The Real Dirt

THE GARDEN CLUB *of* AMERICA

Winter 2017
Issue #42

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Cover Photo:
Papaver rhoeas,
Falling in Love Poppies
by Angela Overy

The Garden Club of America Horticulture Committee does not endorse any of the products, resources or sources mentioned in this newsletter. We offer simple recommendations based on the experiences of individual writers.

Message from the Chairman

In celebration of her exquisite watercolors, and with enormous gratitude for the countless hours she has spent creating them, the Horticulture Committee dedicates this Winter 2017 Issue of The Real Dirt to our friend and botanical artist-extraordinaire, Angela Overy of the Garden Club of Denver.

Barbara Tuffli
Chairman

In the pages that follow, you will have the opportunity to read about botanical illustration and its history, along with Angela's commitment and contributions to GCA, which span multiple decades. She is widely respected, not only as a botanical artist, but also importantly as a horticulturist and educator. Angela's three major watercolors celebrating Horticulture Committee initiatives, have been recreated as note cards to inspire and educate members of GCA clubs across the country:

- 2013 GCA Centennial Tree Map which hangs at Headquarters
- 2014 20th Anniversary Freeman Medal Watercolor of the first 20 medal-winning plants
- 2016 watercolor of Our Native Plants and their Pollinators from all 12 GCA zones

We hope you enjoy reading about the 2017 Freeman winners.
Congratulations and many thanks to the proposers!
Freeman Medal:
Magnolia ashei, Ashe magnolia
Proposed by Leslie Pierpont, Late Bloomers Garden Club, Zone VIII
Honorable Mentions:
Carpinus caroliniana, American hornbeam, ironwood or musclewood
Proposed by Beth Hickman, Rochester Garden Club, Zone III
Halesia carolina, Carolina silverbell
Proposed by Eleanor Pope and seconded by Katherine Hopkins,
The Palmetto Garden Club of South Carolina, Zone VIII
Special Recognition:
Aristolochia californica, California pipevine or California Dutchman's pipe
Proposed by Vanessa Crews, Orinda Garden Club, Zone XII

20th Anniversary Freeman Watercolor by Angela Overy

Message from the Editors

Catherine Allan
Editor

Each issue of *The Real Dirt* begins with the task of creating a theme, then requesting articles from within the GCA Horticulture Committee, our resource for information. This talented group produced more content than we imagined, so much so, that we've decided to continue the theme of botanical illustrations next winter. However, this Winter issue will be dedicated to the Freeman Medal Winners and to Angela Overy, a talented botanical artist from the Denver Garden Club.

Jenny Wyatt
Assistant Editor

The Freeman Medal is awarded annually to a plant recognized for its unique qualities and is readily available in nurseries across the U.S. This year, the award was given to a tree or woody plant. It alternates with an herbaceous plant on even years. Lucy Rhame, the Vice Chair for the Freeman Medal Award has written in detail about the Freeman Medal winners. We encourage you to take time to read her outstanding coverage of this year's winners. Perhaps there is a plant in your area that is under-utilized and worth promoting? Learn how to submit this form by Abby Coffin, a member of the Chestnut Hill Garden Club in Zone I

Lulu Lubbers, the GCA Director for Zone XI, captured the essence of Angela Overy and her unique artwork. You may recognize Angela's work in many watercolor paintings that she has generously produced for GCA. The Centennial Tree Project Map is familiar, as are the Horticulture Award Certificates and the Freeman Medal Award notecards. Her work fills these pages along with her inspirations, musings and noteworthy drawings that have graced many GCA articles. How fortunate we are to have ready access to her exceptional botanical watercolors in our Horticulture Committee!

Angela's artwork for each Zone's native plants inspired the Zone Representatives and others to submit articles from their area. Barbara Tuffli cleverly extracted Angela's drawings of each native plant with a pollinator to accompany the articles, bringing them to life in this issue. Anne Kinder, Zone VIII Representative, researched and wrote about the history of botanical illustrations, concentrating on the printing techniques from 1750-1850, which demonstrate the evolution of botanical drawings.

Last, but by no means least, is the Book Review by Gail Hamsher from Zone II. Her synopsis of Angela Overy's, Sex in Your Garden, should peak everyone's interest to better understand what really goes on in the garden!

Our special thanks to the talented writers who've generously contributed to this publication, with articles on the Freeman Medal winners; Angela's work; Zone native plants to discover; as well as articles brimming with colorful botanical drawings to delight the eye during this winter season. Happy Reading!

2016 Shirley Meneice Horticulture Conference Wrap-Up

Donna Ganson Vice Chair
2016 Shirley Meneice
Horticulture Chair

The 2016 Shirley Meneice Horticulture Conference was held at the Brooklyn Botanic Garden from September 19th to 21st, including optional events a day before and after the two-day symposium in the Garden. The conference is always very popular, and 2016 was no exception, with all places filled within a week of the registration opening. It is important for clubs to know that the Shirley Meneice Conference is limited in the number of participants by the size and capacity of the facilities which host the events, so clubs need to move quickly to register if they want to ensure a member of their club will be able to attend. In 2016, 211 attended from clubs across the country and over 60 volunteers helped to make this a successful hands-on conference.

Participants chose from more than 30 break-out sessions where small groups of attendees had the opportunity to look closely at most areas of the Garden, accompanied by the Garden's Curator, including the Native Flora Garden, the Rose Garden and the Bonsai collection. New techniques in water conservation, compost tea, tree maintenance and children's education which are being used at the Garden were also explored, to mention just a few of the topics covered.

Keynote speakers for the conference included Scot Medbury, President of the Brooklyn Botanic Garden (and a former GCA scholar) Darel Morrison, native flora expert Amy Goldman Fowler, one of the foremost heirloom plant conservationists in the country. Paige Dickey gave a charming talk on change in the garden and others. We also heard from the directors of Brooklyn's newest park, Brooklyn Bridge Park and the oldest, Prospect Park, talk about the history of the facilities and the importance of these parks in a city so densely populated. The days were long, starting at 8 am and going through dinner, but the attendees all seemed to agree that despite a bit of rain and slightly sore feet, the content, venue and camaraderie they experienced at the conference were worth every effort. For many attendees, it was their first time to Brooklyn, and the beauty they discovered there made them eager to return to New York's most populous borough to continue the exploration. Conference attendees all agreed, "A Tree Grows in Brooklyn-and Much More."

Members of the GCA Horticulture Committee enjoying the discovery of seed packets

A walk in the rain in the Japanese Garden

Upcoming GCA Shirley Meneice National Horticultural Conference 2017

The 2017 Shirley Meneice Horticulture Conference, Jewels of the Plains, will kick off on Sunday, September 24, 2017 at Omaha's Henry Doorly Zoo and Aquarium, consistently at the top of the "World"s Best Zoo" lists. Come experience America's largest indoor rainforest as well as the world's largest indoor desert under an enormously glazed geodesic dome. Dine with Zoo Director Dennis Pate, as he shares their many research, conservation and horticultural accomplishments in the Midwest and around the world. Our dinner speaker Michael Forsberg, will inspire you with his breathtaking photography and narrative. He will share his dedication to wildlife and conservation in North America's Great Plains during his 20 plus years as a photographer and conservationist. Audubon, National Geographic and the Nature Conservancy have proudly featured his images over the years. His numerous and stunning books tell his story and will be available for purchase.

Monday's meeting will feature a welcome from Lauritzen Gardens Executive Director and GCA Honorary Member, Spencer Crews. There will be stimulating breakouts, speakers and a panel discussion with seed saving, a major theme of the meeting. The day concludes at the fabulous Art Deco designed Durham Museum, the former Union Pacific Railroad Depot, for dinner. The speaker this evening is American agriculturalist Cary Fowler, who will expound on the Svalbard Global Seed Vault. His priority continues to be protecting the future of food one seed at a time.

Tuesday will take you to Glacier Creek Prairie Preserve for a half day to explore the tall grass prairie and associated ecosystems of eastern Nebraska. The Barn at Glacier Creek is an on-site Environmental Education and Research Facility where lectures and hands on activities will take place. Come meet and observe the unique Working Dogs for Conservation. The other half day will be focused at Lauritzen Gardens, Omaha's Botanical Center. Enjoy touring the 100 acre garden, Conservatory, as well as the new Conservation Center. You will be pleased with the many choices you'll have for breakouts at the Garden. Vermiculture, beekeeping, prairie material wreath making, garden-tool maintenance, designing English perennial borders with natives, water conservation and the Xerxes Society on pollinators and much more. The day will culminate with a cocktail hour where an heirloom tomato tasting will be served followed by dinner in Lauritzen Garden's Great Hall. Jim Locklear, Director or Conservation and author, will speak on his latest book, JEWELS OF THE PLAINS.

The 2017 Shirley Meneice Conference is proud to present a Conference Post trip to the residence and property of Robert and Karen Duncan in the capital city of Lincoln, Nebraska. They have spanned the globe to build a world class, 2000 plus art collection both inside their spectacular home and on their magnificently landscaped private grounds. Lunch and a trip to the Sunken Gardens in Lincoln will complete the day.

The 2017 Shirley Meneice Horticulture Conference will offer you world class experiences in the Heartland of America. Come experience the Omaha Henry Doorly Zoo, Glacier Creek Prairie Preserve, Lauritzen Gardens, the Durham Museum and the post trip to the Duncan Residence. Take in the outstanding speakers, breakouts and opportunities to learn about the midwest horticultural specialties presented at this conference. Delegates will be staying at the Embassy Suites in Omaha's Old Market, located a convenient distance from Omaha's Eppley Airport.

The full meeting schedule will be available in early April. Watch for it, and register early for the 250 available spots. We look forward to seeing you in Omaha, Nebraska in September!

