The Lady-Slipper

Kentucky Native Plant Society Number 22:1 Spring 2007

A Message from the President

As I sit in my office overlooking Rose Street on the UK campus with my window open, I can't help but ponder the thought that a mere two weeks ago it was frigid outside and appeared that spring would never arrive. But arrive it has and with it the usual early proliferation of spring ephemerals. Just yesterday I noticed a white-trout lily budded and ready to open in my garden. I have been quite impressed with the number of members that have contacted me via email or personal letter about the society and what they like and their concerns about the future of the society. The board will be discussing these ideas at our annual spring meeting, wildflower weekend, at Natural Bridge. I would like to encourage you to continue to forward me, or any board member, information about your concerns, issues, etc. about the society because we serve at your behest.

I am truly excited about this years fall conference, which will be held at Otter Creek Park (just west of Louisville) as we have attracted an excellent national speaker to come and visit about exotic pest plants. Dr. Randy Westbrook, from USDA APHIS, will be joining us and I encourage you to make plans to attend the fall meeting. In addition, Dr. Westbrook will be providing a seminar at the University of Kentucky the Friday before the native plant society meeting. We are excited about hosting this great event and kudos to Pat Harrigan for arranging the fall meeting.

Have you looked at the web site lately? I hope so because you will notice how ACTIVE our board members have been in getting field trips organized. Oh my goodness what a great board we have in arranging for some interesting field trips. In addition you will notice more field trips and wildflower activities on the EVENTS page. Thanks to all who have so graciously stepped up in organizing and hosting these events. We should also extend a big thanks to Dave Luzader for keeping our website up to date. This is no easy task and he has done a great job with it and I hope this becomes the preferred avenue for finding out, in a timely fashion, what your society is up to.

Of course the big event, Wildflower Weekend, is scheduled for April 19 – 22 at Natural Bridge State Resort Park. At the present time the cabins and rooms at the lodge are already be booked and I would recommend contacting Natural Bridge 5 star rentals at 1-888-445-3843 which will have a large variety of cabins, lodges, and other lodging facilities available in the area. You may ask yourself why is the weekend so early this year? Last year the board decided to move the weekend up in order to see more of the spring ephemeral flowers. Unfortunately for the past many, many years we have been missing the peak wildflowers because they were past prime and many species were already done flowering. Hopefully by moving up the date it will allow everyone once again the opportunity to see a large variety of species that are in their prime. Our speakers for this year include Patricia Harrigan of the Olmstead Conservancy who will be speaking on rediscovering the Flora of Cherokee Park on Friday evening and our keynote speaker on Saturday will be Maggie Whitson from NKU who will be speaking on the fascinating world of the ground cherries. Both talks should be excellent. There is also a speaker on Thursday evening and of course walks begin Friday morning and continue on through Sunday morning.

Hike leaders from KNPS Wildflower Weekend 2006

I hope to see many of you and have the opportunity to visit with as many members as possible. If you have not completed a membership survey prior to the spring meeting, please do so as that topic will be one of major discussion at the board meeting.

--Tom Barnes

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Send dues and inquiries about membership status to: KNPS Membership, P.O. Box 1152, Berea, KY 40403. **FOR ALL OTHER BUSINESS** contact an appropriate Officer / Board Member below:

KNPS Officers—
President: Thomas G. Barnes - Department of Forestry, University of Kentucky, Lexington, KY 40546-0073, 859-257-8633, tbarnes@uky.edu

Vice-president: Patricia D. Haragan - 713 Greenridge Lane, Louisville, KY 40207, 502-894-0674, patricia.haragan@olmstedparks.org or caribpat@aol.com

Secretary: Amanda McKinney - 3964 Woodchase Drive, Erlanger, KY 41018, (859) 283-5377, honey.adm@hotmail.com

Treasurer: Kathleen Jones - P.O. Box 1152, Berea, KY 40403

KNPS Executive Board Members—
Dave Luzader - 5646 Taylor Mill Rd., Taylor Mill, KY 41015, 859-356-8581, dluzader@insightbb.com

Jason (Zeb) Weese - Kentucky State Nature Preserves Commission, 801 Schenkel Lane Frankfort, KY 40601, (502) 573-2886, zeb.weese@ky.gov

Tara Littlefield - 353A Woodland Ave Lexington Kentucky 40508, 859-333-9887, tara.littlefield@ky.gov

Alan Nations - 13020 Mitchell Hill Rd, Fairdale, KY 40118, alan.nations@olmstedparks.org , 502-235-8068

Native Plant Studies Certification Program Director - Landon McKinney - ASC Group, Inc., 1616 Burlington Pike, Suite A, Florence, KY 41042; 859-283-5377; lmckinney@ascgroup.net
Co-Directors: Ron Jones and Margaret Shea

The Lady-Slipper Editorial Committee - Landon McKinney (see contact info above) and Ron Jones - Biological Sciences, Eastern Kentucky University, Richmond, KY 40475, 859-622-6257, ron.jones@eku.edu

The Lady-Slipper design and production - Amy McIntosh, 255 Sunset Ave., Richmond, KY 40475, 859-626-5207, amy_mcintosh6@eku.edu

Webmaster - Dave Luzader (see contact info above)

The Pleasing Persimmon

by Maggie Whitson

With large orange fruit dangling from bare branches like Halloween ornaments, the American persimmon (*Diospyros virginiana* L.) puts on a striking late fall display along our fields and roadsides. The numerous sweet fruits were notable enough to find their way into the genus name, which means "fruit (*-pyros*) of the gods (*dios*)."

