

The Newsletter

LANDIS ARBORETUM

Esperance New York

Winter 1999

Volume 18, No. 1

Upcoming Events

(At the Arboretum unless otherwise noted)

Feb. 13	Family Workshop:	Owl Prowl/Star
	Night Walk, 7 p	

Feb. 21 Family Workshop: Winter Forest Ecology, 2 pm

Feb. 23 Adult Workshop: Propagating
Houseplants, William Rice
Extension Center, Vorheesville,
7-9 pm

Mar. 4 "How to Design a Glorious, Everblooming Perennial Garden," Unitarian Society, Schenectady, 7-9 pm

Mar. 6 Family Workshop: Maple Sugaring, 10 am

Mar. 19 SPRING BENEFIT

April 10 Star Party, 8:30 pm

April 24 Family Workshop: Spring Hawk Watch, 7 am to 5 pm

May 1 Family Workshop: Songs of Spring Night Walk, 7:30 pm

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Winter Into Spring

The 1999 Arboretum Spring Benefit

On March 19, at 6 p.m. at the Mohawk Golf Club, on Union Street east of Balltown Road in Niskayuna, the Landis Arboretum will present its Spring Benefit, with a theme this year of Winter Into Spring. Chairing the event is trustee Mary Ann Tomlinson, ably assisted by Nancy Boericke, Cheryl Lewis, Elliess Riemer, Jacqueline Tomlinson and Susan Sagendorf.

Silent and live auctions will feature many different and intriguing items - live plants, garden ornaments, books, vacation houses, getaway weekends. These are only a few of the many attractive and unusual items that will be auctioned by Jack Aernecke of WRGB-TV who will again be our host and auctioneer.

The evening's refreshments will feature appetizers, gourmet food stations, a cash bar, and a Viennese dessert table.

Tickets for the benefit are \$45 per individual and \$80 per couple, and include the entire evening's activities. Invitations will be mailed in mid-February. If you do not receive an invitation, and would like to attend, please call the Arboretum office. Proceeds from the evening will benefit programs at the Arboretum, including care of the collections.

From the Garden

Patricia Rush, Executive Director

As I write, the Arboretum is blanketed with layers of snow and ice - I think the top layer today (1-15) is snow, but since the icy roads have prevented me from making the drive, ice could be the dominating feature.

What do we do out here in the winter? Alas, unlike the plants, we have no period of dormancy; much of our administrative time is spent now in closing out the books for the previous year, and getting ready for the big events of the spring - the Spring Benefit and the Spring Plant Sale. Our horticulturist Fred Breglia is working diligently on BG-Base and office manager Shelley Weed is going through the complex tasks of closing the books for 1998 on our new accounting software, ACS. Since this is the first time through the process, she is taking great pains to ensure accuracy in all aspects of year-end operations.

ACS: This is a software package which we purchased last spring with the state grant obtained with the help of Senator James Seward. ACS is a modular software package

From the Garden, Continued

and we purchased the financial, membership and contributions modules; they form a relational data base which enables us to track our finances through all phases of the Arboretum's operations. Shelley Weed received training from the software vendor in the operation of the software; now, all of our complex financial reporting comes from the data which Shelly enters on ACS. Our membership program and contributions program are fully loaded and operational, which has streamlined our administrative operations and has given us a flexible and powerful tool for accurately tracking and reporting on our operations, membership and contributions.

BG-BASE: Many Arboretum supporters are aware that we have a database on which our entire collection of woody plants is catalogued (theoretically, at least). The data base, BG-BASE, was developed and is maintained by the Holden Arboretum; Landis was able to purchase it with funds from a federal grant we received in 1995. With funding from that grant, the entire Arboretum was surveyed; individual plants were entered on BG-BASE with locations given from survey points on the survey map. As part of that project, plants were given accession numbers as well as location numbers on the survey grid.

As part of his responsibility to update and maintain BG-BASE, our horticulturist Fred Breglia, who worked on the original grant project when he was a student at SUNY Cobleskill, is field-checking each plant entered on the data base to determine whether it's where it's supposed to be (in terms of the survey grid) and also whether it's still alive. He's found many errors of many different kinds, but the top-to-bottom verification of every entry on the database will ensure an accurate and comprehensive listing of the woody plants in the Landis Arboretum collection.

Gifts and Grants: The New York State Council on the Arts has awarded the Arboretum a \$700 grant to help underwrite Music at the Arboretum, our summer concert series. The Stanley Smith Horticultural Trust in Berkeley, California has awarded Landis Arboretum a grant of \$10,000 to be used to pay a portion of our horticulturist's salary in 1999. We have also been awarded a \$1,674 grant from NY State ZBGA which will we will use to pay part of the horticulturist's salary. This is wonderful news!