Linda Grieve, Vice Chair Shirley Meneice Horticulture Conference 2017
Des Moines Founders Garden Club


JEWELS OF THE PLAINS
GCA Shirley Meneice
2017 Horticulture Conference
Omaha, Nebraska
September 24-26, 2017
IMAGE
CENTER FOR
GREAT PLAINS STUDIES
VISITTHEPRAIRIE.COM

Partners for Plants

A Partners for Plants Projects is:

- A hands-on GCA club habitat restoration work project
- Located on public lands of 150 acres or more and supervised by the land manager
- Planned and overseen by a botanist or professional horticulturist. Expenses for the professional person may qualify for a GCA Funding Grant. Submit a Funding Request Form by the spring deadline for a grant for the following year
- GCA club member(s) provide leadership as the Project Coordinators
- Project may have other components in addition to the hands-on work project, but those expenses are to be covered by the club.
- New Projects must be approved and supported by their club's President and Executive Committee.

Sharon Blackburn
Vice Chair
Partners for Plants

To begin a new P4P project, contact the P4P Vice Chairmen. P4P@gcamerica.org

- Read the Partners for Plants webpage on the GCA website.
- Fill out and submit, online, a Project Proposal for New Projects Form. All forms are found under "Resources" and "Forms" on the far right side of the P4P webpage on the GCA website.
- New projects that meet project requirements will be approved by the P4P Vice Chairmen.

Caterpiller and bumblebee enjoying *Asclepias incarnata*. Photos by Dedee O'Neil, Zone X Director

Propagation and Seed Share

Winter is upon us and GCA members around the country are busily buying seeds to sow for their spring gardens. Please plan to document your seed propagation efforts and put them up on the website for all to read, learn from and be inspired by!!! Or perhaps you are trying your hand at hardwood propagation at this perfect time of year, winter. Don't let this effort go unnoticed. Document it on the GCA website. The Horticulture pages on the GCA website are a wealth of information and right at your fingertips. Sow it, Grow it, Share it and Show it! Here is an example, *Rudbeckia* 'Praire Sun' by Dedee O'Neil, The Akron Garden Club.

Katherine Shepperly
Vice Chair
Propagation &
Seed Share

Rudbeckia *'*Prairie Sun*'*

Hybridizers have created beautiful cultivars. My favorite is *Rudbeckia* 'Prairie Sun,' an All-America Award Winner in 2002. It has beautiful 4" blooms from July until frost and makes a wonderful cut flower for summer bouquets. Supposedly an "annual," I have had the plants survive northern Ohio winters, plus drop seeds. (Some seedlings grow "true" with green centers, other seedlings revert back to brown or black centers – I like them all). Growing these from seed is simple. Germination takes about two weeks. I start these in April, place small plants in the garden in early June, and have blooms by late July. (Check the Plant Propagation Handbook on the GCA website for detailed information on growing from seed.)
https://www.gcamerica.org/_uploads/filemanager/publicaions

In a garden, the plants are 24"-30" tall, forming clumps that make a bright yellow beacon for the bees and butterflies, and then the seed heads are a food source for birds in the late fall.

Dedee O'Neil
Akron Garden Club, Zone X

Rudbekia 'Prairie Sun' photo by Dedee O'Neil

Freeman Medal

Native Ashe Magnolia Named 2017 Plant of the year by The Garden Club of America

Magnolia ashei has been named 2017 Plant of the Year by The Garden Club of America (GCA). Annually since 1995, the GCA has identified a stellar North American native plant to receive its Montine McDaniel Freeman Medal for Plant of the Year.

Lucy Rhame
Vice Chair
Freeman Medal

Named after U.S. Forest Service forester, William Willard Ashe, *Magnolia ashei* or Ashe magnolia is a spreading, deciduous, understory shrub or small tree endemic to 8 counties in Florida but capable of growing in Zones 6 to 9 in rich, moist, well drained, acidic soil. An outstanding specimen in a shady woodland, the dark green glossy leaves can grow up to 2 feet long. Large citrus scented, creamy white, saucer shaped flowers with purple stains at the base of the 6 to 9 pedals are characteristic of this plant. The flowers can reach up to 12 inches across during blossom in early spring. The flowers set fruit borne in cone shaped aggregates that are an attractive pink-purple color adding fall interest to the plant. Seeds should be collected when the fruit turns bright red and stratified with a minimum of 60 days cold, moist storage to ensure germination. The Florida Department of Agriculture lists the Ashe magnolia as endangered, due to its small population and restricted area of growth in Florida though the tree can be grown in a wider geography. The flowers support pollinators and the fruit is eaten by wildlife. Long-lived, heat tolerant and resistant to diseases, deer and insects, this magnolia is an ideal specimen tree in a small garden. Nominated by Leslie Pierpont, from the Late Bloomers Garden Club, Zone VIII.

Photo courtesy by Steven P. Christman

There were two Honorable Mention Plants of the Year in 2017, as well as one noted for special recognition.

Carpinus caroliniana, commonly known as American hornbeam, ironwood or musclewood due to its closely grained and heavy, hard wood, was awarded an Honorable Mention.

Michael Dirr states, “This plant has a lot to offer our landscapes in subtle beauty.”

Carpinus caroliniana, is a small, deciduous hardwood, understory tree or multi-stemmed shrub native to eastern North America. Found in the wild along stream banks, moist woods, and in ravine bottoms, preferring moderate soil fertility and moisture, this species tolerates a wide range of temperatures, soils and moisture conditions, even several weeks of drought once established. Slow growing in USDA Zones 3 to 9, American hornbeam can grow 20 feet high and 35 wide at maturity.

Much admired for the bark, the smooth, grey trunk and branches exhibit a unique muscle-like fluting hence the other common name for the tree. In the spring, flowers bloom with male and female catkins. The female catkins produce clusters of winged nutlets as they mature. Long, oval, dark green, textured leaves turn shades of yellow, orange and red in the fall.

An attractively shaped globular tree, the catkins are a food source for numerous animals including squirrels, rabbits and beavers as well as turkeys, ducks, songbirds and grouse. The blossoms are a nectar source and the leaves a larval host for butterflies.

Resistant to disease, insects, ice damage and deer browsing, Hornbeam is suitable in a woodland setting, along a street, in a garden or as a bonsai specimen.

Nominated by Beth Hickman, Rochester Garden Club, Zone III.

Photo courtesy of Julie Makin from the Lady Bird Wildflower Center

Halesia carolina

Native to the southeastern United States, mostly in the Piedmont and mountains of the Carolinas, *Halesia carolina*, commonly known as Carolina silverbell, is a small, deciduous tree with lovely white, pendulous, bell shaped flower clusters blooming from April through May. Grown in USDA Zones 4 through 8, this lovely specimen requires moist, slightly acidic soil in sun or part shade and will reach heights of 40 feet with a spread of 35 feet at maturity. Tolerant of wind and heat, Carolina silverbell is resistant to diseases, insects and deer. This tree is useful in establishing and maintaining riparian forest buffers. Note that the species can be grown as a shrub also.

In the fall, four-sided winged, brownish, nut like fruits appear and often persist well into the winter. Squirrels use the seeds as a food source and the trees for dens. The wood of the silverbell is soft and close-grained making it a favorite wood of craftsmen. This genus honors the Reverend Stephen Hales (1677-1761), an English chemist and inventor.

Nominated by Eleanor Pope and Katherine Hopkins, The Palmetto Garden Club of South Carolina, Zone VIII

Photo courtesy of R.W. Smith of the Lady Bird Johnson Wildlife Center

Aristolochia californica

Endemic to northern California and native to the Sacramento Valley, San Francisco Bay area, Sierra Nevada foothills, USDA Zones 8 to 10, *Aristolochia californica,* commonly known as the California pipevine or California Dutchman's pipe, is the exclusive food source for the larvae of the California pipevine swallowtail butterfly, Battus philenor hirsute. The red-spotted caterpillars eat the leaves of the pipevine and then use the flowers as a secure enclosure to undergo their transformation from larvae to butterfly. The leaves of the plant contain a toxin, which when eaten by the caterpillars, makes them unpalatable to predators.

A deciduous woody vine, pipevine grows from rhizomes to a length of about 5 feet but can reach over 20 feet. The vine prefers part-shade and regular watering but can tolerate some drought. Common in moist woods and along streams in northern and central California, pipevine will spread out over open ground in the wild but can be trained on trellises or along paths in a garden providing a groundcover. The plant produces large green to pale brown, unpleasant, musty smelling pipe shaped blooms January through April that attract tiny carrion feeding insects that aid in pollination. After the blooms, the vine sends out green heart shaped leaves. The leaves tend to dry and hang on the vine in the winter so it is suggested, in some sources, that one plants the pipevine with other plants.

Nominated by Vanessa Crews, Orinda Garden Club, Zone XII

Photo courtesy of the UC Botanic Garden at Berkeley

The Freeman Medal was established to highlight underutilized, but highly worthy, native trees, shrubs, groundcovers, vines and perennials. "The goal is to draw attention to select native plants to encourage their use in the landscape and make them familiar to gardeners and more available in nurseries," explains Rhame. Annual selection is made by a group of nationally renowned horticulturists and experts in the nursery trade. Woody and herbaceous plants are nominated in alternate years. The 2017 winners were selected from 18 plants nominated by members of GCA clubs.
The medal honors Montine McDaniel Freeman (1915-98), member of the New Orleans Town Gardeners Club, and was established by her son and daughter-in-law. Freeman was an outstanding horticulturist particularly enamored of native plants. Her 93-acre Beechwood Gardens boasted more than 4,000 azaleas, camellias and magnolia grandifloras.
The GCA, founded in 1913, is composed of 200 clubs with nearly 18,000 members who devote energy and expertise to projects in horticulture, conservation and civic improvement across the United States.