Persimmons are common in Kentucky and occur throughout the state. The species is found as far south as Florida and ranges up the Gulf Coast to Connecticut. It laps from the Southeast on to the Midwest and peters out around eastern Texas. Like many widespread plants, persimmons have a variety of common names, ranging from picturesque to puzzling. To list a few: date-plum, seeded-plum, winter-plum, simmon, lotus-tree, Jove's-fruit, and possum-wood.

Drawing of American Persimmon, *Britton and Brown*

Though the typical persimmon has a trunk ranging from about 6" to 24" in diameter, given optimum growing conditions and plenty of time, they can get much larger. Kentucky's champion persimmon is located in Ballard County, and is 113.5 inches around, or about 36" wide. The U.S. champion tree is in Portsmouth, Ohio, and is a whopping 142" in circumference and 82 feet high.

Due to their deeply ridged bark which forms block-like plates, persimmons are easily recognized even in the leafless condition. The twigs are also distinctive, if only internally, as they often have diaphragmed piths. That is, when a twig is cut at an angle, its exposed center displays ladder-like divisions. Persimmon leaves are relatively nondescript, being simple, entire, alternate, and ovate. However, the undersides are often marked with fine black speckles (probably tannins).

While persimmons look similar throughout their range, they actually vary in chromosome number. A 60 chromosome race is common in the Southeast, while a 90 chromosome race is found throughout most of the Midwest. It is thought that there may also be a 30 chromosome race in southern Florida. These races do not readily hybridize with one another.

Persimmons bloom in May and June and are typically dioecious, with separate male and female trees. However, individuals capable of self-pollination are occasionally found, and sometimes a tree will produce flowers of both sexes one year and flowers of only one sex the next. The small, bell-shaped white flowers are eagerly pollinated by bees, and their industrious buzzing may be more obvious than the flowers, which are nearly invisible high up in the leafy branches. Persimmons belong to the Ebenaceae, or ebony family, which has only three genera. *Diospyros* is by far the largest, and with about 450 species single-handedly saves the family from obscurity. Most persimmon relatives are woody, and this pantropical group is well-represented on the Malay peninsula, in Africa

and Madagascar, and in Central and South America. Interestingly, while people eat the fruit of many species in this genus, the few temperate species are the most famous fruit producers.

As a member of the ebony family, it is perhaps unsurprising that *D. virginiana*'s other claim to fame is its incredibly hard heartwood. In the Old World tropics, *D. ebenum* and *D. reticulata* are the best producers of ebony, though most species in the genus also produce hard, dark wood. Here in the U.S., the wood of *D. virginiana* was best known for its use in golf clubs, but was also used to produce other items such as tool handles, mallets, shuttles, and the lasts on which shoes were made and repaired. These days, synthetic materials are more commonly used for many of these products.

The Southwestern U.S. hosts our only other native *Diospyros*, the chapote, or *D. texana*. It has fuzzy, blackish fruit which are edible as well as being used as a source of natural dye. These shrubs or small trees range from Texas into northern Mexico, and like *D. virginiana*, the hard wood has been used locally for products requiring durability. The bark is smooth and attractively peeling, giving these plants potential value as ornamentals.

In the temperate zones, there are three species of persimmons commonly eaten. The Asian persimmon, *D. kaki*, is widely cultivated in China and Japan and is now appearing more frequently in American supermarkets.

Persimmon fruit gathered and photographed by author

The date plum, *D. lotus*, is a similar species from Eurasia and has long been eaten in Europe. Finally, our own *D. virginiana* was particularly enjoyed by both the native Americans and early settlers. Persimmons are mentioned in the writings of early explorers such as Don Fernando de Soto and Captain John Smith. By 1626, many English gardens sported American persimmon trees. However, since fruits were most often simply harvested from wild trees, there are few improved varieties available today. Most of our native persimmons are cultivated for wood, as ornamentals, or as grafting stock for Asian persimmons.

Persimmon bark, *www.wm.edu*

Ripening throughout the Fall, the 1"-2" fruits approach tangerine orange (or occasionally blackish-brown) upon maturity. They vary widely in shape, ranging from nearly round, to somewhat flattened, to long ovals. (One can see similar variation in cultivated Asian persimmons.) Shape aside, they're all full of seeds. A single persimmon berry can contain up to eight, flat, woody seeds. At almost 1/2" long by 1/3" wide, the seeds themselves are quite large. During the shortages of the Civil War, Southerners supposedly drilled holes in them and used them as buttons. The large seeds don't deter true fans from eating the ripe berries, which are a favorite of wildlife, hunters, children, livestock, and occasionally dogs.

Though there is some interest in improving fruiting varieties of our native persimmon, only limited progress has been made. While ripe persimmons have a rich and intensely sweet flavor, even slightly unripe fruit are astringent with tannins, and will leave your mouth with an unpleasant, bitter, puckery feel — not unlike eating a very green banana. Though non-astringent Asian varieties have been bred, this breakthrough has not yet been achieved in the American persimmon. Thus, the fruit can only be harvested when dead ripe. In fact, the best

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Check out our newly revised website at

www.knps.org

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persimmons are usually those that have just fallen from the tree. Since ripe persimmons are almost pudding-like in texture, they often split when they fall and certainly do not ship well. Persimmons are also generally flecked with dark tannin deposits, which doesn't effect the flavor, but does make them look imperfect. Add all this to the relatively small fruit and large seeds, and American persimmons so far remain in the realm of home-garden curiosities, rather than commercial fruit production.