It has been matched by more wonderful news! An anonymous donor has made a gift of \$10,000 to the Arboretum's endowment, and has asked that the income from the gift be used to support the horticulturist's position. This donor has challenged friends of the Arboretum to match this gift by the end of 1999; if they do, the donor will give an additional \$10,000 to the endowment. Still another anonymous donor has answered that challenge and has given \$2,000 to the endowment, which will be matched with another \$2,000 by GE. Board President Nick Zabawsky has pledged \$1,000 to the challenge. Now, only one month after the original gift from our anonymous donor, we have a fund of \$25,000 in gifts and pledges to begin the establishment of a dedicated endowment fund for the horticulturist position at the Arboretum. Thank you to all of you!

How Does Our Garden Grow?

New Members - Please note that the names listed here are new members that joined during the fourth quarter of 1998. We wish you welcome! A complete list of members and contributors will be available once each year.

Muriel Cox Ona Curan Jen Gutillo Margaret Lynch Webster Arboretum The Blue Moon

THE LANDIS ARBORETUM

NEWSLETTER
is published quarterly for its members.
The Arboretum's mission is
to provide natural history
and horticultural education through

its programs and through its plant collection.

Editor Fran Finkbeiner

Contributors

Fred Breglia, Herm Finkbeiner, Anne Jaster, Pat Rush, Paul Schneider, Viktoria Serafin

> Printer Shipmates

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Patricia Rush, Executive Director Shelley Weed, Office Manager Fred Breglia, Horticulturist and Operations Manager

George Steele, Science Educator

Address correspondence to:
Newsletter Editor

The Landis Arboretum
P.O. Box 186
Esperance, New York 12066

Phone: (518) 875-6935

SPRTOG PLANT SALEMay 15 and 16, 1999

Preview Party and Sale May 14 Members only

The Rhododendron Collection Past, Present and Future

Fred Breglia, Arboretum Horticulturist

"The rhododendrons are my favorites of all flowering shrubs. To my mind they are unequaled in their perfection of form and their combination of spectacular clustered bloom with cleanly molded evergreen leaves." - Fred Lape, A Garden of Trees and Shrubs

Past

When I came to Landis in May 1998 the rhododendrons were suffering from overcrowding by brush and scrub species such as buckthorn and honeysuckle. There had been no fertilization in a long time and the specimens were under extreme stress from overcrowding, from lack of light, and from spider mites (that particularly look for stressed plants). The collection, although it had been protected from our resident herd of deer with the installation of deer fencing, was in such disrepair that the Arboretum closed the area to the public during the spring and summer of 1998.

Present

During the general cleanout of the Arboretum that began after I became horticulturist, a priority was placed on the rhododendron collection as a discrete collection to bring back through rehabilitation, renovation and, eventually, replanting.

This past summer we literally cut down every scrub species in the collection; with the help of the Private Industry Council crew, we disposed of all of the cut brush. We dug around stumps and then cut below ground level so a lawn could be established and mowed, to make it easier to keep the brush from growing back.

After the scrub vegetation was removed, we seeded the bare soil to stop erosion and and to establish lawn in areas that had been covered with scrub vegetation. Next, I went in with a pruner and a horticultural hand saw to structural-prune the remaining rhododendrons. This fall all the rhododendrons were fed with a slow release organic, acidifying fertilizer.

Currently we have finished mapping the collection and taking an inventory of surviving plants in the rhododendron area. According to our data base (BG-Base), 84 different cultivars were registered in this section; results of the 1998 inventory show that 47 cultivars remain.

Future

The Arboretum's horticulture committee will be asked to approve the replanting of the rhododendron collection beginning this spring. In anticipation of the committee's approval, I have been designing - on paper - the renovated collection. The design work involves taking exact measurements of the existing plants, both the rhodies and their overstory conifers, and plotting them on paper so the design can be used as a planting plan.

Then we will design the collection around the existing specimens and the overstory trees. Also, I'm doing a full soil analysis in the area so we know what the soil nutrients are and which ones we will need to supply. We'll test soil pH and make up a plant list of hardy resistant cultivars to replace those that have died. Part of the planning will include a circulation plan through the collection, so there is a smooth flow from one part to another.

Even now the rhododendron collection can again be open to the public with confidence that visitors will enjoy the beautiful bloom.

The Spring Plant Sale

Herm Finkbeiner

The 27th annual Landis Arboretum Spring Plant Sale will be held on May 14, 15 and 16, 1999. The Advance Order Catalog has a large number of very tempting offerings and the sale in May will have even more. (The next issue of the newsletter will carry a preview of some special items that will be available at the sale, and Paul Schneider's article on Asian maples on page 6 of this issue will whet your appetite for those desirable species.)

The Pick of the Pots Preview Party and Sale has been so successful that it has now acquired the patina of tradition. As in the past the Preview Party will be open to members only and will provide an opportunity to see and purchase the choicest plants in a congenial, garden party atmosphere. (Rain, did you say? We have a committee working to provide a perfect evening!) More details will be coming to members during April.