Freeman Medal Bouquet by Angela Overy

In 2014 Angela Overy, Garden Club of Denver, created a botanical study in watercolors of the twenty Freeman Medal winners to commemorate the medals' 20th Anniversary. Her challenge was how to give each species, ranging from grasses to trees, equal merit in a small space. She collected detailed photos of the winners and extracted the most attractive features from each one. Balancing spaces, color, and design was her next feat that she accomplished by creating a striking bouquet . Angela has painted other botanical masterpieces for GCA such as the Club and Zone Horticulture Award certificates, the Centennial Tree Map, Shirley Meneice Seed packages, and the new Native Plants and their Pollinator Cards. When asked which was her your favorite creation, she replied, "I think that as a whole, the most successful of my art pieces for GCA is the Freeman bouquet. It captures each species well! And I love it."
We thank you, Angela!

Submitted by Alice Thomas, Past Vice Chair of the Freeman Medal

Freeman Award: A Club Guide 101

Chestnut Hill Garden Club ladies are seeing the world more clearly thanks to the process of nominating a woody perennial for the Freemen Medal.

The CHGC Conservation Committee Chair asked the 23 members of the Conservation Committee to look at our native woody perennial plants and recommend plants they thought would be good candidates to propose for the Freeman. A woody perennial is awarded the Freeman in odd years (2017). Quite a few favorites trees, shrubs and vines were suggested but with a little investigation on the GCA website, these names were ruled out. The remaining list was submitted to the Vice Chair of the Freeman Medal to confirm eligibility. In September 2016, with a good list in hand, the Committee met at the September Conservation Meeting and discussed the attributes of each possible candidate. Were the plants of merit? Did they meet the specific criteria of the Freeman? Were members familiar with the plant? After careful consideration, the group unanimously chose *Tilia americana*, and proceeded to learn about it in depth. The Committee met at the Arnold Arboretum on October 31 and studied the collection with Sue Pfeifer, the Horticulturalist on staff. We had our questions from the Freeman Medal application on hand and were very focused.

The Conservation Committee of the Chestnut Hill Garden Club has pledged to put up a plant for the Freeman Medal every other year. We loved the process. We identified a *Tilia americana* in Dane Park, our Partners for Plants project, and we found it all over our area. Our members now know that we walk by this beautiful native tree in many of our daily outings and we thank the Freeman Medal for the structure of study.

Abby Coffin
Conservation Chair
Chestnut Hill Garden Club

Mary Johnson from CHGC

Horticulturist, Sue at the Arnold Arboretum

Awards

GCA Horticulture Awards, May – December 2016

Alice Thomas
Vice Chair Awards

The 2016 recipients of a Club or Zone Award received a beautiful new certificate that has been created by Angela Overy, Garden Club of Denver. Images of these awards and of the Club and Zone Commendations may be viewed on the Horticulture page of Garden Club of America website https://www.gcamerica.org/members/committees-hort. Ask your club's Award chairman whom she is considering for 2017 and encourage her with suggestions.

The Zone Horticulture Award is presented to one or more members or a member club for outstanding horticultural achievement beyond the activities of her own club. If more than one receives the award they must have worked on a significant project together.

How often is it presented: Annually
Who is eligible**:** A GCA club member
Which committee is it approved by: Horticulture

Below are the winners from May to December 2016. How did your Zone do? If you find a friend's name, please congratulate her!

Zone Horticulture Awards

Zone II	Jennifer Brown	Green Finger Garden Club
Zone III	Ellen Peterson	Millbrook Garden Club
Zone XII	Angela Overy	Garden Club of Denver
Zone XII	Sandy Roth Scott	Wood-side Atherton Garden Club

Zone Horticulture Commendations

Zone V	Dr. John Frett UDBG	Garden Club of Wilmington
Zone VII	Peggy Cornett	Albemarle Garden Club
Zone VII	Louis Hillenmeyer III	Garden Club of Lexington
Zone XII	Teresia M Hazen	The Portland Garden Club

Club Horticulture Awards

Zone I	Dede Biau	North Shore Garden Club
Zone I	Ruth Culleton	Melton Garden Club
Zone I	Paula Gimblette	The Lenox Garden Club
Zone I	Trish Meade	Chestnut Garden Club
Zone I	Shirley Williams	Worchester Garden Club
Zone II	Anne Holcombe	Garden Club of Hartford
Zone II	Whitney Freeman-Kemp	Ridgefield Garden Club
Zone II	Helen Ong	Garden Club of Darien
Zone II	Susan Schieffelin	Greenwich Garden Club
Zone II	Jane Wappler	New Canaan Garden Club
Zone III	Deborah Boillot	Rye Garden Club
Zone IV	Anne Bonadies	Garden Club of Englewood
Zone IV	Elizabeth Lilleston	Rumson Garden Club
Zone IV	Judy Ostberg	The Summit Garden Club
Zone V	Susan Ayres	The Garden Workers
Zone V	Louise Downey	Carey T. Watson Garden Club
Zone V	Carolyn Folk	Providence GC of Pennsylvania
Zone V	Diane L. McCallister	The Weeders

Zone VI Anne Jelich	Talbot Country Garden Club
Zone VI Lyn Ingram	Amateur Gardners Club
Zone VI Amanda Mahoney	Garden Club of Twenty
Zone VII Jenny Evans	Tuckahoe Garden Club of Westhampton
Zone VII Dana C Parker	The Virginia Garden Club
Zone VII Elizabeth Pringle	Twin City Garden Club
Zone IX Molly Adams	Garden Club of Lookout Mountain
Zone IX Linda Bullard	Magnolia Garden Club
Zone IX Meredith Cocke	River Oaks Garden Club
Zone IX Shane French	New Orleans Town Gardeners
Zone IX Robin Orsi	Little Rock Garden Club
Zone IX Stanya Owens	Alamo Heights-Terrell Hills Garden Club
Zone X Margaret Ransohoff	Shaker Lakes Garden Club
Zone XI Lesley Schoedinger	Garden Club of St. Louis
Zone XII Deni Bates	Piedmont Garden Club
Zone XII Barbara Dalton	Tacoma Garden Club
Zone XII Sally Farnum	Pasadena Garden Club
Zone XII Cynthia Wenziau	Diggers Garden Club
Zone XII Marilyn Wilson	Garden Club of Denver

Club Commendations

Zone II Dr John Frett	Garden Club of Wilmington
Zone II Scott Jamison	Fairfield Garden Club
Zone III Adam Wheeler	Millbrook Garden Club
Zone IV Variety Growers	Rumson Garden Club
Zone VII Boys & Girls Club Orange	Dolley Madison Garden Club
Zone X John Klein	Garden Club of Cincinnati
Zone X E Robert Hilton McGregor	Shaker Lakes Garden Club
Zone XI Forest Park Forever	Garden Club of St. Louis
Zone XI Jay & Roy Veneo	Lake Minnetonka Garden Club
Zone XII Martin Nicholson	The Portland Garden Club
Zone XII Jack States	Woodside-Atherton Garden Club

Bouquet of Poppies
by Angela Overy

Angela Overy

Artist, Horticulturist and Inspirational Friend to all in GCA

”Know your Plants and Pollinators and you will have Sex in your Garden!”

A personal interview with Angela Overy written by Lulu Lubbers, Director, Zone XI

Words of wisdom and fun from Angela Overy, international author, botanic illustrator, teacher, horticulturist, plant lover, self taught scientist, watercolorist, mentor and thirty year member of the Garden Club of Denver.

Mertensia ciliata

Angela loves science and a challenge and is passionate about plants and pollinators. She has gardened in metro Denver, at 5,000 ft., with plenty of sunshine, in Douglas County, CO at 6,000 ft, in a harsh, windy environment with clay soil, and in the Rocky Mountains at 8,000 ft. where the continuous winter snow cover is a blessing, smothering perennials and keeping them at a constant temperature for months. This snow blanket prevents the plants from a killing freezing and thawing cycle, finally the melting snow provides moisture for fast Spring growth. Angela finds it easier to grow perennials in the mountains than on the plains.

Angela wrote Sex in Your Garden, Fulcrum Publishing 1997, which is still in print and received the Garden Writers of America Award of Excellence 1998. It is reviewed in this issue.

Become Intimate With Your Plants - Take the time to really get to know them!

When Angela takes on a project, she does extensive research to be accurate. Her favorite and most trusted resources include an old copy of Hortus. In spite of no color, or photographs , and an awkward heavy weight, the text is still a reliable source on the shapes of leaves, scientific descriptions of flowers and seeds, growing conditions required and continents where the plants evolved. Genus and species are listed, and there is a list of cultivars with descriptions. It is far more comprehensive than the average plant book.

She also uses tried and true websites connected to educational and research institutes such as the Lady Bird Johnson Wildflower Center and the Missouri Botanic Gardens Plant Finder. These two provide many photos, some descriptions, and are better than garden nursery web sites which may tend to slightly exaggerate.

Understand Your Pollinators - What motivates their behavior so there will be sex in the garden?

In addition to learning about plants, Angela recommends learning about the pollinators. Whether you are looking or not, there is lots of sex going on in your garden! Flowers have male and female parts and have one goal: to produce seeds that will grow into the next generation. Angela suggests you think about which bee, butterfly or bird is going to be using your plant since they respond to all different sizes, colors, shapes and smells. Bees are important to us and we are important to their survival. Bees are attracted to yellow, blue, purple and ultraviolet flowers. Butterflies like red, orange, yellow and pink. If you want hummingbirds, plant red, orange and purple-red and enjoy your visitors!

Watercolor Painting in Progress

Everything you put in your garden should be there for a reason. With a better understanding of plants and environment and the reproductive process of plants, one can be a more successful gardener. Bees, butterflies, bugs, birds and bats all carry pollen from plant to plant and different colors and shapes attract particular species of pollinators - it goes without saying that insecticides don't play a part in this world!

Prunus virginiana

Have Fun and Go Native!

Angela reminds us that Native plants, pollinators and environmental balance is important for the survival of this planet. For human survival, pollinators ensure the fruiting of many food crops without which most of us would go hungry. Most animals would die, unraveling the planet's food chain and ultimately destroying the planet as we know it.

