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2004

Arboretum Annual Report, 2004

Connecticut College

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MISSION

The Connecticut College Arboretum is owned by Connecticut College and operated for the benefit of the College and the community. The Arboretum functions in support of the College's mission by helping to prepare men and women for a lifetime of learning about and interacting with the natural world. The mission of the Connecticut College Arboretum is:

TEACHING

To provide an outdoor laboratory for use by faculty and students in Botany, Zoology, Biology, Environmental Studies and other departments. In both teaching and research the Arboretum is a unique and valuable academic resource and support facility.

RESEARCH

To support and conduct research in a broad range of subjects including ecology, field biology, conservation and natural history. Arboretum research emphasizes long-term studies.

CONSERVATION

To provide stewardship of College lands by protecting, sustaining and enhancing biological diversity of large tracts of open-space. The Arboretum also provides leadership statewide and beyond in conservation matters.

COLLECTIONS

To maintain, develop and interpret well-documented plant collections for teaching, research, public education and enjoyment.

RECREATION

To provide a place where people from the College and the community may enjoy passive recreation and where they may come to learn, reflect and renew themselves through contact with the natural world. The Arboretum enhances the quality of life both for the College and the citizens of southeastern Connecticut.

PUBLIC EDUCATION

To provide programs and publications about conservation, horticulture, gardening, botany and natural history which enhance people's understanding of the natural world and foster an understanding of the Arboretum's mission.

On the cover: An orthographically corrected color aerial photograph forms the background for this Geographic Information System (GIS) map of the Arboretum's Native Plant Collection and Bolleswood Natural Area. Green lines are fences, yellow lines are trails, red are stone walls and orange are College boundaries.

from the director

2004

I have always been fascinated by maps. More than just a means to find our way around, they allow us to imagine landscapes we have not yet traveled and to understand relationships we can't easily perceive. Geographic Information Systems (GIS) are computerized maps that allow different map objects (topography, hydrologic or biologic features, soil types, land use, political boundaries, roads, buildings, anything that can be represented in space) to become "layers" that can be turned on and off with the click of a mouse button. Assuming we have many layers of information, we can use GIS to create customized maps on the fly — adding roads, subtracting topography or adding geographically corrected aerial photos. For example, I created the very simple map on the cover of this report in a few minutes, adding trail, fence and stonewall layers to an aerial photograph. What makes this system much more powerful is its ability to associate specific information with the various points and shapes on maps. Complex or simple questions can be answered in stunningly visual ways, opening new avenues of understanding and communication.

For a number of years, we have been collecting digital map information and aerial photographs of the Arboretum, which are proving very helpful in teaching GIS in the College's Environmental Studies Program. The Arboretum provides many of the teaching examples and an unlimited number of individual project opportunities for the class. The GIS class, in turn, has generated new layers of information about the Arboretum, for example a detailed and highly accurate trails map. The addition of a half-time academic position to teach the course and provide technical assistance means that GIS can be included in other courses at the College. Each class then adds more geographically based information to our local GIS database. In the near future, we should be able to network these data, so it will all be available to all students and researchers on their personal computer.

Only a few years ago, using GIS in the Arboretum was not even contemplated, yet today more students than ever are out in the Arboretum or are learning about it through maps and images. The blossoming of this new technology and its myriad applications makes me optimistic about the development of new academic uses for the Arboretum. While our teaching and research will still be grounded in scientific natural history, long-term ecological study and native species biology, there is no telling how we will be using this living laboratory 10 years from now.

— Glenn Dreyer MA '83
Charles and Sarah P. Becker '27 Director of the Arboretum



*Programs and publications about coastal
natural history, which enhance*
education

Ralph Lewis leads coastal geology walk



Learn, experience, participate, enjoy and enrich your understanding of the natural world.

The Arboretum educational programs have traditionally emphasized the environment, horticulture and natural history, and 2004 was no exception. The 2004 public offerings started in February with a discussion of Dr. Mitchell Thomashow's book *Ecological Identity: Becoming a Reflective Environmentalist* led by Kathy Dame. Later that month Professor Emeritus of Botany Sally Taylor presented "Brown Gold and Green Tea," a lecture/workshop that provided samples of many exotic teas.

Hands-on horticulture was emphasized during the spring months with a water gardening workshop presented by

Tom Hutchings and Karen Angell, co-owners of Waterfall Junction in Colchester, Conn.; grounds supervisor Jim Luce's popular pruning class; a workshop on making artificial stone planting troughs with horticulturist Sally Katkavech; and New London herbalist Regina Gialanella's program on "Knowing and Using Herbs."