The Plant Sale will be open both to members and to the public on Saturday, May 15 and Sunday, May 16 from 10 am to 4 pm. Guest plant organizations will be represented with exhibits and plants for sale. Vendors selling garden-related items will be on hand. And, the Arboretum's Acorn Shop will be open with an expanded inventory.

Members of the Plant Sale Committee are: Herm Finkbeiner, General Chair; Carol Wock, Vice-Chair; Rich and Linda Ohlerking, Commercial Exhibitors/Vendors; Shelley Weed, Finance; Barbara Hunt, Acorn Shop; Anne Jaster, Staging; Viktoria Serafin, Special Displays & Plant Societies; Pat Rush, Publicity and Parking; Sue Sagendorf, Membership and Arboretum Display; Nancy Boericke, Raffles and Prizes; Carol Wock, Plant Sales; Central Bridge Civic Association, Food Sales; Viktoria Serafin, Plant Propagation; Florence Grimm, Volunteer Coordinator.

The plant sale is the Arboretum's major event. It is successful because of the efforts of many, many volunteers. If you would like to be a part of this great team call Florence Grimm (842-7436). Don't be shy, the committee members aren't acquainted with every member of the Arboretum so we rely on you to call us. If you are able to help, please do speak up!!

"Oh, Christmas Tree..."

Viktoria Serafin

This is another in the on-going series describing species included on the list of Notable Trees at the Landis Arboretum. Viktoria Serafin, an able and enthusiastic arboretum volunteer, wrote the article on beeches in the last issue of the newsletter. The drawings here are by Fred Breglia, Landis Arboretum Horticulturist. Viktoria is a 1997 graduate and Fred a 1998 graduate of SUNY Cobleskill, each with a Bachelor of Technology in Plant Science.

Abies - Firs

Many species of firs are known by the generic common name "Christmas tree." There are a total of 40 species of firs in Europe, North Africa, temperate Asia and North America from Canada to Guatemala. The largest species will reach heights of 200 feet and more in the wild; in cultivation all but one (Abies pinsapo) tend to be considerably smaller. Firs are monoecious and evergreen. They can be distinguished from spruces (Picea spp.) in several ways.

Fir cones are upright while spruce cones hang from the branches. The needles are flat on firs and round on spruce and feel soft unlike the sharp-tipped, prickly spruce needles. Fallen leaves (needles) of firs leave a circular leaf scar while spruce needles grow on a peg-like stalk. There are other differences as well. The cones of most firs are purple, aging to brown. Some species have greenish brown or greenish purple cones. Stomatal bands make the undersides of fir needles appear white. Buds on firs are usually resinous in winter and appear to be waxy, while on spruces they are less so.

Firs are important timber trees. The soft, light wood is used for paper and cellulose, as well as in construction. It has been used in airplanes as well. The resin of some species of firs is also collected for use. The Balsam Fir is a popular Christmas tree not only because of the fragrance and softness of its needles, but also because it tends to, like firs in general, retain them much better than spruces do. The Fraser Fir is also a popular Christmas tree choice, and Noble, Nordmann and Pacific Silver Firs are also used.

Major pests of firs are twig aphid, spruce bud worm, and spruce spider mite; the major diseases are rust and needle cast. Firs are less susceptible to fungal diseases than most other conifers.

Many cultivars of firs are known, including prostrate, compact, pendulous, contorted, fastigiate, yellow-foliaged and blue-foliaged forms. They are, however, difficult to find in the trade, most likely because firs are much less adaptable than spruces, and exacting in their climatic requirements.

The natural habitat is cool, wet mountainsides, which explains why firs are not suitable for cities or as street trees.

Some people might wonder why they cannot find Douglas Fir included here. Despite the common name, it is of a different genus, *Pseudotsuga*.

Fourteen species of firs are present in the Arboretum collection. My personal favorite is Abies nordmanniana, the Caucasian Fir or Nordmann Fir. It grows on the hillside between the Farmhouse and the Meeting House, and proudly carries its silky dark green to nearly black needles on stiffly horizontal branches, giving an elegant, formal profile. The Nordmann Fir is native to the Caucasus and parts of Turkey, and is hardy to Zone 4. In the wild it will reach heights in excess of 150 feet. There are many cultivars.

Most of the firs at the Arboretum can be found along the Fred Lape Trail, soon after it winds its way up the hill from the parking lot. The China native Abies ernestii, Ernest Fir, challenges the limits of its hardiness here; it is considered to be hardy only to Zone 6. In China it is known to grow to a hundred feet or more.

The North American native Balsam Fir, Abies balsamea, is the only native fir occurring on the East Coast and Eastern Canada. It is hardy in Zones 2-5, but will not succeed where it is warm. Not imposing in stature, the Balsam Fir grows to a relatively modest 80 feet.