Pollinators facilitate the reproduction of plants by helping flowering plants set seed and creating plant diversity. The leaves of plants emit oxygen into the air and remove carbon dioxide from our atmosphere. Plants create a carbon sink, over millions of years they make fuel such as coal and oil. Pond plants can clean up certain pollutants. All living things, animals, plants, forests, and jungles have a vital co-dependency. They have evolved together, and cannot survive without each other.

Along with other GC of Denver members, Angela participated in a "citizen science" project by monitoring the activity and nesting of native bees in bee boxes in their gardens. Sponsored by the University of Colorado, and called *The Bees Needs*, they are learning how to keep records of nest materials such as mud, leaves, seed down and resin. They are also trying to identify and photograph the pollinating insects visiting our boxes. This is a wonderful occupation and way to learn your natives, everything from mason bees and wasps to leaf-cutting bees. She has learned a great deal and highly recommends this to other clubs.

Get Up-Close and Personal with Your Plants - Establish a Healthy and Meaningful Relationship

Angela designed and founded the Denver School of Botanic Illustration in 1990. An exhibition of her botanical paintings was held at the Pennsylvania Horticulture Society in Philadelphia.

A botanical illustration is not a pretty or stylized painting of a flower. It is a realistic portrayal of a plant or flower that gives scientific information and shows the anatomy of a plant including the male and female parts. It is usually on a white background, has no props like a vase and is often painted life-size. Botanic illustrations allow an artist or gardener to become intimately involved with a plant. As a teacher, Angela's favorite class is the Beginners, six weeks of basic detailed drawing of flowers that can open up a whole new world and a whole new way to learn about a plant.

Gazania sp.

Cross-section of a Crocus

If you cannot draw there is another wonderful way to become intimate with a plant. Angela suggests that every student, gardener, or garden club member could take OWNERSHIP of a plant or two. Study it carefully. What kind of leaves does it have, what shape, what margin, what size? How are the leaves attached to the stem, on a long or short stalk? ...singly or in pairs? ...or are they wrapped around the main stem? Look at the buds and then the flowers. How many petals? What color? What shape? Look in the center of the flower. Can you distinguish the stamens (male) parts? Is there any pollen, if so what color? Look for the central pistil (female) organ. Touch the top, is it sticky or rough? Now pull all the petals off and cut your flower in half, one flower horizontally and another vertically. Look for undeveloped or pollinated seeds inside. How many? How are they arranged. Now find a seed pod and cut that in half. There is no end to how much you can discover. It helps to pull each leaf and petal off a plant and paste it on paper with clear sticky tape. Try and label each part of your plant/flower from a book or the internet. Make notes of the colors with crayons or cut pieces of color from a magazine. This will now be YOUR plant. Buy some, or sow the seeds. Follow its growth and take notes. You only need to do one a year to gather a heap of information. Then teach a child or friends about your plant. Your information needs to be widespread!

Plant with a Purpose

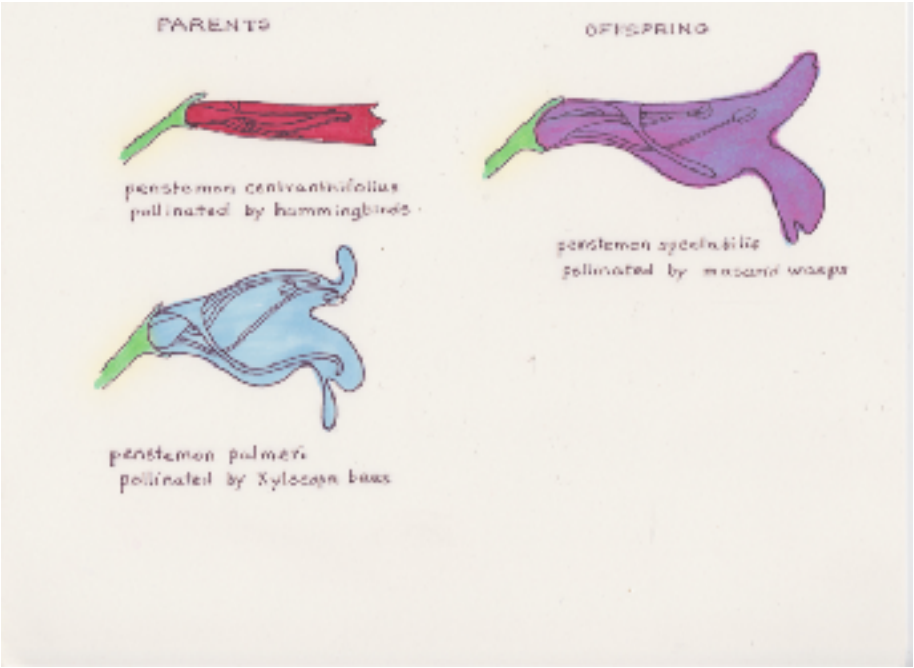
As GCA says, Right Plant, Right Place! When planting your plant take care where you give it a good home. What kind of soil does it like? Whether clay, sand, rocks, or loam, make sure it is the right kind for the plant you selected. Many plants are not adaptable to soils that are not native to them. The roots will have difficulty spreading and taking up nutrients. If you have "poor" soil, or insufficient nutrition amongst the soil particles, you will have to "amend" the soil. This often means adding compost: decomposed and rotted plant material in small pieces. It will be eaten by worms and other living organisms living in the soil. In turn they will eat, digest and excrete the compost so it can be absorbed readily from plant roots.

Cross-section of a Nasturtium

Of course you can add commercial chemicals to your soil, but remember that could kill your worms and things such a fungi, very counterproductive. Better to stick with a natural product, it may take longer but is wiser. You will also have to amend the soil every year. It would be nice if a load of rich, fancy topsoil upturned on your garden would improve the earth for many summers. Often, the nursery topsoil gradually disappears and it all reverts back to the clay or sand or whatever. So soil-making is an on-going job, improved each year with care and additions. Compost should be dug into the earth, not just layered on top, however tempting that may be. Soil layered like a cake is not helpful to root systems, especially newly planted ones.

Finally, learn what environment your special plant needs. Does it like to bake in the sun all day? or need the shade of an overhanging tree? Will it thrive nestled up to a rock, on its own, or can it cope squashed in with other plants in a pot or window box? Will your plant grow right next to your house where builders often bulldoze construction debris to fill in around foundations? Analyze all your situations and give your plant your best possible spot for its needs.

In addition to Sex in Your Garden (reviewed in this issue), Angela has written: The Foliage Garden, Harmony/Crown 1993, a Garden Book Club Selection. Fine Gardening Magazine featured Angela Overy's garden in Sedalia, Colorado, on the front cover and included many articles written by Angela through the years. Angela was also the garden editor of Mountain Living Magazine



Three Penstemon and their pollinators

Angela has been recognized many different ways for her generous spirit, passion for plants and remarkable talent. She is the recipient of the Harriet De Waele Puckett Creativity award in 1995, The Garden Club of America Zone XII Horticulture Arts Award, 1998, The Garden Club of America Eloise Payne Luquer Medal for Services to Botany, 1999, and The Garden Club of America Zone Horticulture Award in 2016. For additional information about Angela, check out the GCA Fall 2015 and Winter 2017 issues of The Bulletin.

Angela has shared her passion for plants and artistic talents with her club, her community and The GCA. She loves science and a challenge. Among a few of her other accomplishments:

She designed the Garden Club of Denver logo shortly after she became a member

She helped design flower show programs and, and Best of Show awards for Horticulture, Flower Arranging and Photography.

She has been a speaker at many GCA Clubs throughout the Country, the Philadelphia Flower Show, PA, Colonial Williamsburg Garden Symposium, VA, Denver Botanic Gardens, CO, Huntington Botanic Gardens, CA, National Science Teachers Convention, MA, Native Plant Society of New Jersey, NJ, Lady Bird Johnson Wildflower Center, TX, Science Symposium Hill Arboretum, VA, Rocky Mountain National Park Visitors Center, CO, and GCA Zone V annual meeting.

She is a past board member of the Lady Bird Johnson Wildflower Center.
She painted the design for the scarf for the 2006 GCA Annual Meeting
Did botanical illustrations of over 20 high-altitude plants for the Nature Center on Mt. Goliath, CO
Created an illustration of a Bur Oak tree for a memorial plaque at Four Mile Historic Park, CO.
Co-chaired the club committee for the GCA Centennial Tree Project, which we called "Three Trees and a River."

For the GCA Horticulture Committee, she volunteered, researched and created the 2013 Centennial Tree Map to show the 23,000 trees planted by the 200 clubs, honoring The GCA's 100th birthday.

For the Horticulture Committee she made a watercolor celebrating the 20 anniversary of the Freeman Medal trees and plant winners .

Created seed sharing packets for the Shirley Meneice Conference

Designed some of the GCA award certificates.


THE GARDEN CLUB of AMERICA
CLUB HORTICULTURE AWARD
Recipient Name


THE GARDEN CLUB of AMERICA
ZONE HORTICULTURE AWARD
presented to
Recipient Name
Garden Club
Zone
Month Year

Angela designed and researched the watercolor painting for the Horticulture Committee that shows American native plants and their pollinators. There are five or six plants from each GCA zone depicted with appropriate bees, butterflies, moths, hummingbirds, bats and beetles. Note cards of the painting have been printed.

Written by Lulu Lubbers, Zone XI Director
Past Executive Liaison to the Horticulture Committee
Town and Country Garden Club

pollinator watercolor notecard

Pollinators in Winter
by Angela Overy

Have you ever stopped and wondered what happens to bugs in the winter? Well, where do they go in the winter when it is sub-zero outdoors and nothing can survive? We've done a little research to inform inquiring minds on how our native pollinators spend those cold winter months!

Bats

Bats hibernate in the cold winter months. They may roost on their own or in small groups, often in cool, quiet places like disused buildings, old trees or caves, where they hopefully won't be disturbed.