The summer season was ushered in with our Annual Members' and Friends' Night in early June with speaker Susan Munger, New London resident and author of *Common to This Country: Botanical Discoveries of Lewis & Clark*.

The annual meeting is also a time when volunteers are recognized for their service to the Arboretum, awards are presented to the winners of the annual photo contest, and the highlights of the Arbo year are summarized. Later in the summer, Assistant Professor of Ethnobotany Manuel Lizarralde held a bow making workshop and allowed participants to shoot handmade bows and arrows.

Back by popular demand, in September Regina Gialanella conducted a four-part series of workshops on "Discovering Herbs." This was followed by "The Contemplative Garden: Where Inspiration Meets Nature," with Martin Mosko and Alex Noden, authors of *Landscape as Spirit*. The event was cosponsored by the New London and Duck River Garden Clubs.

"Beauty in Biodiversity," our third annual SALT (Smaller American Lawns Today) seminar took place in mid-November. The day-long meeting emphasized the beauty of home grounds that are biologically diverse and in harmony with nature. The keynote address was by Bill Cullina, nursery director of the New England Wild Flower Society Nurseries, who spoke on "Natural Models in Landscape Design." Other speakers included artist and landscape designer Christine Cook and Lisa Gould, author and senior scientist at the Rhode Island Natural History Survey.

Arboretum public programs concluded with a December get together in Olin Hall, where members and friends brought or made natural ornaments for a holiday tree, and the ever-popular holiday wreath workshop with Jeff Smith.

In addition to the workshops and lectures, a series of guided walks throughout the year were fun ways for participants to learn more about our plant collections and regional natural areas. The 2005 walk schedule included the wildflower gardens in May with Assistant Professor of Botany Christine Small; new campus plantings with Hort-Helper Coordinator Caroline Driscoll; the Caroline Black Garden with Glenn Dreyer; Rhododendron Sanctuary and Mount Misery in Pachaug State Forest with Glenn Dreyer; Orient Point, Long Island with Connecticut Sea Grant Communications Director Peg Van Patten '87; a coastal geology walk with Ralph Lewis, retired state geologist; the annual autumn color walk in the Native Plant Collection with Glenn Dreyer; an "archeology in the Arboretum" walk with Professor Harold Juli; and a fall geology walk on Mamacoke Island led by Beverly Chomiak, environmental studies lecturer.

Beyond our public programs, generally targeted at homeowners and environmentally concerned local residents, the Arboretum also offers educational opportunities for landscape professionals. For



Clockwise from left: Wreath making workshop, Manual Lizarralde's bow making workshop, Kathy Dame and Peg Van Patten '87 at Orient Point, Sally Taylor at tea workshop, author Susan Munger, Christine Cook at SALT Seminar, volunteers Marlene and David Oko





the past 14 years we have collaborated with the University of Pennsylvania Morris Arboretum and Larry Weaner's New Directions in the American Landscape to offer a continuing education conference for landscape architects and professional landscape designers who want to learn more about ecological landscaping. "Natural Design in Context: Intimate to Grand" was the topic for the two-day conference held in January. Featured speakers included Patricia Armstrong, principal of Prairie Sun Consultants from the Chicago area; Linda McClelland, a historian and landscape specialist with the U.S. Park Service; and Arthur Haines, a plant biologist with the New England Wildflower Society who is currently working on a new flora (list and description of all non-cultivated plants) of New England. Ninety-eight people attended this two-day symposium.

More than 640 people participated in Arboretum educational programs during 2004, in addition to those involved in the photo contest, the plant sale and the Flock Theater productions. Credit for this year's great diversity of educational offerings once again goes to Assistant Director Kathy Dame, who is in charge of developing and overseeing the Arboretum's public programs.



PHOTO CONTEST

The fifth annual photo contest and exhibition "Capturing the Beauty of Nature — 2004" included a children's competition, plus black and white and color categories for adults. The contest is designed to encourage people to enjoy the beauty of the Arboretum, which hopefully encourages better stewardship of our natural world. Photographs must be taken somewhere on the 750 acres of the College Arboretum property. Judges this year were Platt Arnold '64, arboretum volunteer; Mimi Hutson MAT '77, senior officer for government relations in the Office of College Advancement; and R. Scott Warren, Jean C. Tempel '65 Professor of Botany.