It is, perhaps, America's favorite Christmas tree because of its fragrance and ability to hold its needles. Its resin yields Canada balsam, used in the manufacture of a fixative/preservative for microscope slides, and varnish. Many cultivars exist.

The Rocky Mountain native Abies concolor, White Fir or Concolor Fir, is a beautiful tree often mistaken for a Blue Spruce, but its needles are longer and more upright. It is hardy to Zone 4. It will reach heights of 150 feet or more, and has green cones. The many cultivars include dwarf and weeping forms.

Nordmann Fir

Continued on the next page >

Oh, Christmas Tree, continued

Abies alba, Silver Fir, is native to Central and Southern European mountains and is hardy to Zone 4. It will grow nearly to 200 feet and has bronze-green cones. There are many cultivars.

Abies amabilis, Pacific Silver Fir, is slow-growing, eventually reaching 200 feet and more in the wild, and only half of that in cultivation. This West Coast native is hardy to Zone 5. The needles have a distinct orange fragrance when crushed. Cultivars include compact and spreading forms.

Abies cephalonica, Greek/Grecian Fir, is quite uncommon. It is hardy to Zone 5 and will grow to 120 feet or more. Dwarf and other variants are known.

Abies fraseri, the Fraser Fir, was named for British-born botanist John Fraser. It is an Appalachian native, and hardy to Zone 4. A fast-growing species, to over 60 feet, it is short-lived. Prostrate cultivars are known.

Abies holophylla, Manchurian Fir, is native to Manchuria and Korea, and hardy to zone 5. It will exceed 150 feet in the wild, and has green cones. At least 25 cultivars exist.

Abies homolepis, Nikko Fir, is a Japanese species and hardy to Zone 4. It will grow to 120 feet or more and has cones of a greenish purple hue. Many cultivars are known.

Abies lasiocarpa, Subalpine/Alpine Fir or Rocky Mountain Fir is native to Northwestern U.S. and hardy to Zone 5. It will grow to over 120 feet in the wild but barely half of that in cultivation. Its short branches produce a pencil-slim profile, undoubtedly an adaptation to the heavy snow loads of its native habitat. There are several dwarf cultivars. (Regarding A. Lasiocarpa, I find it curious that both Dirr and the Royal Horticultural Society give a hardiness of Zone 5 to a tree native to the Rockies. - Author)

Abies nephrolepis, Manchu (Khingan) Fir, is one of the hardiest, even to Zone 3. It is native to Manchuria, Korea and China, and will reach well over 100 feet in its native habitat. At least one compact cultivar exists,

Abies pinsapo, Spanish Fir or Hedgehog Fir, is the exception to the rule that firs tend to be much smaller in cultivation than in the wild; it can exceed 100 feet. This tree also challenges the limits of its hardiness here, being considered hardy only to Zone 6. Many cultivars are known.

Abies procera, Noble Fir, a Washington and Oregon native, is hardy to Zone 5. There are many cultivars of Noble Fir.

We hope that this overview of the collection will encourage you to study the firs at the Arboretum more closely on your next visit. One of the pleasures of evergreen trees is that they are at their best still when there is little else in the garden that is green or in bloom.

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The New Royal Horticultural Society Dictionary of Gardening, MacMillan Reference Limited, 1992 and The Stockton Press, New York, 1997.

A Natural History of Western Trees, Donald Culross Peattie, Houghton Mifflin, Boston, 1966.

The Folklore of Trees & Shrubs, Laura C. Martin, Globe Pequot Press, Old Saybrook, Connecticut, 1992.

Statements of authors in the newsletter are based on standard reference works. Their own experiences or observations are so noted. - Editor









Asian Maples for Northern Gardens

Paul H. Schneider

Paul Schneider has been a member of the George Landis Arboretum for the past two years. His gardening interests include Asian woody and herbaceous plants, and ornamental grasses, including the bamboos. He is currently President of the Northeast Chapter of the American Bamboo Society. Paul can be contacted at dharbu@capital.net.

Having a longtime interest in maples (Genus Acer); I was greatly dismayed a few years ago to find that the wonderful cultivars of the Japanese maple, Acer palmatum were not hardy enough to survive the winter rigors of my garden in Cambridge, N Y. (USDA Zone 4). I had hoped as I built my garden to utilize some of these Japanese maples as understory trees beneath the more mature sugar maple and ash trees in the east and west borderline of my property.

With typical "gardener's optimism" I began to research the large and wonderfully diverse maple genus. My discovery of the hardy Asian maples as viable substitutes for the Japanese maple has opened a whole new field of gardening interest for me. North Asia and Eastern Russia support many maple species which are small in stature (under 30 feet) with good fall color, interesting leaf form and Zone 4 hardiness. Many of the species have been largely unavailable to anyone other than die-hard collectors or arboreta. Due to more available seed in recent years, these species maples are slowly becoming available in the nursery trade. Wholesale nurseries such as Heritage Seedlings, Inc. in Oregon have picked up the banner and are offering many of these species. Hopefully, Northern gardeners and arborists will begin to steer toward this group of excellent maples as a source for unusual border and specimen trees.