Beetles and Ants

Many species of beetles survive the cold winter months as adults, by securing a protected spot in an out of the way structure or wall crevice and go dormant, until warm weather activates them again. Ants live in organized colonies similar to bees. Ants survive the cold by moving into and huddling together in the deepest sections of their underground colonies that extend below the frost line. There, they feast on food they stored during the summer months.

Bees

There are 4,000 native bee species of all shapes and sizes in the United States and they pollinate 80% of the flowering plants. Most of the native bees are solitary, meaning they live and raise their brood alone. They either nest in the ground, take advantage of existing holes or as in the carpenter bees burrow out holes with their powerful jaws. They lay their eggs and the next generation will emerge in spring.

Bumble bees

50 species of bumble bees exist and they are social, which means they work together rearing and provisioning. Only the queen bumble bee hibernates over winter and she does it in a small nest in the ground, often in a hole made by a mouse or vole. In the early spring, she collects food and begins to lay eggs in there. The female workers hatch and work together to feed and care for the colony. A new queen will emerge, mate and hibernate starting the cycle over again.

Butterflies and Moths

Most adult butterflies and moths die at the end of the summer, like the Fritillaries and hummingbird moths, but the next generation lives on and winters over as either eggs, caterpillars, larvae or pupae. There are a few species that migrate to warmer climates, like the great flight of the Monarchs. The cloudless sulphur, the red admiral, the painted lady as well as the common buckeye all make a pilgrimage that may rival that of the Monarch though not much is known. There are a few species that have a natural camouflage like the mourning cloaks and the comma butterflies that just hunker down in a safe and quiet place.

Flies

There are hundreds of species of flies. Tiny native flies can pollinate minute white flowers as they seek microscopic drops of flower nectar. Other types of flies favor warm, smelly places to eat and lay their eggs, (think dead animals).

Hummingbirds

There are about 300 species of hummingbirds, all of them originating in South and Central America. Only a handful of species migrate north every spring to breed and feed in the U.S.A. Those of us shivering in cold climates, eagerly await the spring arrival of the noisy, flashy males, who fly in first to stake out a territory for mating and nesting. Camouflaged females arrive a week or so later. Global warming is changing migration patterns. The Bellevue Botanical Garden, near Seattle, planted a garden of winter-flowering trees which are encouraging hummingbirds to stay year-round.

All of our important native pollinators as well as the other native insects have instinctive coping skills to survive cold winters, whether they are migrating, hibernating or setting the next generation via egg, larva or pupa. It is important to maintain a winter habitat in your garden to keep our native pollinators safe so the next generation can survive.

Provide plenty of early blooms for hungry pollinators when they emerge in the spring. Look inside early crocus flowers to see worker bees busy searching for nectar and pollen to replenish their depleted winter supplies. Take some time and look under the bark of trees, the pile of leaves in your yard or natural cavities to find some of these miniature nurseries you'll be amazed at what you find.

Native Plants by Zone

Zone I

***Symphyotrichum novae-angliae*,**

New England Aster, also known as Michaelmas Daisy, has a rich color that highlights the late season landscape with magnificent blooms ranging in color from blue-purple to lavender-pink, with yellow-orange centers. Large and showy this aster grows 3–6 ft. tall. Like most asters it blooms late in the season, from August to October, and provides a critical fall nectar source for pollinators, especially Monarchs as they prepare for their fall migration to Mexico. Among pollinators, it attracts bumblebees, honeybees, miner bees, large leaf-cutting bees, bee flies, butterflies, skippers, short-tongued bees and syrphid flies. It is a larval host for Pearl Crescent *(Phyciodes tharos*) and checkerspot butterflies.

New England aster is a flowering herbaceous perennial plant in the ASTERACEAE family. It is native to almost every area in North America east of the Rocky Mountains, but excluding the far north of Canada as well as some of the southern United States.

This deer resistant native is popular in the tall border, cottage garden or butterfly garden. It prefers moist, rich soils, thriving in full sun or light shade in all but the driest soils. It does self-seed in favorable conditions. When this tall aster goes into bloom the lower leaves begin to dry up. If height becomes an issue, pinching back the stems a few times before mid-July can help eliminate any need for staking.

Leaving the science and addressing the poetic, according to the Victorian practice of assigning meaning to flowers, the aster symbolizes patience.

Echinacea purpurea,

Purple Coneflower is one of the most used native herbaceous perennials in GCA Zone I. It is good for small gardens and for naturalizing in larger areas. Purple Coneflower is easy to grow and blooms for up to two months in July and August. The purplish-pink daisy-like flowers are a nectar source for butterflies, bees, hummingbirds, and the late-summer seed heads attract goldfinches and other birds. The plant is deer-resistant. It prefers full sun or partial shade, is somewhat drought-tolerant, and, being adaptable, grows in loam or sandy, clay or rocky soils. It grows 2-5ft. tall with a spread of 1.5–2ft., the clumps should be divided every 4 – 5 years. The plant family is ASTERACEAE. It's native to the Eastern United States and grows in zones 3 – 8. The genus name, *Echinacea*, has the Greek root *echinos* that means hedgehog or sea-urchin, referring to the spiny center cone on most flowers in the genus. *Echinacea purpurea* seed is often used in land restoration sites.

Plants of the genus were used by Native Americans for medicinal purposes and are still used today in herbal medicine and tea.

Sources: www.prairienursery.com and
www.missouribotanicalgarden.org/PlantFinder

Paulette H. Boling,
Zone I Horticulture Representative
Nantucket Garden Club

Zone II

***Aquilegia canadensis*,** Columbine

This prolific yellow and red delicate spring perennial is a 'must have' in the NorthEast. Self-sowing, its many seeds are held in firm cups. It is most desirable as a semi-shade loving plant. The green leaves resemble *Oxalis*, so be careful when you're weeding, however, it's easily identifiable once you are familiar with the plant. Holding its flowers for a good month, attracting bees and hummingbirds throughout the spring season, this plant beautifies a naturalistic garden and blends well with astilbe and ferns. Providing moist, rich soil will help its longevity through the dry summers when additional watering isn't necessary, here in RI. *Aquilegia canadensis* thrives in Zones 3 to 8 tolerating semi shade to sun and is deer resistant! The plant grows 18" tall, while the flowers extend up to 36" high and stand erectly above the plant. Seeds of *Aquilegia canadensis* are available at the Meneice Conference.

Jocelyn Sherman, Zone II Horticulture Rep., Newport Garden Club, RI

Zone III

Diervilla lonicera Northern Bush Honeysuckle

The genus *Diervilla* consists of 3 North American species within the family CAPRIOLIACEAEA. *Diervilla lonicera*, Northern Bush Honeysuckle, grows across eastern Canada, down to the mid-Atlantic states and south in the mountains. Further south, two more *Diervilla* species occur. Bush Honeysuckles should be distinguished from true Honeysuckles, the genus Lonicera, with some invasive non-native species.

Diervilla lonicera forms a mounded shrub, about 3 feet high; spreading underground suckers may create thickets. Simple leaves are dark green with a copper tinge in spring progressing to showy autumnal reds. Flowers are stalked yellow trumpets, 2 cm long, along each stalk at leaf nodes to a larger terminal cluster. The tubular corolla expands to a bell-shape with five reflexed lobes; the lowest lobe is deeper yellow and downy. The five stamens and single style project out. These attractive flowers cannot self-pollinate, but studies suggest early abundant flowers trained bees to travel between shrub-sites. Pollinators are mainly long-tongued insects seeking nectar, especially various Bumble Bees and Hawkmoths. After pollination, the flower develops orange-red hues, while insects focus on paler flowers. Flowering starts in June, diminishing with time but continues throughout summer.

Diervilla habitats range from wooded to open rocky sites, variable sun to part shade and dry acidic soil; drought is tolerated. Cool summers are preferred. This shrub offers choices for difficult sites with dry shade. Cultivars with orange-hued or variegated leaves are available. *Diervilla,* described in the earliest lists of New York plants (C. Colden, 1742), is less known today and merits our interest.

Fenella Heckscher
Garden Club of Orange and Dutchess Counties

Zone IV

Cornus florida,
The American Dogwood

Cornus florida, the American flowering dogwood, is a spectacular native flowering tree. Growing naturally at the edge of forests, *Cornus florida* extends across the eastern US and as far south and west as Texas. In cultivation in this country since the18th century, it's planted as a specimen tree, in small groupings, or even as a patio tree. And before this, before the European settlers came, Native Americans used the root bark for many medicinal purposes.
A deciduous tree, it grows slowly to a height of 15 to 30 feet, with graceful tiered branches. Tiny, nondescript yellowish flowers form the center of the flower, but most beautifully (and fortunately!) are surrounded by the familiar four showy brackets. The brackets open almost flat to form the large dogwood bloom we all love in the spring. Unfortunately, *Cornus florida* is threatened by Dogwood Anthracnose, a fungus that causes severe damage. If the tree has morning sun and good air circulation, it is less likely to succumb.
Cornus florida is so valuable for wildflife! It's a host plant for the caterpillars of beautiful spring azure butterfly, the *Celastrina lucia*. Another pollinator is the *Phebejies icaroides*, also a lovely blue butterfly. Dogwood berries, which are high in fat and calcium, are food for birds and for browsing woodland creatures. Because the berries last into the winter, *Cornus florida* offers a long lasting food supply too. Have you wondered about the name's origin? It came from the Celtic word dag, or dagge, which was a pointed tool perhaps made from the hard wood of the tree. *Cornus* refers to this strength, as in a bull's horn. Which is why the wood was used to make golf club heads! *
Supporting pollinators, beauty, wildlife value, a rich history; *Cornus florida* is truly a valuable tree!

http://www.missouribotanicalgarden.org

Alice St.Claire –Long
Zone IV Hort Representative
Stony Brook Garden Club

Zone V

Trillium grandiflorum Great White Trillium

Trillium grandiflorum, the great white trillium, is a native to eastern North America and is most commonly found in mixed forests. It is a lovely woodland plant that can be easily recognised by its three-petaled white flowers. It blooms in Zone V in the late spring to early summer. *Trillium grandiflorum* is a perennial that comes from a rhizome. It produces only one white showy flower and has leaves and stem of a dark green color. It can grow 6-12 inches and can often form clonal colonies. One is lucky to find this. It comes from the MELANTHIACEAE family and the Genus is *Trillium*. What possibly could be wrong with this lovely native? It is a favorite food of the white-tailed deer. They love it! So if there is a wooded area that is safe from the deer, that is where it needs to be planted.