Color Category winners:

- 1st prize: John Sargent for "Fresh Cut Wood — Fresh Snow"
- 2nd prize: Jeff Sims for "Red Eft"
- 3rd prize: Mark Braunstein for "Beech Tree — October 2003."
- Honorable mention: Linda Boudreau, Louis Sorrentino and John Sargent

Black & White Category winners:

- 1st prize: Kaitlin Ciarmiello for "Quiet Sunshine"
- 2nd prize: Jeff Sims for "Bog Ice"
- 3rd prize: Susan Parish for "Snowy Trees"

Children's Category winners (Children must be 14 and younger to be eligible for this category.):

- 1st prize: James Thorstenson for "Sleeping Mosquito"
- 2nd prize: Johnny Rodriguez for "Reflections"
- 3rd prize: Chris Williams for "Shadow River"
- Honorable mention: Nicole Hyland, Johnny Rodriguez and Spencer Greenward

PLANT SALE

On October 9, Connecticut College Family Weekend, the 11th Annual Fall

Plant Sale took place on the Harkness Chapel Green. Azaleas, dogwood, mountain laurel, holly and much more all seemed to fly out the door, making for a profitable sale. In addition to the usual offerings, a live bonsai demonstration took place and a five-gallon White Stardust Magnolia was raffled. Once again, Sally Taylor donated a variety of bulbs. There was a "bargain" Volunteer Corner consisting of donations, and Pumpkin Corner did an unusually brisk business.

PUBLIC TOURS

This was the ninth year of Arboretum free public tours conducted almost exclusively by volunteer docents every Sunday afternoon from May through October. This year we hosted approximately 127 people from surrounding communities as well as guests from as far away as South Africa and Spain.

PRIVATE TOURS

The Arboretum volunteers and staff also conducted private tours for the Daughters of the American Revolution, the Duck River Garden Club, Master Gardeners, Volunteers from Camp Harkness and the Branford Senior

Center. During the summer, when the Arbo Project was not functioning, we hosted private children's tours for the Mystic Aquarium Day Camp, Girl Scouts, Brownies and the Wonders in Nature camp.

ARBO PROJECT

Under program director Gintas Krisciunas '04, the Arbo Project expanded significantly in the past year. Staffed by 37 volunteer Connecticut College students, Arbo Project provided environmental education tours of the Native Plant Collection for local schools and other children's organizations. Sponsored by the College Arboretum and the Office of Volunteers for Community Service, the students conducted a total of 46 tours during 2004, giving 28 tours during the spring semester and 18 in the fall, reaching a total of 722 children. Participating groups included Harbor School, Flanders Elementary, Stonington Institute, Benny Dover Jackson Middle School, Great Neck School, St. Mary's School, Girl Scout troops, Boy Scout troops, Clark Lane Middle School, Drop-In Learning Center and the Office of Youth Affairs. The two student coordinators were Reynaldo Lugo '06 and Jennifer Dillon '07.



ity for the College and the citizens of
community outreach

Opposite page: "Snowy Trees" by Susan Parish, third prize winner in the black & white category of the Arboretum photo contest. Below: Tom Lee's bonsai demonstration at the Plant Sale



CONNECTICUT COLLEGE ARBO PROJECT
VOLUNTEERS

Alexa Ball '06
Jessica Bethoney '07
H. Joseph Blumenthal '04
Ashley Coltin '04
Sarah Davis '06
Katharine Derr '06
Kurt DeVlyder '04
Jennifer Dillon '07
Alex Feinstein '07
Alexandra Filippelli '07
Matt Frackelton '04
Susana Hancock '08
Lauren Harris '05
Jennifer Huizenga '05
Adam Knoff '05
Hana Kolibiarova '08
Susan Laszewski '05
Reynaldo Lugo '06
Bethany Lucas '04
Henry Maxwell '08
Jennie McLaughlin '05
Catherine McLinn '06
Danielle Miley '04
Adanna Roberts '06
Jess Roden '06
Melissa Rodriguez '07
Danielle Sipplak '05
Ben Swanson
Elisabeth Walker '08
Mercy Warren '06
Anna Watson '05
Gabrielle Zandan '06
Adam Zeender '07
Laura Zerra '07
Jessica Zhao '07
Alexis Zukowski '06
Kathryn Zullo '06

OTHER OUTREACH ACTIVITIES

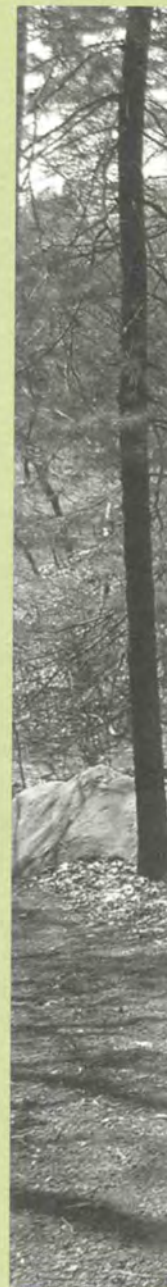
During the summer the Arboretum hosted productions of "The Tempest" by Shakespeare, "Molière Shorts," and "The Frogs" by Aristophanes. Approximately 2,500 people attended the performances presented by the Flock Theater.