I have chosen to highlight the following six species for hardiness and variety. Although they are often understory trees in their native habitat, they will be comfortable in a wide mix of garden situations if given reasonable moisture and soil fertility.

Acer barbinerve - Zone 4-7, to 30-35 foot, multi-stemmed, yellow fall color, S.E. Manchuria, China and Korea. This maple has thin coarsely-toothed leaves with grey or greenish branches. It is rare in the trade as viable seed is difficult to obtain. An excellent companion tree for the other species in this article.

Acer caudatum ssp. ukuruduense - Zone 2-7, to 30 ft, shrub-like small tree, yellow fall color, Manchuria, central China, Korea. This maple is similar to our North American A. spicatum (mountain maple) both in habit and leaf shape. A. caudatum leaves, however, are heavily tomentose (hairy) while those of A. spicatum are glabrous (smooth, hairless). Happy in any soil and extremely cold hardy.

Acer mandshuricum. Manchurian Maple - Zone 4-6, to 20+ feet, often shrub-like, red fall color, S.E. Manchuria, N. and S. Korea, E. Siberia. Lacking the peeling bark of A. griseum and A. triflorum, this hardy trifoliate maple is a welcome garden addition for its three-leaved foliage and red fall color.

Acer pseudosieboldianum. Korean Maple - Zone 3-8, to 26 feet and as wide, yellow, orange, red fall color, Manchuria, China, Korea. This maple is from the Palmata (as in

hand-like) section. With its 9-11 lobed leaves and red/orange/yellow combinations of fall color it may be the best hope as a hardy substitute for the Japanese maple. It has been subjected to -40 F. temps in northern Vermont with no evidence of die-back.

Acer tegmentosum. Manchurian Striped Maple - Zone 4/5-7, small tree, large shrub to 35 feet, yellow fall color, Amur River region of Russia, mountains of Korea and Manchuria. Preferring moist sites, this striped-bark maple is similar to our native Acer pennsylvanicum. This species leafs out early and should be sited carefully to prevent damage from late spring frosts.

Acer tschonoskii ssp. koreanum - Zone 4-7, small tree or tree-like shrub, yellow to orange fall color, N. and S. Korea, Manchuria. This maple has finely cut leaves with red petioles and red twigs making it a delightfully colored small maple.

These six species are maples that I have been trying to bring to the attention of Northeastern gardeners through plant sales such as those held at the Landis Arboretum, Tower Hill and the Arnold Arboretum. This year's Landis Arboretum Plant Sale Adoffers Acer vance Catalog pseudosieboldianum - Korean Maple, one of the best of these species. I will also be bringing Acer tschonoskii ssp. koreanum and others to the sale. For gardeners seeking unusual maples this is an opportunity to acquire these species and also benefit the George Landis Arboretum with your purchase. Hope to see you all at the Spring Sale.

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Maples of the World, vanGelderen deJong, Oterdoom, Timber Press 1994

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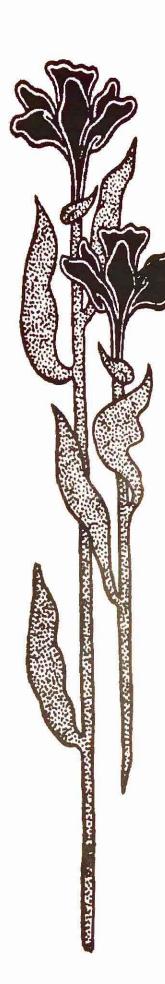
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COMING ATTRACTIONS

The Landis Arboretum, Esperance, NY

Plant Sales

Two plant sales are held each year at the Arboretum, the larger Spring Sale and Preview party on May 14, 15 and 16, and the Fall Sale on September 11 and 12. Descriptions and details are published in the Arboretum newsletter.

Concerts

Concert performances are held in our newly-renovated 1830's barn amid the sights and sounds of a summer night at Landis. The ticket prices for each concert is \$5 for Arboretum members, \$8 for non-members, and children under 12 free. Advance reservations are requested. Consult a later issue of the newsletter or call the Arboretum for complete program information.

Saturday, June 19 at 7 pm. The Quercus Quartet, led by Ann-Marie Barker, will present a program of classical music on nature's themes for string quartet.

Sunday, August 8 at 3 pm. Dual Cellists: Laurie Anderson Bishop and Nathaniel Park will present a classical concert for two cellos. Program selections have not been chosen, but will likely include Bach, Bazelaire, Boccherini, Gliere, Couperin, Gabrielli, Viotti, and Popper.