Ellen L Goodwin
Zone V Horticulture Representative

Zone VI

Dicentra eximia Wild Bleeding Heart

Dicentra eximia (Wild Bleeding Heart) blooms longer than most of the eastern North American native plants. It will show up in April and continue to bloom off and on until the fall. In very hot weather, it will stop blooming, but will pick up again in cooler weather. It will thrive in moist rich soil and multiplies by self seeding and underground rhizomes. It is a wonderful addition to shady areas, woodland settings and rocky outcrops. The foliage is beautiful, frilly and delicate, and adds fabulous texture when combined with other ferns, ginger, sweet woodruff and heuchera. The delightful pink to red heart shaped flowers hang down and add color to any shady setting. There is a white flowered one as well, *Dicentra eximia var.* Alba, and some others have been hybridized as well from this one. This plant has many good qualities, it is deer and rabbit resistant, it spreads nicely but is not invasive, it can form a nice ground cover that lasts well beyond its blooming time, and it blends beautifully with many other shade loving plants. it is pollinated by Hummingbirds and long-tongued bumblebees, and since it blooms early, it is a good provider of nectar for those first migrating hummingbirds. Together with *Dicentra formosa*, the West coast *Dicentra*, it has helped produce many of the other hybrids of bleeding heart cultivars sold commercially. Truly a native we are lucky to have, in our lives and gardens!

Clare Stewart
GCA Horticulture Committee Zone VI Representative
Green Spring Valley Garden Club

Zone VII

Mertensia virginica
Virginia Bluebells

Of all the sweet ephemerals that grace Virginia's woodland landscapes, Virginia Bluebells, *Mertensia virginica,* would vie for the most exquisite. This lovely perennial native to the Eastern United States has no equal in its show-stopping blue beauty.

Loving shade to semi-shade and moist, woodland conditions, Virginia Bluebells arise from the soil in early spring. Their blue-green glaucous leaves unfold as pinkish buds emerge. As the plant grows with warmer nights and days, the once pink-tinged buds open into rich periwinkle blue tubular flowers. A swath of them would certainly rival English Bluebells for a stunning display!

Each spring, the Bluebells re-emerge having generously dropped seed that nestles into a leafy mulch cover. Patches move slightly throughout the garden site as these seeds drop or are blown lightly by the wind onto neighboring spaces.

As spring progresses and the flowers fade, leaves turn yellow and are a bit messy, however, they are easily concealed by later-emerging ferns and other shade lovers. The yellow leaves eventually "disappear" back into the earth to feed the soil for next years' growth.

Planted with native Dogwood, *Cornus florida,* Bleeding Hearts, *Dicentra spectabilis* 'Alba'*,* Lungwort, *Pulmonaria angustifolia,* Ferns, Narcissus and Hellebores, *Mertensia virginica* adds magically to spring in the eastern United States.

Sue Thompson
Zone VII Horticulture Representative, The Tuckahoe Garden Club of Westhampton

Nigellum damascnum
Love in the Mist

Zone VIII

Eutrochium maculatum
"Spotted Joe Pye Weed

Upon approaching a mature stand of Joe Pye Weed, the sheer height and strength of the plant brings to mind rugby teams entrenched in the middle of a scrum. *Eutrochium* has a taste for the rugged. It digs deep and holds its ground while looming over woodlands and pastures. The clumping habits of the species, often growing in aggregates, consigns them to big landscapes. *Eutrochium maculatum* is native to damp meadows, thickets and moist wooded slopes. Its capacity for survival affords the plant a diverse range throughout the continent of North America.

The Genus name is derived from the Greek words "Eu" meaning “well" and "Troche" meaning wheel like, in reference to the whorled leaves. "Maculatum" or 'spotted' denotes the spotted stem. The species was first introduced in Europe by the year 1640 and was listed in John Bartram's catalogue in 1793.

Native Americans had long used familiar native plants for medicinal purposes. The roots of *Eutrochium* contain vital oils and elements and were used as a basis for primitive medicine. Slightly bitter, they were boiled or dried into a powered substance, heated and administered to alleviate complications from kidney stones referred to as "gravel." Consequently, Joe Pye Weed was often called "Gravel root." The leaves of the plant are aromatic with a mild vanilla scent. Crushed and heated as a hot tea, they function as a diuretic to treat internal ailments and high fever. The roots were also ground into a powdered state and as a result of their large content of natural oils, a paste was created and applied topically to relieve arthritic pains. This resulted in yet another reference to *Eutrochium* as "Purple boneset.”

Eutrochium is a member of the aster family, 'ASTERACEAE.' Besides reproducing by seeds, this herbaceous perennial also spreads by rhizomes. The stems are covered with down or fine short hair. *Eutrochium* has dark green lanceolate leaves with toothed margins arranged in whorls of three to seven leaves per node. The large whorled leaves give the plants a strong architectural aspect. The compound inflorescences, often twelve to eighteen inches in diameter, are dome shaped clusters of flower heads arranged on deep pink to purple bracts which then connect to the major axis or stalk. *Eutrochium* blooms from mid summer to early fall attracting honey bees, bumblebees, butterflies, skippers and moths.

Anne Kinder
Zone VIII Horticultural Representative
Palmetto Garden Club of South Carolina

Zone IX

Crinum americanum, Swamp Lily

The Crinum Lily is in the AMARYLLIDACEAE Family. It is a bulbous perennial that prefers full sun to partial shade. It grows along streams and in wetlands. The plant grows to be up to five feet tall and wide. The leaves are strap like, up to three feet long and three inches across. The blooms are delicate and fragrant. They are white or white and pink, have six petals and usually come 3 to 6 to a tall stalk. The flower tubes are four to six inches long.

Asclepias tuberosa, Milkweed, Butterfly Weed

Asclepias is in the ASCLEPIADACEAE Family. Although known as Milkweed, this particular variety has very little milky-ness to its sap. This herbaceous perennial grows up to three feet tall and has an orange bloom in umbel-like cymes 1 ½ to 2 inches across. It blooms from midsummer to early autumn.
Also known as Butterfly Weed, "The relationship between the Monarch butterfly and Butterfly Weed is mutually beneficial. In addition to providing nectar, Butterfly Weed contains a cardiac glycoside that passes from the caterpillar into the butterfly and subsequently to any bird that feeds on the insect. If a bird eats the butterfly, it will suffer nausea and vomiting and learn to be cautious about eating another Monarch. In exchange, the butterfly pollinates the plant, ensuring survival." Wildflowers of Tennessee, the Ohio Valley and the Southern Appalachians, Horn and Cathcart.

***Oenothera speciosa*,** Pink Evening Primrose

Oenothera is in the ONAGRACEAE Family. This perennial spreads by runners and can often be seen along the roadside or a field. It blooms from early summer to early autumn. The fact that the flowers open during the day belies the common name. The flowers have four petals. The plant grows easily from seed so it could be considered aggressive.

Sarracenia flava, Yellow Pitcher Plant

Sarracenia is in the SARRACENIACEAE Family. It is a carnivorous perennial that has beautiful drooping yellow flowers in the Spring. The pitchers are erect, trumpet-shaped and yellow-green. The pitcher has a round mouth and a raised lid.

Iris versicolor, Harlequin Blue Flag

All Iris are in the IRIDACEAE Family. *Iris versicolor* is a laevigatae or smooth iris with erect leaves and branched flowering stems, each producing three to five violet, purple, or lavender flowers about 2 ½ to 3 inches across with a white-veined purple area on each fall. The Blue Flag Iris is common along stream banks and ponds.

Molly Adams,
Zone IX Horticulture Representative, Lone Mountain Garden Club

Zone X

Asclepias incarnata
Swamp Milkweed

The common name is a giveaway – this is a plant that wants consistent moisture. It is a perfect plant for a sunny area that is wet, or even mucky, a riparian edge, a wetland or a rain garden, areas where the long tap-root can reach water even during a drought, but it will also grow in a well-drained garden. Late to emerge in the spring, this milkweed sends up multiple, upright stems, becoming a 3-4 foot plant covered with vanilla-scented, pink flowers in mid-summer. Although some species of milkweed colonize by sending out runners, Swamp Milkweed spreads only by seeds; by simply removing the seed heads in the fall, it will stay in its space, the clump gradually growing but not taking over. Native bees, honey bees and butterflies love the nectar plus it is one of the milkweeds essential for the caterpillars of Monarch butterflies. Swamp Milkweed is prone to aphids, and the leaves may yellow in late summer, but placing it in the back of a garden helps hide these problems. Swamp Milkweed is native to 44 states–all except Mississippi, the West Coast, Alaska and Hawaii.

Rudbeckia hirta Black-Eyed Susan

For long-lasting color in midsummer it is hard to beat the Black-Eyed Susan (*Rudbeckia hirta).* From July through August, the yellow daisies make a bright spot in the garden.
While individual plants in the garden seldom live more than two or three years, the plants re-seed, so that the patch of Rudbeckia remains. It will spread, but can easily be kept within bounds. This is a prairie plant – so it needs little care, can survive drought and neglect. Deer tend to avoid these, although in desperation they will eat the buds and flowers. In a garden, the plants are 24”-30” tall, forming clumps that make a bright yellow beacon for the bees and butterflies, and then the seed heads are a food source for birds in the late fall.