In March, Kathy Dame spoke to the



Master Gardeners in Norwich and recruited nine program participants to volunteer with the Arboretum. On Earth Day in New London, Caroline Driscoll gave a tree tour of Bates Woods. In June, Kathy Dame did a public service address regarding Arboretum opportunities for Adelpia TV, which ran for six months. During the course of the year, Director Glenn Dreyer spoke about Connecticut's notable trees to the West Hartford Garden Club, the Norwalk Tree Alliance, the Mystic Rotary Club and the Hartford Audubon Club.

The Arboretum co-sponsored an Earth Day Program on April 22 with the Middlesex Land Trust, Inc. and the Berlin Land Trust, Inc. Presenters were Michael Nadeau, Plantscapes, Inc., who spoke on "Going Natural: Exploring the Links Between our Gardens and the Earth," and Paul Woodworth from the Connecticut River Coastal Conservation District, who spoke on "Protecting Your Backyard Stream." The program was held at the deKoven House Community Center in Middletown, Connecticut with approximately 90 people in attendance.



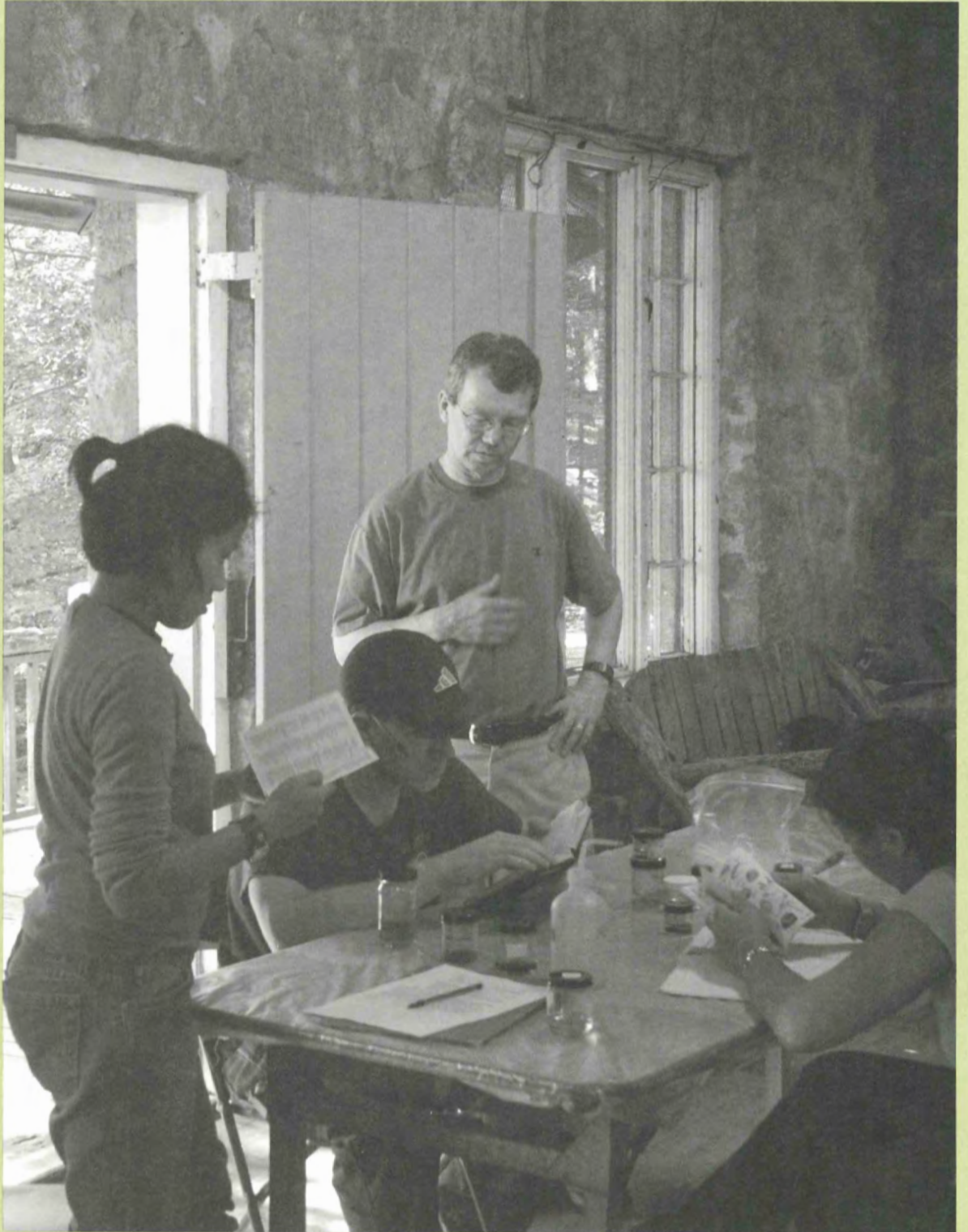
Clockwise from far left: a Flock Theater production in the Outdoor Theater, Arbo Project tour, volunteer Allen Gauthier at the Photo Contest Exhibit



In both teaching and research, the

teaching + research

Professor Askins helps ecology students identify pond organisms at Buck Lodge.