Persimmon flower, *www.duke.edu*

None-the-less, both the Indiana Nut Growers Association (INGA) and the North American Fruit Explorers have several webpages dedicated to American persimmons and the challenges involved in selecting quality fruiting cultivars. Jim Claypool of Illinois may be the most famous amateur persimmon breeder, and he amassed a collection of over 2,000 trees. When his health failed, INGA inherited much of his collection, which they continue to use for breeding work. The Missouri Agricultural Experiment Station also keeps a persimmon germplasm collection and has an orchard planted with 21 cultivars selected from Claypool's trees.

Several mail-order nurseries carry American persimmon cultivars, including Meader, Early Golden, Garretson, John Rick, and Prok. More unusual are the hybrid varieties made by crossing American and Asian persimmons. The most common are Nikita's Gift and Russian Beauty, both of which were bred in the Ukraine. They have slightly larger fruit than the typical American persimmon while being much cold hardier than the Asian species. One Green World Nursery in Oregon and Raintree Nursery in Washington state both carry American cultivars, Asian cultivars, and the hybrids.

Not only can American persimmons be eaten fresh or dried, but they have been cooked in a variety of ways. Settlers commonly made persimmon puddings, bread, and preserves. In addition to eating the fruit, they fermented it and made persimmon beer, brandy, and wine. Today, there is still a limited market for frozen persimmon pulp, which can be used in anything from ice cream to cookies to cakes. Persimmons generally work well in recipes designed for pumpkin, and introducing 50% persimmon pulp into a pumpkin pie recipe is a simple and tasty way to enter the field of persimmon cookery.

While American persimmons may never surpass bananas, apples, and oranges at the supermarket, they are attractive, easily grown trees with a long and interesting history. A ripe persimmon makes a wonderful late fall treat, and is a ecologically friendly way to enjoy the woodland resources of our state. So next time you're out enjoying the fall wildflowers, don't miss the opportunity to admire the persimmons, as well.

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The
"Who Am I?"
native plant identification contest
will resume in the summer 2007 issue.

Weed Alert! Chinese Yam

Dioscorea oppositifolia L. (syn. *D. batatas* Decne.) is a herbaceous perennial vine in the yam family native to Asia. Two common names for this species are Chinese yam and CINNAMON VINE. It was introduced into the United States for ornamental value and also as a potential food source. Chinese yam is widespread throughout the eastern United States and ranges from Vermont south to Georgia and west to Oklahoma and Texas. There are several characteristics that make identification of this species fairly easy:

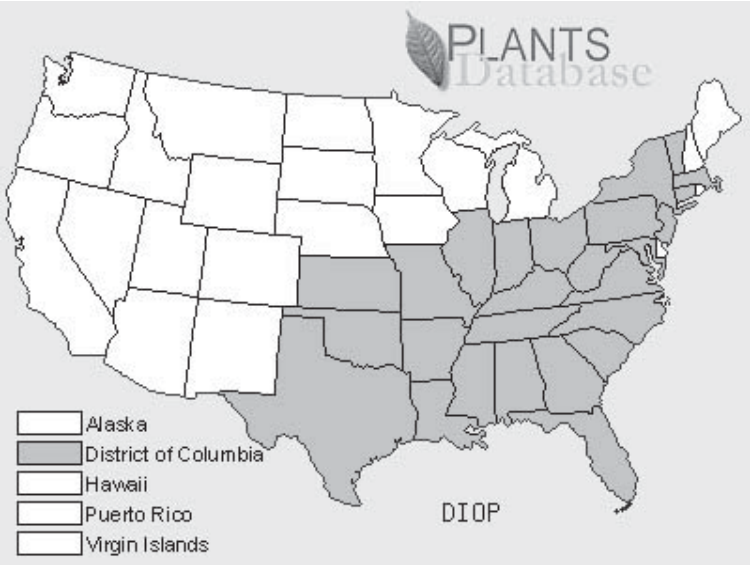
Stems: The vines twine from left to right (counterclockwise) and are angled.

Leaves: The leaf shape is variable, but the two most common shapes are hastate and ovate. Leaf arrangement is usually opposite, but the upper nodes may be alternate. There is usually a reddish- purple color at the junction of the petiole and blade.

Bulbils: Aerial tubers, called bulbils, are usually present during the summer months, June-September. Bulbils are produced in the leaf axil and resemble miniature potatoes.

Flowers: Flowers produced from June-July, are white, in spikes, and often have a cinnamon fragrance.

Habit: The plants often form dense mat-like colonies and are most often observed along roadsides, at old homesites and fencerows, and in alluvial soil along streams.