Both Plant Profiles by, Dedee O’Neil
Akron Garden Club, Zone X Director, Past Horticulture Vice Chairman, 2011-2013

Zone XI

Here in Zone XI we are most known for our plains, prairie and tall grasses. Some of the notable natives are *Aclepias verticillata*, *Helianthanus maximilianii*, *Liatris pycnostachya, Geum triflorum* and *Penstemon catonii*. These natives are colorful, and they are most beneficial to feeding small mammals with their seed, insects with their pollen and a host for larvae.

Aclepias verticillata Whorled Milkweed

is known as the Whorled Milkweed with narrow leaves and stems. It blends well with grasses and has blooms of green and white. It is one of the last species to senesce as the season progresses and is a common late season host for monarch larvae.

Helianthanus maximiliani
Maximillian Sunflower

is known to many of us as the Maximillian sunflower. It is a tall bright yellow sunflower easily grown from seeds. Blooms August through September and tolerates dry soil.

Liatris pycnostachya is the Prairie Blazing Star. It has a spectacular tall spike of lavender flowers and is deer resistant. It grows well in poor soil and can be used in wild gardens or naturalized areas.

Penstemon catonii
is the Firecracker Penstemon with striking scarlet flowers with tubular blossoms late spring and into summer. It is drought tolerant, roughly grows to two feet and can be planted in gravelly banks.

Liz Lavezzorio, Zone XI Horticulture Representative
Lake Forest Garden Club

Geum triflorum, Prairie Smoke

My Omaha, Nebraska home has a small native prairie in our front yard. Prairie smoke is one of my favorite prairie plants and hosts one of my favorite garden visitors, bombus, the beloved bumblebee! Prairie smoke, *Geum triflorum,* is a perfect prairie plant as its characteristics make it easier to manage in a home garden than some other prairie plants. Although the USDA map shows its native range as the upper Midwest, Canada, and West, we claim it as a native here in Nebraska! It is low-growing, unlike many of its towering prairie compadres. The flower stalks grow only 8-12 inches tall, above the six-inch tall leaves, providing a lovely border edging, and forming an attractive groundcover that slowly naturalizes by means of well-behaved rhizomes. It has no pests, deer do not eat it, and it is low-maintenance, preferring dryish soil. It may die if soil stays too wet over the winter. Leaves emerge earlier in the spring than many warm-season prairie plants. The nodding pinkish-reddish blossoms bloom from May to July. Flower heads are the “flame” that later produces the wonderful seedhead plumes of “smoke” that distinguish this plant and give it its name. You can just imagine an early prairie pioneer using its other imaginative names: lion’s beard, old man’s whiskers and torch flower. Native Americans produced a root tea that was used to heal wounds, ease sore throats, as a mouthwash, and to treat horses! The Kainai of Canada used ripe seeds mixed with oil to make perfume. No wonder bumblebees love this plant!

Sharon Blackburn
Horticulture Vice Chairman Partners for Plants
Loveland Garden Club

Zone XII

Aquilegia caerulea Rocky Mountain Columbine

Aquilegia caerulea, commonly known as the Rocky Mountain Columbine, or Colorado Blue Columbine, was discovered in 1820 on Pike's Peak in Colorado by Edwin James, a mountain climber. It was named the official state flower of Colorado in 1899 and is a protected species making it illegal to uproot the flower on public lands.

The Latin word "aquila" means "eagle" and refers to the claw-like spurs at the base of the flower. The flowers have blue-violet petals and spurs, a white cup and a yellow center. The Rocky Mountain Columbine is a herbaceous perennial growing 1' to 3' tall and wide and requiring cool nights and modest day temperatures, characteristic of elevations over 5,000 feet. It is native from Montana to Arizona and New Mexico. It needs full sun to partial shade and fertile, moist, well-drained soil. At lower elevations, it is best placed in a cool, shady bed that receives regular watering. It is not recommended for hot, humid climates. The Rocky Mountain Columbine's fragrant, showy blooms attract hummingbirds and pollinators such as the hawk moth, butterflies, bumblebees and bees. These plants are ideal plants for cottage, alpine, rock and cut flower gardens where they bloom from May through July and easily self-sow.

By Jane Davis, Columbine Garden Club

Carnegiea giantea Giant Saguaro

The Giant Saguaro, *Carnegiea gigantea*, named after the famous philanthropist, Andrew Carnegie) is native to and found only in the Sonoran Desert located in portions of Arizona, Mexico and California.

The saguaro is a tree like cactus species which originates as a single column. The saguaro is extremely slow growing, only 1 to 1.5" each year for the first eight years. The cacti can eventually grow to over 70 feet tall. A saguaro will produce its first arm at around 50 years of age. A saguaro is considered an adult at 125 years and has a life span of 150-200 years.

The surface of a saguaro is made of spine-covered pleats which expand (like and accordion) as they hydrate. When fully hydrated, an adult saguaro can weigh as much as four tons. A saguaro starts to flower at around 35 years. The saguaro blossom is the state wildflower of Arizona. Flowers appear in April through June. They are white and open well after sunset and close in mid-afternoon. Main pollinators are honey bees, bats, and white-winged doves. The ruby red fruits of the saguaro are 4-5" long and ripen in June. Each fruit contains around 2000 seeds, plus sweet fleshy connective tissue.

The saguaro is an integral part of the desert ecosystem, providing nectar, fruit and shelter to many native desert species. Native birds such as the Gila woodpecker, elf owls and gilded flickers live inside holes in saguaros.

In 1994 the Saguaro National Park, Arizona, was designated to help protect this species and its habitat. It is the only US national park devoted to a particular plant species.

Sydney Dye, Columbine Garden Club

Eschscholzia californica, California poppy

The California poppy, a golden wildflower native to the US and Mexico, is a drought-tolerant, self-seeding annual/perennial that grows well in full sun and fast draining soil. It blooms early spring to fall, and can be seen in clusters along roadways, in the foothills and valleys of California. This angiosperm of the PAPAVERACEAE family, grows as single flowers on long stems with four petals, golden yellow to dark orange, and was chosen as the state flower of California," the Golden State", in 1903. The seeds of the California Poppy were used by Native Americans for food and as herbal remedies.

Sally Fairbanks
Garden Club of Santa Barbara
Horticulture Committee

Hibiscus arnottianus
Hawaiian white hibiscus
Koki`o ke`oke`o

The *Hibisbus arnotiianus* subspecies *immaculatus* is the rarest of the eleven Hibiscus native to Hawaii. It is native to Oahu and Molokai. This species is endangered and only a few plants are found in the wild on Molokai. The blossoms are white and the oval leaves have red veins and stems. The leaves don't look quite like a hybrid hibiscus. They are fairly thick, and basically oval. The blossoms have a distinct fragrance and the plants blooms continuously all year.

This special shrub can grow into a small tree about 30 feet tall, but are generally found much smaller at 15 to 20 feet. The National Tropical Botanical Garden scientists have successfully propagated this native hibiscus and have several plants growing in their test gardens on Kauai in addition to lots of seeds in their seed bank.

Koki`o ke`oke`o does best in full sun but will tolerate partial shade. The pollinator is the Hawaiian Yellow-Faced bee which are now federally protected as they are endangered as well as the hibiscus.

Priscilla Growney
Zone XII Horticulture Representative, Garden Club of Honolulu

Mahonia aquifolium Oregon Grape

Mahonia aquifolium or Oregon Grape as it is commonly called, is a mid size (3-6' H X 5' W) broadleaf evergreen of distinctive pollinator, landscape and cultural merit. It is native to the Pacific North West and the state flower of Oregon. A member of the BERBERIDACEAE family, *Mahonia aquilifolium* has pointy, glossy, leathery leaves and has a mounded growth habit.

Of particular interest, *Mahonia aquilfolium* is of value to pollinators and wildlife. It is recognized by pollination ecologists for its ability to attract large numbers of native bees to its yellow flowers in spring. The flowers are followed by berries, which are eaten by wildlife. Planting in groups is best for fruit production and makes nectar gathering and foraging easier for bees and wildlife.

The landscape benefits of *Mahonia aquifolium* are numerous. It is evergreen, of moderate size with bright yellow flowers in spring followed by blue, grape like fruits. New growth is red tinged, and if that is not enough it is also a low water use plant. Propagation is relatively easy. Options include by seed, cuttings or simple division.

Mahonia aquifolium has cultural and ethnobotanical applications. Jam is made from the berries, and Native Americans made yellow dye from the bark and wood. Medicinal uses include leaves and shoots used in steam baths to treat yellow fever and various root preparations for stomach problems, tuberculosis and hemorrhages.

Linda Morrow, Horticulture Chair, Portland Garden Club

Printing Techniques

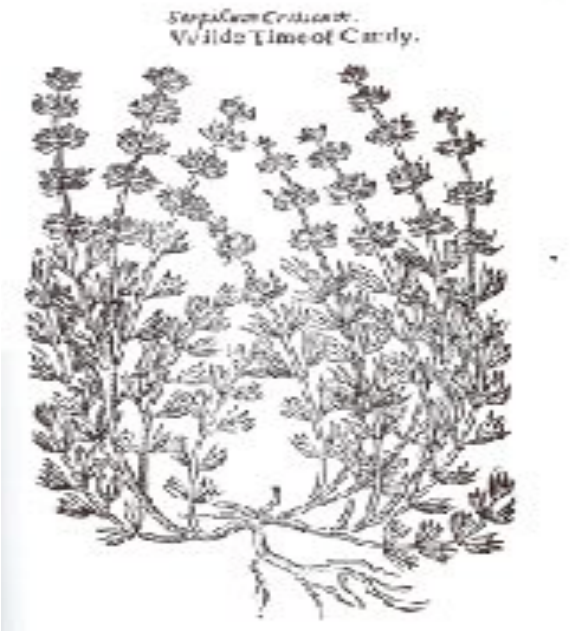
Used In The Production
Of Original Botanical Illustration 1750 to 1850

by Anne Kinder

The objective of every botanical illustration is to capture an exact image of a plant with such precision that the observer is able to recognize and identify the plant. As such, botanical illustrations should be classified to the realm of science. These naturalistic illustrations were executed to advance scientific research. The illustrator was contracted to serve as a draftsman. Often under the supervision of a botanist or patron, he was given specific instructions as to how the specimen was to be portrayed.
Realistic illustrations made for or by the researcher resulted in an image very similar to a herbarium specimen.