TEACHING AND RESEARCH

The College's biology curriculum was recently redesigned, and now begins with a sequence of four introductory courses in organisms, cells, ecology and genetics. Among the new offerings, the ecology course (Bio 207), taught this year by Professors Askins and Small, makes the most use of Arboretum facilities. Six ecology course labs took place in the Arboretum: pollination/bumblebee ecology (meadow south campus), pond macro-organisms (Arboretum Pond), pond micro-organisms (used samples from Pond), sampling forest communities along a topographic gradient (Bolleswood Natural Area), reading the landscape of southern New England (north of Gallows Lane), comparison of feeding behavior and efficiency in seed-eating birds (bird feeders at Arboretum garage).

Professor Christine Small's plant ecology class used the Arboretum for the following labs: dendrochronology (tree-coring and field measurements, analysis of growth rings), soil ecology and field analysis, and reading the landscape (orienteeing with compass, topo map and GPS). In addition, the class did a five-week project on the vegetation of Bolleswood Natural Area that included field sampling using traditional methods and GPS, and data analysis using both statistics and GIS. Unfortunately Professor Small found it necessary to resign from the College at the end of 2004 for personal reasons. She will be missed by her colleagues in the Arboretum, botany and biology departments.

Andrew McCullough '05 completed a survey of salamanders on numerous transects in the Arboretum under the guidance of Professor of Biology Robert Askins. He used Richard Goodwin's bulletin on the history of the Arboretum to determine the age of forests for different tracts in the Arboretum. When the age of abandonment from agriculture was uncertain for a particular tract, he took cores of trees to

analyze growth rings, and also examined archival aerial photographs. He found that redback salamander (*Plethodon cinereus*) density increased significantly with forest age, indicating that it may require decades for the salamander population to recover after an area is cleared of forest. The density of these salamanders was still increasing after forests had grown on a site for more than 40 years. This has important implications for forestry; short-rotation times for forest harvesting may not permit enough time for recovery of redback salamander populations.

Associate Professor of Physics, Astronomy and Geophysics Doug Thompson's Introduction to Physical Geology and his hydrology course used the Arboretum regularly for labs and lectures. He also worked with Adam Weinberg '04 on a honors project that examined the role of hydrologic processes in the differential erosion of two parallel channels formed in loosely consolidated sediments on a slope near the College's athletic facility parking lot.

Botany major Amy Angell took on the reorganization of the College greenhouse for an individual study project supervised by Arboretum Horticulturist Jeff Smith and Glenn Dreyer. The arrangement of all plants on benches was reorganized. Redundant and unused plants were composted, and most were reported. Identification of all plants was checked, and a new plant name labeling system was acquired and used to label the greenhouse plants. Amy's final product was a greenhouse operations manual that will help staff and students manage the facility for years to come.

MEADOW RESTORATION

The history of recent vegetation change in the Arboretum, and most of the rest of southern New England, can be summarized as the slow, steady increase in forest cover and the consequent reduction of

open habitats of all kinds — pasture, hay meadow, crop land, shrublands and even the rare natural "prairie" sites. It is not surprising that at the beginning of the 21st century we find many of our rare plants and animals are residents of these increasingly uncommon, open habitats.

In the interest of increasing habitat diversity and controlling undesirable invasive species for education, research and conservation purposes, the Arboretum began a project to restore approximately 12 acres of overgrown field, plantation and young forest to grass and wildflower meadow. The project area includes the fields to the north (Arboretum Field) and south of Benham Avenue, just west of the railroad tracks, which had been shrinking by peripheral encroachment of woody plants for many years. In addition to these seven acres, an adjacent five acre plot of pine plantation and young deciduous forest on both sides of the jogging trail uphill from the Benham fields was also included. All of these areas have been heavily invaded by exotic species, particularly bittersweet (*Celastrus orbiculatus*), Japanese honeysuckle (*Lonicera japonica*), shrub honeysuckle (*Lonicera morrowii*) and privet (*Ligustrum sp.*).