States affected by Chinese Yam in grey, *www.plants.usda.gov*

Chinese yam has the potential to become a major pest plant in the United States due to its rapid growth and prolific reproduction. This species is considered to be highly invasive and can infest even the most pristine habitats, particularly along riparian corridors. Vines begin growth in April from large, underground, vertically oriented tubers. Growth is rapid and the vines quickly climb over adjacent vegetation. By late summer, vines can be up to 15 feet long, which can blanket nearby vegetation. Chinese yam is dioecious and produces small spikes of greenish-white flowers in June and July, however, fruits are not known to be produced within its current range in the U.S. Instead, the species reproduces asexually via small potato-like structures called bulbils, which are ready to germinate. Bulbils only two weeks old have been seen sprouting roots. Bulbils can remain dormant though the winter and can root and establish a new plant the following spring. The size of the Chinese yam population continues to increase each year as more and more bulbils are produced and become established.


Chinese Yam leaf and vine, *www.invasive.org*

KNPS Committees

Membership: Co-chairs - Steve Sensenig - 1694 Fairview Rd., Lawrenceburg, KY 40342; 502-604-1420; digger@wmbinc.com and Steve Hess - 517 Leicester Cr., Louisville, KY 40222; hess_s@bellsouth.net

Special Projects: Chair - Zeb Weese (see p. 2) Members - Tara Littlefield (see p. 2), Mary Carol Cooper - #1 Game Farm Rd., Frankfort, KY, 40601; 502-564-5280; marycarolcooper@insightbb.com

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A Brief History of Botanical Art: A reflection of botanical science and society

by Amy McIntosh

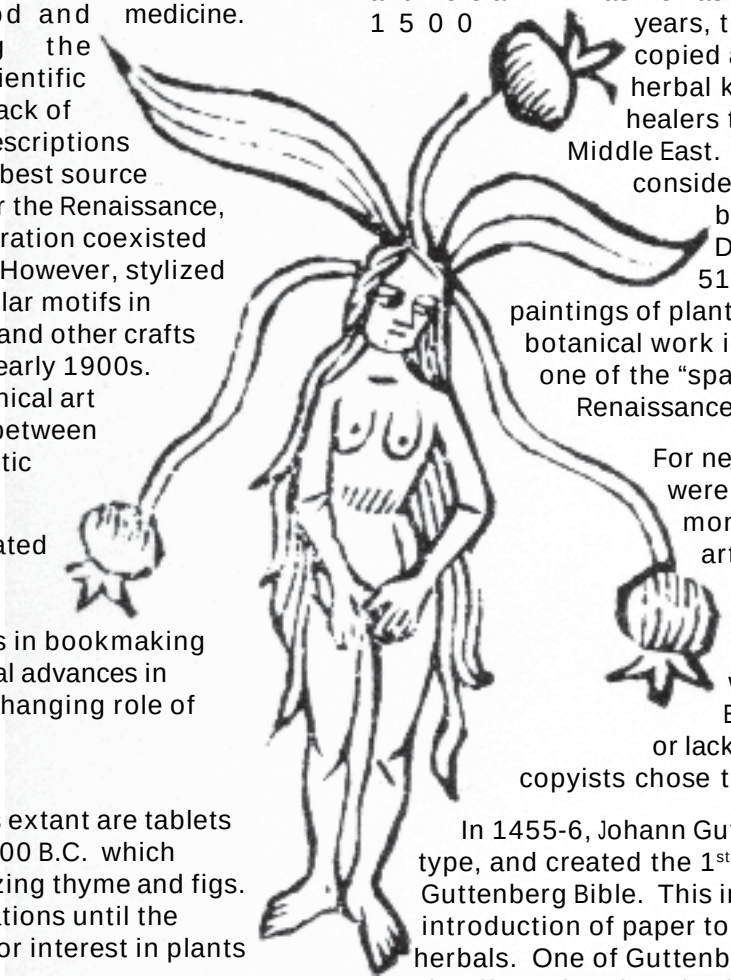
Introduction

Botanical illustration has been created for several purposes throughout history. The earliest botanical art recorded utilitarian uses for plants—particularly utilizing plants for food and medicine. Botanical art during the Renaissance focused on scientific investigation of plants. A lack of standardized names and descriptions made accurate images the best source for identifying plants. After the Renaissance, use of aesthetic plant illustration coexisted with scientific renderings. However, stylized plant designs became popular motifs in fabric, wallpaper, ceramics and other crafts from the mid 1800s to the early 1900s. Today the tradition of botanical art continues, with a balance between scientific accuracy and artistic aesthetic.

The evolution of the illustrated plant has been limited and influenced by three major factors: technical advances in bookmaking and printmaking, intellectual advances in botanical science and the changing role of plants within society

Herbals

The earliest herbal writings extant are tablets from Sumer dating from 3000 B.C. which included prescriptions utilizing thyme and figs. From this earliest of civilizations until the Renaissance, society's major interest in plants was for food and medicine.



The earliest known bound book containing descriptions of plants and their medicinal uses was written in 65 A. D. by Pedacius Dioscorides. His *De Materia Medica* named 500 plants and their healing properties. Dioscorides' work was quickly translated from Greek into Latin, Arabic and Persian as well as many other languages. For 1500 years, the text of this volume was copied and served as the basis of herbal knowledge for doctors and healers throughout Europe and the Middle East. In fact, Dioscorides is considered the "father of medicinal botany". An illustrated copy of Dioscorides work dates from 512 AD includes 400 full page paintings of plants and is the oldest illustrated botanical work in existence. It is considered one of the "sparks that kindled the Renaissance".

For nearly 1500 years all herbals were copied by hand, often by monks who had no training in art. Images of plants were copied crudely and morphological errors compounded until the plants were not recognizable. Because of these problems, or lack of training in painting, many copyists chose to copy only the text.

