation, Munsinger Clemens Botanical Society, Friends of the Gardens, and several other private donors.

A major developmental milestone was the construction of the new greenhouse after many years of planning. In 2007 road construction and site preparation was completed. In summer

- **Liliaceae: Crop:** asparagus, onions, leeks, chives, garlic, and shallot. **Ornamentals:** tulip, daffodil, hosta, hyacinth, daylily. **Weeds:** wild garlic and onions.
- **Polygonaceae: Crop:** rhubarb. **Weeds:** knotweed, smartweed.
- **Rosaceae: Crop:** apples, apricots, cherries, pears, plums, strawberries, blackberries, raspberries. **Weeds:** roses.
- **Solanaceae: Crop:** peppers, tomatoes, potatoes, and eggplant. **Ornamentals:** petunia. **Weeds:** nightshade.

With this knowledge, gardeners should avoid planting members from the same family in succession to reduce disease and pest problems. It is also important to remove weeds in the same family that could be harboring the same problems. Finally there are particular plant families that should not be planted in succession to other plant families. For example the *Solanaceae* plants should not be planted after *Rosaceae* plants have been in that space and vice-versa due to verticillium wilt which impacts both families.

Another important reason to know your plant families and perform crop rotation is because certain families tend to be heavy feeders like the *Solanaceae* and *Liliaceae* families; while the *Fabaceae* family can actually add nitrogen to the soil.

Knowledge is power, and for gardeners that could mean a more plentiful harvest with less problems during the growing season by simply knowing the plant families.

2008 the greenhouse was built and it was ready for use for the 2009 season.

What is on the future wish list? Scott explained that cities plan and budget for projects many years in advance. There is a future sales tax commitment for capital improvements beginning in 2019. This money will be used for repairs and other projects that will be determined, such as restoration of some of the trails in Munsinger. Another potential project would be to add parking in a location by the old greenhouse.

One question that is asked is if the Gardens will ever be made completely handicapped accessible. This design change is expensive and highly regulated and would likely mean a major change in the appearance of the park. It would be a longterm project that would be a significant expense.

Finally, some people ask why there is no admission charge to the Gardens. This would be another large project since there is no fence and no controlled entry point into the site. There are no plans to change the free admission policy at this time due to the cost and the desire to keep the park available to community residents.



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lettuce, standing guard against bugs and rabbits. If you are a person who sees marigolds as being so ordinary that they are not really worthwhile, stop to think why they've become so popular.

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to provide color to the garden, far into pre-winter, when the days diminish into darkness all too early and the nights last all too long. Marigolds, with their sunny blossoms, are cheerful easy-going additions to any garden. If you like flowers that are easy to grow, you'll appreciate marigolds.

Perhaps you like useful plants. Among vegetables, marigold odor repels bugs like mosquitoes and gnats, and it attracts other insects that eat bad bugs. Marigolds attract bees that pollinate vegetable flowers. Next to your lettuce they may keep the rabbits away. They are good companion plants for tomato, eggplant, chili pepper, tobacco, and potato. Marigolds are cultivated to make dye for clothing, flavoring for food, essential oils, and medicines. Their petals are fed to chickens to make egg yolks a beautiful orange color. Marigolds are used to make perfume for lovers and incense for the shamans. It's an ingredient in drinks and an additive to tobacco. As an oil, extract of marigold is used for massage.

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by William M. Cook

Everyone knows that the weather changes. As you read this, the weather is probably turning from spring to summer. However, it is increasingly important for anyone who cares about gardens, plants, wildlife, and many other things to also understand the ways that our climate is changing too.

A couple of quick definitions first. Think of weather as day-to-day changes in atmospheric conditions; is it rainy,

sunny, a little warmer, a lot colder than the day before? Climate is much more about averages—how weather changes not from day to day, but from season to season and especially over longer periods of time. Climate questions could include whether droughts are more common than they used to be, whether spring is coming earlier or later on average, or if winters are in general colder or warmer than they have been.

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Call for Volunteers

Want to help serve rootbeer floats at one or more of our 2016 summer concerts in Munsinger Garden?
Contact Elaine Carter at (320) 253-6143 or efcarter@stcloudstate.edu to be added to our volunteer list.

Are you looking for more photos and up-to-date information on the Gardens and our events? We are making it easy by posting all the news on Facebook so you can find out what is happening and share that information with your friends. We hope you will help us—tell everyone how great our Gardens are!

LIKE our Facebook page at Munsinger Clemens Botanical Society



Photography Displays, 2015 Winners
JuneUS Bank, 1015 W. Saint Germain
July (6/29-7/29) ...Paramount Theatre, 913 W. Saint Germain
August-Sept.Saint Cloud Medical Group, 251 County Rd. 120
OctoberWaite Park Library, 253 Fifth Ave. N., Waite Park
NovemberSaint Cloud Public Library, 1300 W. Saint Germain
Winning photos can also be seen at www.munsingerclemens.com.

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