In consultation with College faculty and USDA Natural Resources Conservation Service (NRCS) Biologist Dr. Nels Barrett '78, a plan and grant application was developed to clear the entire project area of most woody plants. Cutting and herbicides will eliminate invasive species. Five acres of former forest will be seeded with native grasses and wildflowers. And the entire 12 acres will be managed as contiguous meadow habitat. The Arboretum received a Wildlife Habitat Incentive Program (WHIP) grant from NRCS that partially reimburses the costs of these procedures.

With the help of contractors, the heavy clearing work was finished by December 2004. The fields adjacent to Benham Avenue were opened back to the

western stone wall boundary. A few red cedar (*Juniperus virginiana*), dogwood (*Cornus florida*) and crabapple (*Malus* sp.) trees were left amid the existing little bluestem (*Schizachyrium scoparius*) grassland in the north field. Trees, shrubs and vines were cut from the new uphill section. Here useable logs were hauled away by the contractor and a very large chip pile was created. A few well-formed oak trees were left on the site, and a number of herbicide applications were made during the growing season to suppress the invasive exotic species. In 2005, final clearing, grading and herbiciding will prepare the uphill section for seeding in spring 2006.

PUBLICATIONS

During 2004 both the “general” Arboretum brochure and the self-guided tour brochure were updated, redesigned and reprinted.

STUDENT PAPERS

Weinberg, Adam S. 2004. “Geomorphological Response to Hydraulic Processes: A Study of Erosion in the Connecticut College Arboretum.” Honors study, Environmental Studies Program.

McCullough, Andrew. 2004. “Relationship between forest age and the abundance of the Redback Salamander, *Plethodon cinereus*.” Individual Study, Biology Department.

GIS in the ARBO

GIS, which stands for “Geographic Information System,” is a computer system capable of capturing, storing, analyzing, and displaying geographically referenced information (data identified according to location). It can be used to create maps and images utilized in development, planning, resource management and analysis of land use trends.

GIS was originally brought to the College in the early 1990s by Charles and Sarah P. Becker '27 Professor of Botany Peter Siver, who uses the technology in his freshwater ecology research and teaching. He also taught the first introductory GIS course. The GIS laboratory is in the Olin Science Center, and it recently received new hardware and software upgrades that allow the use of these cutting edge tools for research as well as land and plant collection management. Beverly Chomiak, Lecturer in Environmental Studies, now teaches the GIS course and provides much needed technical support. The College uses ESRI's ArcInfo 9.0 Educational Laboratory Package, which allows us to utilize both vector and raster data GIS.

In 1995, the Arboretum acquired a high resolution AutoCAD database of all College property, which includes two-foot topographic contour interval information. These data have been converted into shapefile and geodatabase format for use in ArcInfo. Connecticut SBC kindly donated two sets of high resolution, geographically corrected aerial photos of the areas that include the College — a black and white set photographed in 2001 and a color set photographed in 2004. Vast amounts of compatible geographic information are also available on the Web from various government agencies and private organizations.

Faculty in the Environmental Studies program are encouraged to introduce GIS components into their courses, particularly field-based courses. Currently, there are GIS components in ecology, physical geology, and plant ecology courses. GIS components are being planned or developed for three other courses for the '05-'06 academic year: ethnobotany, geomorphology and hydrology.

Over the past 50 years, a large amount of spatial data has been collected in the Arboretum, and we are starting to enter the data into the Arboretum GIS. Student projects in the GIS course are adding to the information. For example, using GPS to accurately map all the trails in the Arboretum collections and natural areas (see cover illustration). The evolving database will be available for use in all field-based courses, and will be particularly useful for Arboretum land management and education. Recently, Beverly Chomiak assisted in updating the Arboretum Self-Guided Tour brochure by helping to produce a new map. Curator Mary Villa audited Beverly's GIS course, and has begun using the GIS system to produce the Arboretum's first digital plant collection maps. Glenn Dreyer has used the GIS system to find the size of difficult-to-measure entities in the Arboretum, such as the area of the pond (4.3 acres) the length of chain link fence surrounding the Bolleswood and Native Plant Collections (about 7,800 feet), and the area of the fields along Benham Avenue to be restored to meadow vegetation (about 12 acres).



Boundaries of the Arboretum meadow restoration project.

Clockwise from top left: ecology class students collect organisms in the Arboretum Pond, area in Meadow Restoration site that is full of Oriental Bittersweet before clearing, same Meadow Restoration location after clearing, botany students key plants in Edgerton and Stengel Wildflower Garden, Amy Angell '05 explains her greenhouse project at an open house.