In 1455-6, Johann Guttenberg invented movable type, and created the 1st printed book, now called the Guttenberg Bible. This invention, along with the introduction of paper to Europe led quickly to printed herbals. One of Guttenberg's successors, Peter Schoeffer, printed *Herbarius Latinus* in 1485. It was the first German printed herbal. Although the plant images included in *Herbarius Latinus* were simplified, formal, and often unrecognizable, an edition of this book served as the source of images for herbals for 50 years.

Woodcuts, a type of relief print, enabled an image to be set within movable type and printed hundreds of times. The artist would cut away the white areas of the woodblock, leaving raised areas to accept black ink. Since much of the printing of books was concentrated at a few publishers, woodcuts were amassed, and it was convenient to utilize old blocks for new books. Stock images were used regardless of their accuracy. Some images were used multiple times in the same book to illustrate vastly different plants. Because there was no clear system of nomenclature or classification, errors

The KNPS's goals:

To serve as the Kentucky native plant education resource;

To support native plant research;

To support efforts to identify and protect endangered, threatened, and rare native plant species;

To promote appreciation of the biodiversity of native plant ecosystems;

To encourage the appropriate use of native plants.

were made in matching images with text. When new blocks were created, artists often copied and compounded predecessors' mistakes. The public's undiscriminating demand for printed herbals resulted in a supply of books inaccurate in both text and image.

Some herbals contained anthropomorphic plants resulting from plant folklore and the Doctrine of Signatures, which suggests that all life is marked with a sign of its usefulness to man. The mandrake (in the image on page 6), from *Le Grand Herbier* (1522), is represented with the mark of a female human shape.

As the herbal evolved for medicinal use, a new revolution in science was taking place. A movement toward naturalism in religious work was obvious in late medieval art, such as in the borders of illuminated manuscripts.

Large Piece of Turf , 1503, by Albrecht Durer

Renaissance (1400-1600)

Interest in the natural world and other aspects of science predominated Renaissance thought. The "Renaissance man" evolved; a scholar interested in art, natural science, music, engineering, astronomy and physics. The usefulness of nature became subordinate to recording the diversity of nature. Renaissance artists such as Leonardo da Vinci and Albrecht Dürer kept sketchbooks where they compared morphology of plants, movement of animals, and recorded the diversity of life they encountered. Dürer wrote of the importance of recording nature accurately in artwork:

> " . . . observe it [nature] diligently, go by it and do not depart from nature arbitrarily, imagining to find the better by thyself, for thou wouldst be misled. For art [that is, knowledge] is embedded in nature; he who can extract it has it."

During the Renaissance, illustrations of plants were created from living subjects. Da Vinci drew accurate comparative studies of plants in his sketchbooks. However, Da Vinci never developed his botanical subjects into completed paintings, although scientifically accurate plants appear in the foreground of some of his famous works.

Dürer was the son of a German goldsmith, and was a master engraver and a naturalist. His work entitled *Large Piece of Turf* was one of the first paintings of a botanical subject that did not serve a medical purpose. All the plants portrayed in this work are identifiable to species level due to the level of detail and accuracy employed.

Conrad Gesner was a botanist and artist who had assembled 1500 drawings for *Historia Plantarum*, but died in 1565 prior to its completion. A page from his sketchbook shows the habit, roots, stem, leaf arrangement and flowers as well as details of dissected flowers and fruits. This format for botanical illustration was ahead of its time, with an emphasis on flowers and fruits reemerging in the 1700s with Linnaeus' classification of plants based on sexual features.

In the late 1500s and early 1600s the center for botanical science was Flanders, where Clusius worked. He was an explorer, botanist and gardener. He introduced the tulip, hyacinth and garden anemone to the Netherlands after cultivating seeds sent to him from the Ottoman Empire in the 1550s. Clusius employed several illustrators and had amassed a large collection of watercolors by the time of his death.

Rennaisance influence on Herbals

The use of live plants for illustrations was not seen in Herbals until 1530 when Otto Brunfel published his herbal. The text was based on Dioscorides, and it was illustrated by Hans Weiditz, a pupil of Albrecht Dürer (*see* ***Hepatica*** *species, above*). It was the first book which relied on scientifically accurate illustrations. These sensitive illustrations showed the potential of the woodcut.

Mattioli, a physician and botanist from Prague interpreted Dioscorides' work in 1544. His

Commentary on the Six Books of Dioscorides was printed in 40 editions with realistic woodcut images. The 1st edition alone sold 32,000 copies. It was the first practical work to enable a physician to identify Dioscorides' plants.

Ancient ways of describing plants persisted even after images from nature became more common. There were no systems in place for describing plants, and a descriptive vocabulary for morphological features had not been developed. Many descriptions of the plants were unclear, inaccurate or linked to folklore of the plant. Accurate images were used more readily than descriptions for identification.