Saturday, August 14 at 7 pm. The Sun Mountain Fiddler has an enthusiastic following and is well-known to Arboretum audiences. Dick Solberg has been playing the violin for more than 30 years, beginning as a street musician. He plays fiddle, piano, guitar and bass - and sings, too. It's a program for the whole family!

Star Parties

The Albany Area Amateur Astronomers meet regularly at the Landis Arboretum for its dark skies and good horizons. On sun/moon picnic dates, the club's special solar telescope is used to provide a safe view of the sun; lunar and star gazing is continued after dark. Visitors are welcome to join the club's activities; bring a blanket to sit or lie on, and a picnic supper if you wish.

Adult Workshops

Tuesday, February 23, 7 to 9 pm. (Snow date, 2-25.) Houseplant Propagation, an educational program by Ken Carnes, Consumer Horticulture Agent, Albany County Cooperative Extension at William Rice Extension Center, Martin Road, Voorheesville, NY. Simple refreshments and all materials will be provided for this informal workshop. Participants will receive several "starts" to take home. (Bring a styrofoam or other approriate carton.) Fee: \$13.50 (member), \$15 (non-member). Payment is due by February 19; no phone reservations. Make your reservation by mail and include your check, which is your receipt. For further information, call the Arboretum at 875-6935.

Thursday, March 4 from 7 to 9 pm. "How to Design a Glorious Everblooming Perennial Garden" by Kerry Mendez. At the First Unitarian Society, 1221 Wendell Avenue, Schenectady. A lecture and slide program to guide participants in developing their own gardens. Simple refreshments will be served. Admission: \$13.50 (member), \$15 (non-member). Advance reservations are required. Call Landis Arboretum (518) 875-6935 or FAX 875-6394. Payment is due by March 1.

Botanical Drawing Course

This class meets on Thursdays in the Meeting House from 6-8 pm on June 3 through July 1. Anne Jaster, whose drawings are regularly seen in the Arboretum newsletter, is the instructor. Fee: \$30.



CALENDAR OF EVENTS

TANTIADY 16	Family Workshop: Signs of Winter. 2 pm	
JANUARY 16	Family Workshop: Owl Prowl/Stars Night Walk. 7 pm	
FEBRUARY 13 21	Family Workshop: Winter Forest Ecology. 2 pm	
23	Adult Workshop: Propagating Houseplants by Ken Carnes, Albany	
23	County Cooperative Extension, Vorneesville, 1-9 pm	
MADCH A	Adult Workshop: How to Design a Glorious Everblooming Perennial	
MARCH 4	Garden, by Kerry Mendez, Unitarian Church, Schenectady, 7-9 pm	
6	Family Workshop: Maple Sugaring. 10 am	
19	Spring Benefit Auction, Mohawk Golf Club, Schenectady. 6-9 pm	
APRIL 9 & 10	Albany Amateur Astronomers Star Parties. 8:30 each night	
24	Family Workshop: Spring Hawk Watch	
24	with Hawk Identification Workshop (2 pm). 7 am - 5 pm	
MAY 1	Family Workshop: Songs of Spring Night Walk. 7:30 pm	
16	Family Workshop: Nature Art Workshop. 2 pm	
14	Spring Plant Sale Preview Party, Members Only	
15-16	Spring Plant Sale, 10 am - 4 pm	
JUNE 3	Botanical Drawing Course. 6-8 pm	
5	Family Workshop: Moths. 8:30 pm	
3	Free Arboretum Tour: Flowering Shrubs. 11 am	
10	Botanical Drawing Course. 6-8 pm	
11-12	Albany Amateur Astronomers Star Parties. 10 pm each night	
17	Botanical Drawing Course. 6-8 pm	
19	Concert: Quercus Quartet. 7 pm	
20	Family Workshop: Father's Day Herpetology Hike. 2 pm	
24	Botanical Drawing Course. 6-8 pm	
26	Free Arboretum Tour. 11 am	
JULY 1	Botanical Drawing Course. 6-8 pm	
10	Free Arboretum Tour, Notable Trees. 11 am	
14	Arboretum Adventures: Reptiles. 10 am (Advance registration required)	
17	Family Workshop: Pond Ecology. 2 pm	
21	Arboretum Adventures: Birds. 10 am	
24	Sun/Moon Picnic, Albany Amateur Astronomers. 5 pm	
28	Arboretum Adventures: Mammals. 10 am	
	Family Workshop: Full Moon Campfire Sing-Along. 8:30 pm	
AUGUST 1	Family Workshop: Meet the Arthropod Squad. 2 pm	
4	Arboretum Adventures: Insects, 10 am	
8	Concert: Duo Cellists, Laurie Anderson Bishop & Nathaniel Park. 3 pm	
11	Arboretum Adventures: Outdoor Living Skills. 10 am	
12	Albany Amateur Astronomers: Perseid Meteor Showers. 9 pm	
14	Concert: Sun Mountain Fiddler. 7 pm	
17	Albany Amateur Astronomers: Annual Meeting and Star Party. 7:30 pm	
18	Arboretum Adventures: Nature Art. 10 am	
22	Family Workshop: Tree Identification. 2 pm	
SEPT. 11-12	Fall Plant Sale. 10-4 both days.	
12	Family Workshop: Mammal Tracks and Traces. 2 pm	
25	Family Workshops: Map and Compass. 2 pm	
OCTOBER 2	Free Arboretum Tour. Evergreens and Trees with Winter Interest. 11 am	
3	Family Workshop: Fall Foliage Walk. 2 pm	
15-16		
23		
DEC. 10-11	Albany Amateur Astronomers Star Parties. 7:30 pm each night	