CURATION

Thanks to a bequest from A. Clayton and Lynnette Scribner, the Arboretum hired our first collection curator. Although periodic inventories of the Arboretum plant collections were done by various botany professors and their classes over the years, it was not until 1979 that a truly systematic process was established for tracking individual plant specimens. The Arboretum was one of the early adopters of the plant collection management software known as BG-Base, and complete accessioning of the Native Tree and Shrub, Caroline Black Garden and all trees in the campus landscape was accomplished during the 1980s. From then until this year all curatorial duties — inventoring, measuring, accessioning, mapping and labeling — were accomplished by a series of dedicated students and interns, with some help from staff members.

Curator Mary Villa's (see Staff and Associates section) duties encompass a broad array of information management activities associated with the plant collections and related publications and data. With this half-time professional position in place, we anticipate being able to keep more accurate and up to date records, and to increase the educational value of these unique college assets. This year Mary received training in the BG-Base, and will audit a GIS course to aid in the computerized mapping of the collections.

The Scribners were avid wild plant enthusiasts, and also donated a sizeable collection of botanical publications to the Arboretum. Director Glenn Dreyer worked with Mary to decide what items to retain. We eventually chose 276 books as well as many booklets, pamphlets and bulletins to add to the Arboretum library. Older and fragile books were protected with jackets. The library collection was organized using a classification system adapted from the Arnold Arboretum and the Polly Hill Arboretum Libraries.

NATIVE PLANT COLLECTION

Burgeoning white tailed deer populations throughout the region continue to damage managed and wild landscapes, and new plantings are not likely to succeed without protection. The 100 acres that comprise the Native Plant Collection and Bolleswood Natural Area are surrounded by a six-foot-high chain link fence, which is unfortunately not tall enough to exclude motivated deer. During 2004, the Arboretum received approval of a grant from the USDA Natural Resources Conservation Service to provide partial reimbursement for extending the existing chain link fence around the Bolleswood and Native Plant Collection to 10 feet high. Access paths were developed along the inside of the fence so Arboretum staff can patrol the perimeter to quickly mend breeches and prevent access under the fence in locations with uneven terrain. Until such time as the perimeter fence can adequately exclude deer, new plantings in this collection will be protected with small rings of livestock fencing.

As part of a campus-wide volunteer day on April 23, members of the Connecticut College community assisted Arboretum staff in planting a paper birch (*Betula papyrifera*) grove on both sides of the Laurel Walk. The 24 trees replaced the American Beech (*Fagus grandifolia*), which succumbed to an unidentified disease and were removed over the past two years. Soon after the planting, Arboretum volunteers mulched the trees and surrounded each with its own protective fence.

CAMPUS COLLECTION

Two new campus gardens were established this year. The Marjorie Holloway Memorial Garden, a gift of Susan Lynch '62, was created to honor a friend of Mrs. Lynch's mother. It is located to the west of the entrance of Harris Refectory, the centerpiece of the partially renovated "Plex" (North Complex) dormitories.

Early plantings revealed unusual clay soils and poor drainage, so the design was modified to feature wetland tolerant plants including Bald Cypress, Winterberry, and Viburnums. On better drained soils hydrangeas and two Dove trees line a dormitory wall. Two decorative stone benches within a naturalistic perennial planting invite passersby to linger and enjoy the space. The garden was designed by Arboretum Horticulturist Jeff Smith and installed by the Arboretum crew.

The second garden was designed by Campus Grounds Supervisor James Luce, and is located south of the tennis courts behind the College Center. Filled with a variety of garden perennials and Rhododendrons, it artfully incorporates a number of preexisting trees and shrubs. The planting honors the generosity of alumni from the Class of 1969.

NEW CAMPUS PLANTINGS

Acer pseudosieboldianum, Korean Maple
Acer saccharum 'Green Mountain,' Sugar Maple
Aesculus parviflora, Bottlebrush Buckeye
Betula utilis var. *jacquemontii*, White-barked Himalayan Birch
Clethra alnifolia 'Ruby Spice,' Sweetpepper Bush
Davidia involucrata, Dove Tree
Hydrangea macrophylla 'Nikko Blue,' Bigleaf Hydrangea
Hydrangea paniculata 'Tardiva,' Panicked Hydrangea
Ilex glabra 'Shamrock,' Inkberry
Ilex verticillata 'Sparkleberry,' Winterberry
Juniperus virginiana 'Grey Owl,' Eastern Redcedar
Prunus 'Hally Jolivette,' Flowering Cherry
Pseudotsuga menziesii, Douglas Fir
Quercus alba, White Oak, gift of the friends of Brett Fain
Rhododendron kaempferi 'Christina,' Azalea
Rhododendron 'Fantastika'

entire plant collections for reaching.