Botanical Exploration and Gardens

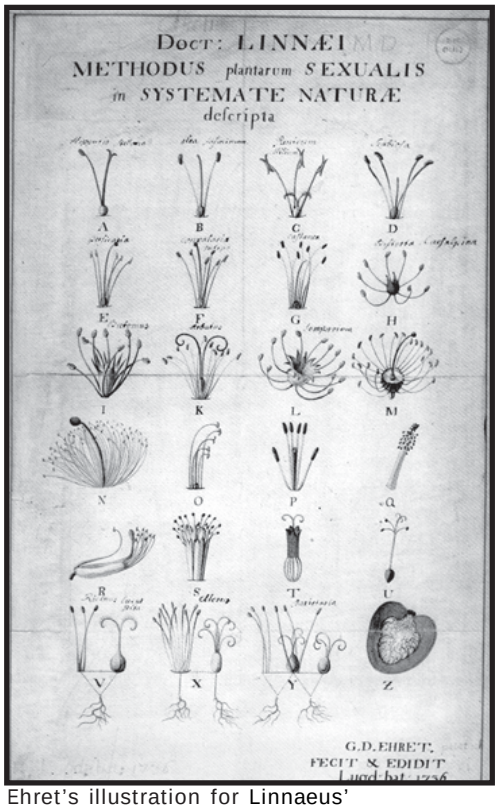
Around the middle of the Renaissance, European exploration of the Far East and the Americas began. Exotic plants arrived in Europe beginning in the late 1400s, including ornamental and spice plants from the Orient. Specimens collected during exploration were deposited in herbaria and in royal and private gardens. Exotic gardens were a sign of status and wealth, and the 17th century was the beginning of royal patronage for gardens and accompanying floral painting. The Royal Gardens at Kew, England are national examples of gardens that began during the age of exploration and still exist today.

A revolution in printmaking was occurring at the same time. The 1st books with *engraved* plant illustrations appeared in the 1590s and by the early 1600s, woodcut was no longer a popular method for books. Engravings allowed an artist to cut lines into a plate that held ink. The surface of the plate was wiped clean and pressure transferred ink to paper. Engravings allowed a more refined image and withstood more editions than woodcut. Artists would print their engravings in black and often color them later by hand with watercolor.

George D. Ehret

Folios of prints and entire books were commissioned by individuals and garden directors to celebrate plant collections. In one exceptional commission, Basil Besler worked for 16 years to develop 374 drawings for the Prince Bishop of Eichstatt. The work was engraved by additional artists and printed in Germany in 1613. In this work decorative qualities begin to override botanical accuracy.

The Dutch were especially interested in collecting and cultivating bulbs such as tulips and crocus. The Dutch school of flower painting resulted from the bulb craze of the mid-1600s. Oil paintings were created as aesthetic, decorative works for wealthy patrons of art. Sketchbooks kept by artists throughout the year enabled final paintings to include anachronistic groupings of flowers and fruits, such as spring tulips and summer grapes. The inclusion of insects, snails and other animals was for an added decorative effect. Some artists did not travel much and worked from garden collections and herbarium specimens.



Ehret's illustration for Linnaeus' classification system

George Dionysius Ehret was a contemporary and friend of Linnaeus (Swedish taxonomist who dominated botany and developed the binomial system of nomenclature). Ehret's father was a gardener, and he apprenticed as a gardener until his artistic skill was noticed. His early work was both scientifically accurate and aesthetically pleasing, utilizing collections and gardens in England for his work. His work after 1737 emphasized the flowers and fruits of plants due to the influence of Linnaeus. His illustration for Linnaeus' system of plant classification was copied without permission for *Genera Plantarum*, which ended their friendship.

In the late 18th c. illustrated systematic floras began to appear in England. William Curtis' *Flora Londinensis* of 1775-1785 was planned to contain all wildflowers within a 10 mile radius of London. Curtis employed James Sowerby as an illustrator. Sowerby published his own *English Botany* in 1790. It was revised and re-released until 1902.

Florilegia became popular in the early 17th c. and continued until the early 19th c. These books of "flower

portraits" celebrated the most exotic and unusual specimens of a garden. Florilegia were non-systematic groupings of plant pictures with little text. The famous *Temple of Flora* utilized a background of an English church for a "portrait" of a tropical Jamaican plant, to reflect the style of landscape art popular at the time.

Many botanical magazines were published in hopes to popularize and encourage cultivation of new and wild species. *The Botanical Magazine* (now *Curtis' Botanical Magazine*) was begun in 1787 and is still produced today. Monthly installments originally included three engravings with descriptions. The magazine utilized hand-colored engravings until 1948.

British, Dutch, and Russian colonizing efforts often paid plant artists to join exploratory voyages. These artists were invited in part because live specimens often did not survive the difficult journey back to Europe. Sydney Parkinson joined Captain Cook's voyage to the south seas from 1768-1771. He created field drawings with colors recorded briefly with watercolor. Although Parkinson died during the voyage, his drawings were used to create lithographic prints representing the plants encountered during the trip.

Frenchman Pierre-Joseph Redoute is considered one of the greatest botanical artists of all time. His father was a painter and interior decorator. Redoute met James Sowerby in London and became familiar with color printing techniques. He also learned printing techniques from the royal engraver for France, Demarteau. Redoute has been called the "Raphael of Flowers". He created stipple-engravings for Andre Michaux's *The North American Silva*. Redoute perfected the stipple-only engravings and added color directly to his engraved plates before printing. He would then touch up his work with watercolor. Redoute's work is very life-like and true to nature, yet beautifully composed and executed with aesthetic in mind.

The Golden Age of plant illustration, from 1700-1830, is considered so largely due to the artistic vision, botanical accuracy and sheer volume of work from Ehret and Redoute.