FAMILY WORKSHOPS

Family Workshops with nature educator George Steele will be held on selected Saturdays and Sundays, at the times designated from February through October. All programs begin - rain or shine - at the Arboretum Meeting appreciated.

Programs are free; donations from non-members are greatly

Saturday, February 13, 7 PM - Owl Prowl/Stars Night Walk - The great horned owls will soon be nesting in our woods. Join us as we listen for their plaintive hoots as they set their territories and search for mates. We'll also try to call in screech owls. While waiting for the owls learn about some of the common winter constellations and the stories and myths they inspired. Dress warmly for this outdoor program.

Sunday, February 21, 2 PM - Winter Forest Ecology Walk - Winter is a tough time for wild things in our northern woods. Come explore and learn how things survive. Who eats who? How do they stay warm? We'll be looking at plants and animals to learn about the winter web of life. Dress warm for this outdoor program.

Saturday, March 6, 10 AM - Maple Sugaring - Spring is coming and the trees show it. Sap is starting to flow. Learn about maple sugaring, a skill learned from the native Americans. Answer the question, how did the sugar get there? You'll learn how to identify a maple, a little more challenging when there are no leaves on the tree. We'll help you with the techniques so that you can tap a maple in your backyard. You'll have the chance to make a sumac spile to take home and use.

Saturday, April 24, 7 AM - 5 PM - Spring Hawk Watch (with Identification Workshop at 2 PM) - The hawks are on the move, some returning from as far away as south America. From our perch above the Schoharie Valley we'll have the chance to see them as they wing northward. Join us for an hour or stay all day (don't forget lunch). At 2:00 there will be a session on how to identify hawks in flight. Bring your binoculars or use the extras we'll have on hand.

Saturday, May 1, 7:30 PM - Songs of Spring Night Walk - It's a frog chorus out there at night with some birds and insects joining in. Celebrate spring with a walk through the Arboretum grounds listening to this animal serenade and learn why and how they do it. Bring a flashlight and dress for the weather. Arboretum grounds can be quite muddy this time of year.

Saturday, May 16, 2 PM - Nature Art Workshop - A repeat of last year's very popular event. In conjunction with the Arboretum plant sale, a chance for the whole family to celebrate nature through art. Learn how to do Cherokee leaf prints, make recycled paper and make a sun print or animal track book mark.

Saturday, June 5, 8:30 PM - Moth Program - There are more than 100 times the number of species of moths than butterflies, yet moths get little attention, probably because most moths are active at night. Join us for a look at moths in this night time program. We'll attract them with a variety of techniques to learn a little more about them and to marvel at their numbers and diversity. Bring a flashlight and dress for the weather.

Sunday, June 20, 2 PM - Father's Day Herpetology Hike - Explore the Arboretum with a look at herpetology, the study of reptile and amphibians. The woods are home to salamanders, red effs, toads and some frogs and snakes. Maybe we'll find other snakes and frogs in the fields. Finally, the ponds might give us a glimpse of many amphibians, along with a chance to see water snakes and painted turtles. Learn about these animals' life cycles and survival habits.

Saturday, July 17, 2 PM - Pond Ecology Exploration - The pond is alive with thousands of animal organisms. We'll use nets and scoopers to capture these animals to get a close look at them and learn how they survive. Dragonflies, mayflies, damselflies, phantom midges, leaches, tadpoles will offer many chances to learn about adaptations, camouflage and the food web. Although we won't be going into the water, wear old shoes or sneakers or boots to keep your feet dry.

Wednesday, July 28, 8:30 PM - Full Moon Campfire Sing-A-Long - Celebrate the full moon rising and enjoy an evening of nature tunes and tales around a crackling campfire. Bring something to sit on or be comfortable on the ground. Summer evenings on the hill can be cool, so dress appropriately.

Sunday, August 1, 2 PM - Meet the Arthropod Squad - Arthropods include the insects, spiders, centipedes and millipedes among others. These are the most numerous of all the animal kingdom. Join us as we go looking for them in the Arboretum's fields and forest. Learn about their life cycles, where they live, how they survive and what role they play in nature.