The "Golden Century" of botanical illustration occurred from 1750 to 1850. Prior to this period the printing process primarily consisted of images carved from a "relief" design cut from a block of soft wood. These relief designs were used in the early Middle Ages for the printing of textiles. The "relief" wood block was also used for printing on paper in the l5th century and the process became the common method of illustrating early printed books. Until the l8th century woodcut impressions were cut with the grain into soft wood, after which the "ground" was cut away from the image.

A wood engraving is an impression cut into a block of hardwood. The engraving is cut across the grain of the wood resulting in the actual design being cut away and not the surrounding wood. The medium provided a modest straightforward image of the specimen. The Great Herbal, De Historian Stirplum published by Leonhart Fuchs in 1542 was printed using the process of wood engraving. A special tool called a “burin" was used to create a "V" shaped incised line which allowed for greater scientific detail and accuracy.



As the evolution of printing techniques progressed and the demand for more detailed and accurate images increased the printing technique of engraving became the preferred medium of choice. The process begins with preliminary annotated ”field drawings" done in layers of graphite or ink. These drawings functioned as studies of the specimen that eventually would be re-drawn on a copper plate using the technique of "line engravings." Again the "burin" was used to incise deep lines in the copper plate, and the use of a "dry point" would create a finer or lighter line. The ink was manipulated into the interior of the lines after which the plate was wiped clean. The pressure of the printing press forces the paper into the incised line pulling the ink onto the paper. The press is then removed and the paper with the image pressed on it is pulled from the plate.

In 1785 André Michaux used the technique of "stipple engraving" on copper plates.
The manipulation of fine lines and black ink allowed for several intense shades of gray creating the illusion of a three dimensional image. Color engravings and etchings were introduced in the mid18th century. Watercolor and washes were developed to enhance the engraved printed line. After the paint had dried, a solution of Gum Arabic was applied as a binder for the colors and as a glaze for deeper shadows. The Arabic was introduced into the pigment by the use of a quill. The advantage of color retention allowed the illustrator to further enhance the illusion of a three dimensional image of the plant.

An early Italian garden, painted on a tile

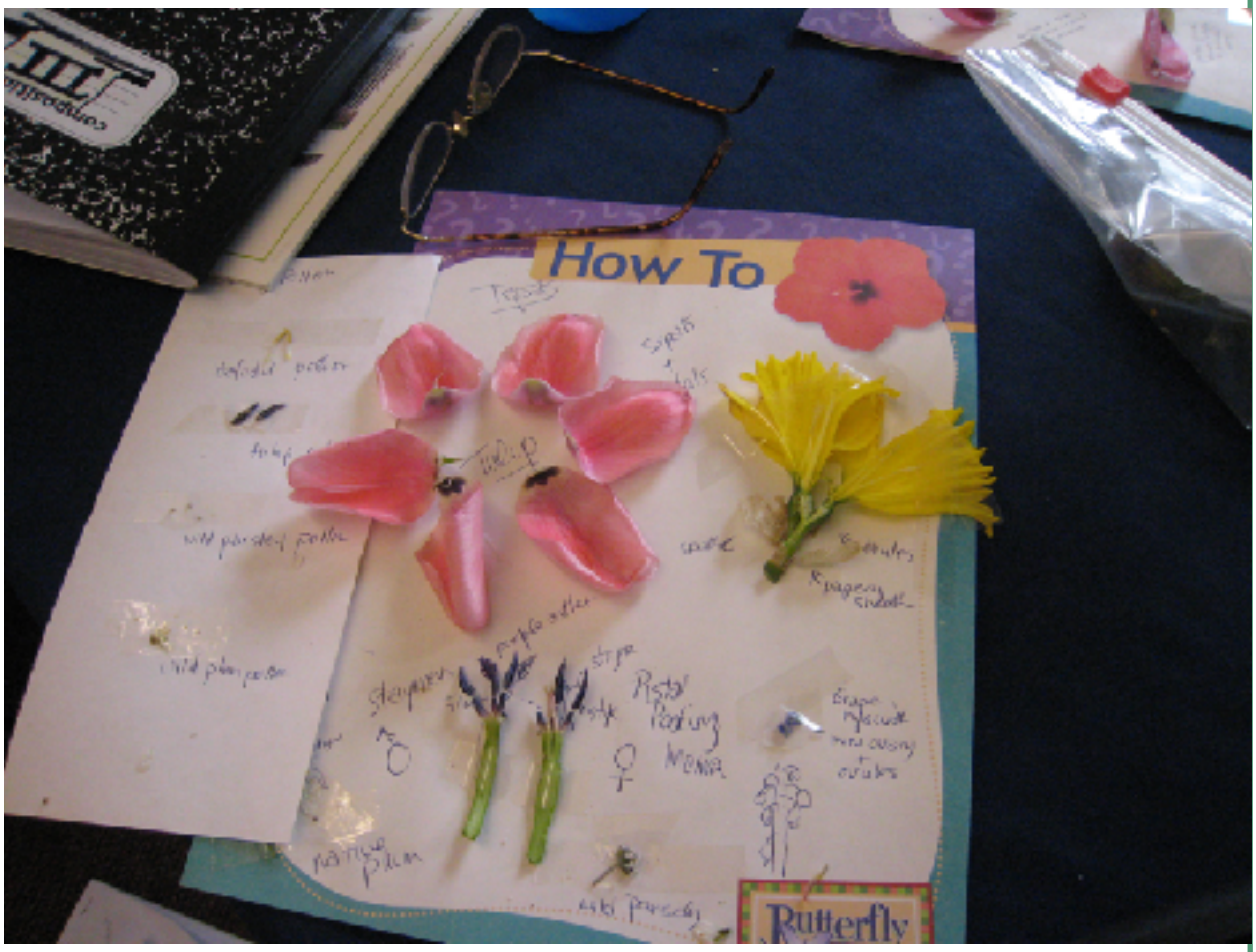
Botanical information was accumulating at a rapid pace. Voyage narratives sponsored by the royal houses of Europe, the generosity of institutions and private patrons resulted in the demand for the skills of accomplished illustrators. Wealthy owners of formal gardens commissioned "Hortipicti" or painted gardens. The illustrator would create on a copper plate an engraved image of the entire garden. The focus of the"Hortipicti" would be directed to the rare plants the owner had collected.

The labor intensive process of pulling prints from copper plates eventually gave way to lithography. The availability of inexpensive materials, ease of production and the capacity to reproduce multiple prints at one time made lithography the medium of choice for the remainder of the century.

Anne Kinder
Zone VIII Horticultural Representative
Palmetto Garden Club of South Carolina

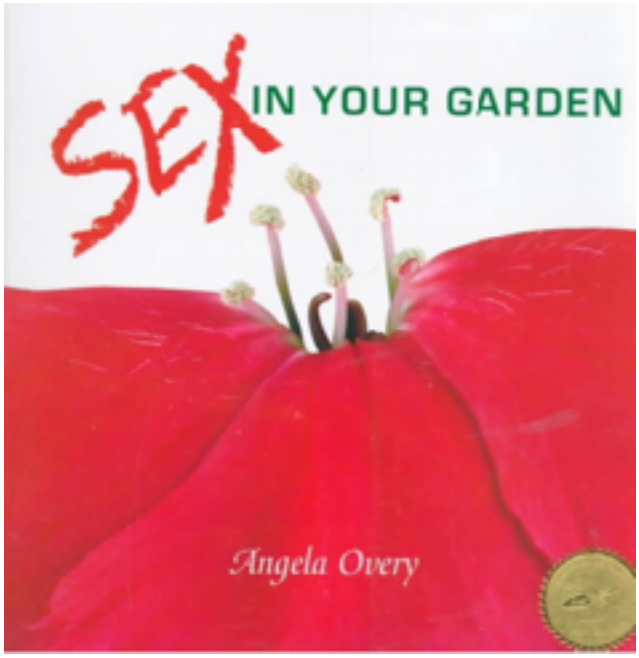
How To Identify Plant Parts

Angela likes nothing better than to watch her students discover nature for themselves. She said, “This is the most rewarding part of my work!” She established the Denver School of Botanic Illustration in 1990 where students can explore nature’s beauty in detail as demonstrated in the image below. Her efforts to establish the school added a unique cultural dimension to Denver’s diversity in educational opportunities. Not only is Angela an artist, but an educator, eager to share her passion of botanical drawing.



Book Review

Sex in Your Garden
ByAngela Overy
Reviewed by Gail Hamsher



Every serious naturalist and gardener knows the importance of pollination and propagation to plant life. It is the basis of all plant regeneration. The nuances of this process of propagation can be complex and somewhat daunting to the non-botanically oriented observer. It's best to brush up on these processes occasionally since they are the dynamics of what's going on in the garden that is not only essential but also fascinating to observe.

Reproduction of plants in most cases requires fertilization and the outcome is seeds. Pollinators of various forms take up a large part of the story our author weaves in a very entertaining way. The author even addresses how fertilization took place before there were insects in gymnosperms. Insects, pollination and flowers made an appearance in the plant world about the same time since one is essential to the function of the other. She also uses a comparison of human anatomy and reproduction to plant reproduction to illustrate just exactly how this fertilization process takes place. It makes for an amusing read and yet gets the message across very clearly.

Our very own GCA Harriet De Waele Puckett Award recipient, Angela Overy takes one on a very concise and amusing journey into this magical aspect of gardening. The scientific details and terminology are all there along with wonderful photos and illustrations. It was an enjoyable "refresher" on the details of plant reproduction

Gail Hamsher
Library Committee
New London Garden Club

Spring Drumstick Primrose
Snowdrop with Lilic buds
at home, Angela Overy