In 1812 lithography was first employed to print botanical subjects. Lithographic stones were quicker to prepare than engraved plates. Joseph Prestele was employed by Asa Gray to lithograph images for Gray's book of American woody genera. His invoice to Gray shows that he was paid $2.50 per prepared stone.

Curtis' botanical Magazine editor, William J. Hooker trained Walter H. Fitch (1817-92), who became the sole artist of Curtis' for many years. W. H. Fitch produced 10,000 lithographic images during lifetime and was the official Kew artist until 1877. He worked directly on the lithographic stone with no preparatory drawing, and is considered one of the greatest lithographers in the history of botanical art.

Joseph Prestele's illustration of Kentucky Coffeetree for Asa Gray

Decorative Art

From the mid-1800s to the early 1900s floral images were used to decorate the home: upholstery, wallpaper, china, light fixtures, etc. The Art Nouveau period of the early 1900s utilized a decorative, exaggerated, repetitive botanical form which emphasized flowing lines.

Modern Botanical Art

The quality of photographic facsimiles have improved, resulting in a decline of the print and an increase in watercolor and pencil work. Examples of modern artists that worked primarily in watercolor include Arthur Church and A. R. Valentien. Arthur Harry Church, an Englishman working in the early 1900s, illustrated flowers with emphasis on sexual morphology for a work entitled *Types of Floral Mechanism* (see Columbine at left). A. R. Valentien, also from the early 1900s, but working in California, was commissioned by Elizabeth Scripps to illustrate the flora of California in opaque watercolor.

Women in Botanical Art

Women served as healers, herbalists and midwives throughout the medieval period. However, women's knowledge of plants was gradually disregarded during the Renaissance and afterwards as scientific understanding of plants overshadowed medicinal uses. Women's contributions begin to resurface in the 1700s within

the field of illustration. Proper young ladies were encouraged to draw flowers as a pastime, as a means to improve themselves during their leisure time. In fact, leading botanical artists such as Ehret and Redoute were paid to tutor daughters of nobility in flower painting.

An early exceptional female illustrator was Maria Sibylla Merian. Born in 1647, she was the daughter of a Swiss engraver and step daughter of a Dutch flower painter. She left her husband and traveled with her daughter to Surinam, South America in 1698. Her work there resulted in *The Insects of Surinam*, published in 1705. Although considered primarily an entomologist, her work is recognized for its botanical contributions, and is clearly influenced by the Dutch school of flower painting (see her passionflower piece, below).

Many disregarded women's art and it was used most often in books for general audiences instead of serious scientific works. However, many women were employed to illustrate leading botanical magazines and were hired by Societies and Royal gardens as illustrators. In fact, during the 20th century, most botanical magazines in Britain were illustrated nearly exclusively by women.

Augusta Withers was commissioned by the Royal Horticultural Society to paint a series of fruit in cultivation in England in the early 1800s. She also illustrated the *Orchidaceae of Mexico and Guatamala* with another female artist. Lilian Snelling, born in 1879, served as the chief artist of *Curtis' Botanical Magazine* while it was under the management of the Royal Horticulture Society. Stella Ross-Craig (b. 1906) was on staff at Kew Gardens from 1929-1960, worked for Curtis' and published *Drawings of British Plants.* Margaret Stones was the primary illustrator for Curtis' Botanical Magazine for many years (beginning in 1955), and was also commissioned to illustrate the *Flora of Louisiana*. Her masterpiece is considered to be *Endemic Flora of Tasmania*. Born in Australia, she is considered one of the best botanical artists living today.

Contemporary botanical art, as evidenced by both female and male artists, is a combination of scientific recording and aesthetic rendering. Active organizations for botanical illustration include the American Society of Botanical Artists. The Gardens at Kew and Curtis' Botanical magazine currently have artists on staff. Botanical art is able to capture the essence of a plant which is in many ways superior to photography. Advancements in digital science have enabled original works of art to be replicated in nearly true color for books and magazines.

Margaret Stones, *Crossvine*, from *Flora of Louisiana*

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2007 Annual Joint Field Meeting

of the Botanical Society of America (Northeastern Section), Torrey Botanical Society, and Philadelphia Botanical Club

The 2007 Joint Botanical Field Meeting will meet on the campus of Davis and Elkins College in Elkins, West Virginia, from Sunday, June 17 to Thursday, June 21. Our program will include three all-day field trips plus four evening lectures on pertinent topics.

Elkins is a gateway to the high Allegheny Mountains of West Virginia. Much of this magnificent, scenic region is conserved within the Monongahela National Forest. Our field trips will visit Canaan Valley State Park, Dolly Sods Wilderness Area, and other interesting botanical sites. Canaan is a high, cool valley at about 3000 ft. above sea level, with an average growing season of less than 100 days. It supports a varied flora, with several plants growing near the southern extreme of their range. Dolly Sods features spectacular rock outcrops in addition to its remarkable flora. We will examine some of the characteristic plant communities of this part of West Virginia, including spruce forests, heath barrens, and sphagnum glades. There will be plenty of ferns and fern allies, and this should be the blooming time for several native orchids.

The price for the meeting is $250 based on double-occupancy. It includes lodging for 4 nights, 4 breakfasts, box lunches on 3 field trips, and 4 dinners, including our traditional Wednesday night banquet. Our lodging accommodation is a college dormitory with double-occupancy rooms (two twin beds) and communal bathrooms. A few single-occupancy accommodations are also possible ($290).