Sunday, August 22, 2 PM - Tree Identification -Learn how to identify the native trees common to the Arboretum. You'll learn how to use a scientific key for this purpose. We'll also look at how trees grow and where they fit into the forest food web and ecosystem.

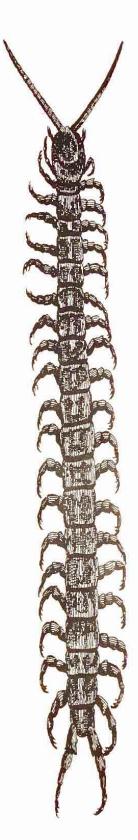








FAMILY WORKSHOPS (Continued)



Sunday, September 12, 2 PM - Mammal Tracks and Traces - The Arboretum is home to many mammals. Deer, raccoons, opossoms, fox, rabbits, squirrels, mice and moles are just a few of the residents. Yet we hardly see them. To know that they are there we need to look for their signs, the tracks and traces they leave behind. Join us as we learn to look carefully for the signs of mammals. Dress for the weather.

Saturday, September 25, 2 PM - Map and Compass - Getting into the outdoors means getting around in the outdoors. learn how to use a map and compass to find your way into woods and fields. We learn how to follow a bearing using a compass and how to read a topographic map. Everyone will have a chance to demonstrate their compass skills by navigating a simple compass course.

Sunday, October 3, 2 PM - Fall Foliage Walk - Enjoy the changing of the seasons with the spectacular colors of fall. We'll take an easy hike through the forests and fields of the Arboretum to take in the colors and learn about what is going on in he life cycles of the trees.

Saturday, October 23, 2 PM - Bird Feeder Workshop -It's almost winter and the time to feed wild birds. Learn about the tips and techniques to feed and identify our feathered friends. We'll make recycled bird feeders. Bring one or more of the following to use for feeder making: Three identical plastic juice or sports drink containers, cardboard egg carton, two plastic milk jugs, or other plastic containers.

ARBORETUM ADVENTURES FOR KIDS

This series is designed for children ages 7 to 11 and taught by nature educator George Steele. The adventures take place Wednesdays from 10 AM to 1:30 PM and include participatory learning sessions in the morning, lunch (brought from home), and crafts, games and other activities related to the program topic in the afternoon. Classes are held rain or shine; please dress accordingly. The fee is \$10 per session for the first child in a family, \$8 for additional children from the same family. Any child who attends the first five sessions may come to the sixth sessionat half price. Registration and payment are required at least one week before each session. Parents are welcome to remain with their children, but are not required to remain.

July 14 - Reptiles and Amphibians - Become a herpetologist and explore the Arboretum to learn about the common amphibians and reptiles of our area.

July 21 - Birds - Become an ornithologist and study birds at the Arboretum. Receive instruction in the use of binoculars to study nature and get a binocular certification card. Dissect an owl pellet to learn what an owl needs to survive.

July 28 - Mammals - Become a mammalogist and look for the mammals of New York. Receive a scientific key to mammal skulls and learn how to use it. Construct a bat box that can be set up in your backyard. Additional materials fee of \$10 for the bat box kit.

August 4 - Insects - Become an entomologist and study the most numerous of the animal kingdom. Make a variety of insect capturing devices to be able to study insects up close.

August 11 - Outdoor Living Skills - Become an outdoors person and learn the skills needed to survive in the wilderness. Learn about map and compass, how to build a fire and cook a meal on it, what to do if you become lost in the woods, and more.

August 18 - Nature Art - Become an artist inspired by the wonders of nature. Make recycled paper, solar-powered art and an animal track t-shirt. A white or natural color t-shirt is required for this activity.

ARBORETUM ADVENTURES FOR KIDS Registration Form

Address Child #1	Parent's Name				Daytime phone
Number of sessions (1-5) @ \$10	Address				
Number of sessions (1-5) @ \$8Session 6 @ \$4Total cost	Child #1	_Age			
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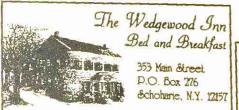


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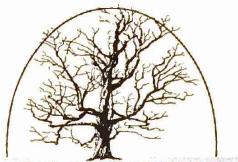
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Of Hemlocks

At the north woodlot edge the hemlocks advance in the wind's face, in the cold's teeth. What strength concealed under the wisps of drooping tips, under the green spray of taut limbs that bend double unbroken.

Walk within their world where light dims and nothing grows on the acid mulch of needles. Only the red purple trunks column upward, two centuries of life force residue in bark furrowed like an old face, hiding sapwood and butter yellow heart, how many years gone into one beautiful cure under high branches where siskins riddle the thumbnail cones.

Man is their short time owner. They give timber for house and barn, bark for tanning. And if one falls after all its generations of owners, it leaves for the earth a compost of needles for mosses to sweeten, and along its fallen trunk the fungus whorls, like seashells, write a poem of epitaph.

- Fred Lape, "Along the Schonarie"