For further information or a registration form please contact: Larry Klotz, chairperson; lhklot@ship.edu 717-477-1402

Kentucky Old Growth Forest Society Inaugural meeting

Marc Evans of the Kentucky State Nature Preserves Commission and Neil Pederson of EKU are convening a statewide meeting to: 1) learn about old-growth forests and 2) begin a discussion on how to raise awareness regarding the remaining forests that pre-date Daniel Boone. Anyone interested in the remaining old-growth forests in the Commonwealth of Kentucky is welcome to attend.

This gathering will be held at Pine Mountain State Resort Park from the June 15th-16th, 2007. Partners include the Southern Research Station of the U. S. Forest Service, Kentucky State Nature Preserves Commission and Eastern Native Tree Society, Cumberland Laboratory of Forest Science and the Department of Biological Sciences at EKU.

The meeting will begin on the 15th of June at 1 pm and include a full afternoon and evening of talks and discussion regarding the value of old-growth forests and planning for the KY Old Growth Forest Society. Talks will continue on the morning of the 16th and end at lunch time. In the afternoon there will be a traditional ENTS tree measuring and tree aging workshop. Following the workshop, we will hike into a local old-growth forest. There is a great lineup of speakers for the meeting. Included in this list are Dr. Lee Frelich (U. of Minnesota), Bob Leverett (Co-founder of the Eastern Native Tree Society) and David Taylor (USFS), among others.

The meeting is free and lodging may still be available at the Pine Mountain Resort Park. For details regarding the meeting and society, see http://people.eku.edu/pedersonn/kyOGentsmeet.html. This webpage will be updated as new details develop.

KNPS 2007 Hike Schedule

Walks are limited to twenty participants. Please call the number provided and register prior to each hike.

April 7, 2007. ***(Note new date!)*** Pine Creek Barrens, Bulitt County to see the Kentucky Glade Cress. Leader: Tara Littlefield 502-573-2886 ext 106.

May 5, 2007. Rivercliffs State Nature Preserve, Franklin Co., KY. Meet at 10 AM. Easy walk but some uphill. Leader: Deb White, (502) 573 2886.

May 19, 2007. Cherokee Park, Louisville, KY. Folks meet at the Daniel Boone Monument on Eastern Parkway (park entrance) at 9:30. Easy Walk. Alan Nations, staff naturalist and restoration specialist will lead the walk. Call Darlene Yann at the LOPC at 502-456-8125.

September 15, 2007. Otter Creek State Park, Brandenburg, KY. A moderately difficult walk through scenic Otter Creek State Park with naturalist, J. Bryan Lewis. Meet at the main building located at 850 Otter Creek Park Rd at 9:00 a.m. Call 502-574-4583 or 942-3211 for information.

October 6, 2007. Powerline/right-of-way walk with Dave Taylor not far from Cumberland Falls SRP, KY. The location is off KY 92. Meet at 10:00 a.m at Dupont Lodge parking lot, and drive back east to the site. Call 859-745-3167 for information.

Calendar of KNPS and Other Native Plant-related Events

Natural Bridge Events:

Invasive Species Volunteer Workshops:
June 2, July 7, Aug 4, Nov 3, 2007

Help stop this invasion of exotic plants by volunteering to assist the naturalist staff in pulling and cutting some of the worst invaders. This is great opportunity for individuals and groups to improve the environmental health of our public lands! Each volunteer day begins at 9:00 am at Natural Bridge's Hemlock Lodge, and ends whenever you get tired! Preregistration is encouraged, contact Brian Gasdorf at 606 663-2214 or brian.gasdorf@ky.gov for more info.

KNPS 21st Annual Wildflower Weekend:
April 19-22, 2007

The Natural Bridge area is home to hundreds to species of native plants; enjoy them this weekend with other botanists, gardeners, and nature lovers. Our field trips (with a selection on Friday evening and Saturday and Sunday mornings and afternoons) are for all levels of participation, from beginner to advanced wildflower enthusiast and from short easy walks in Natural Bridge to longer hikes in Red River Gorge. Our evening speakers will focus on the native plants of the region. On site registration fee is $5 per adult and $2 per child. Contact Brian Gasdorf at 606 663-2214 or brian.gasdorf@ky.gov for more info. and see page 1, President's Message.

Spring Native Plant Sales

Mark your calendar!

Saturday, April 28, 2007
Salato Wildlife Education Center
#1 Sportsmans Lane
Frankfort, KY
(502)564-7863
www.fw.ky.gov

April 27 & 28; May 18 & 19, 2007
Fridays from 12-8 pm; Saturdays from 9 am-5 pm
Dropseed Native Plant Nursery
13930 Brush Run Road
Louisville, KY
(502)762-1080
www.dropseednursery.com

April 20-end of May
Fridays and Saturdays only; 9 am-5 pm
Shooting Star Nursery
160 Soards Road
Georgetown, KY
(502) 867-7979
www.shootingstarnursery.com

SEE PAGE 2 FOR CONTACT INFORMATION.
(Return address below is for POST OFFICE USE ONLY.)

Kentucky Native Plant Society
c/o Department of Biological Sciences
Moore 235
Eastern Kentucky University
521 Lancaster Ave.
Richmond, KY 40475-3102

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