plant collections



Dove Tree
blooming in
Holloway Garden

Rhododendron 'Helikki'
Rhododendron 'Kalinka'
Rhododendron x 'Skookum,' Yaku
Rhododendron
Rosa Bonica 'Meidomonac,' Rose
Sequoiadendron giganteum 'Glaucum,'
Sierra Redwood, gift of Meskwaka
Tree Project
Taxodium distichum, Bald Cypress
Thuja occidentalis 'Nigra,' Wintergreen
Arborvitae
Viburnum carlesii, Koreanspice Viburnum
Viburnum 'Mohawk,' Viburnum
Viburnum wrightii, Wright Viburnum



COLLECTION STATISTICS

By the close of 2004, there were
2,671 living trees accessioned in
the Arboretum:

1,105 in the Native Plant
Collection

1,393 in the Campus Landscape
Collection

173 the Caroline Black Garden



Far left top: volunteers Nina Lentini of the Office of College Relations and Susan Laszewski '05 planting paper birch trees near the Arboretum entrance. Far left bottom: new paper birch trees protected from deer by individual rings of fence.

Clockwise from left: Plex (North Complex) dorms prior to planting of Holloway Garden, Holloway Memorial Garden's first year, Spring flooding in the Maple area, Class of 1969 Garden, Native Plant Collection, Scribner wild plant book collection in Arboretum Library.



staff + associate



Opposite page, upper right: Arboretum summer staff, front row, from left: Sewit Hail '05, Alexa Ball '06 and Amy Angell '05. Back row, from left: Jeff Smith, Chip McIlwaine and Craig Vine. Lower right: Arboretum and botany department staff and families at Craig's retirement party. Left column, from top: Arboretum curator Mary Villa; Craig Vine at his retirement party; Arboretum office student assistant Vasilena "Leny" Gocheva '04 at Commencement; Dick Goodwin at Craig's party.

This page: work study students rake in New London Hall gardens.

The Arboretum staff, associates and campus grounds staff during 2004 are listed on the inside back cover of this report. A number of significant events are noted here.

Assistant Horticulturist Craig Owen Vine retired at the end of 2004 after 36 years of faithful service to the Arboretum and College. Craig began working for the Arboretum in 1968 as assistant to "Big John" Stengel, the German horticulturist who taught Craig most of his professional skills. At that time Bill Niering had recently taken over as Arboretum Director from Dick Goodwin, and Connecticut College for Women was getting ready to admit men the following year. Through all the changes at the College and the rest of the world in the following decades, Craig reliably cared for the Arboretum and the Botany Department greenhouses. His dedication, not to mention his sense of humor and storytelling ability, will be greatly missed by his fellow staff members. During December, Craig's supervisor Jeff Smith, and his wife, Linda, hosted a small retirement party. Craig was presented with an encyclopedia of trees with hand-painted illustrations as a token of the Arboretum's appreciation. Craig's future plans include travel to Ireland and elsewhere and lots of singing, both solo and in groups. Information on Craig's successor will be found in the 2005 Arboretum Report.

In July, Mary Villa joined the staff as the Arboretum's first curator and information manager. She is a resident of Norwich, a graduate of the University of Connecticut's Landscape Architecture Program, and has extensive design and planning background as well as woody plant identification skills. Her duties include curating the Arboretum plant collections (inventory, accession, label, map), managing collection information using the BG-Base database and Arc-GIS mapping software, and managing other Arboretum information resources including publications, images and maps. This half-time

professional position was made possible in part thanks to a bequest from A. Clayton and Lynette Scribner and replaces a former internship position.

Professor Emeritus of Botany Betty Flanders Thompson died on February 14, 2004 at the age of 90. A plant morphologist, Dr. Thompson taught at Connecticut College from 1943 to 1976. She will be remembered in the Arboretum as the person who oversaw the Caroline Black Garden during the 1940s – 60s and as an editor of Arboretum bulletins. Dr. Thompson was a gifted writer, and beyond the campus she was best known for *The Changing Face of New England*, a popular geological and natural history book published in 1958, which was considered on par with Rachel Carson's nature writings.

STUDENT WORKERS

Every year a select group of Connecticut College students join with our staff to help with Arboretum maintenance. Primarily "work-study" students whose wages are partially supported via a federal grant program, these individuals are crucial to our daily operation, and their service is greatly appreciated.

Spring 2004

Amy Angell '05
Liam Cohen '05
Vasilena Gocheva '04
Susan Laszewski '05
David Lloyd '04
Rory Jose '05
Ross Morin '05
Eliot Stulen '04
Seth Stulen '07
Alex Tenenbaum '07

Summer 2004

Amy Angell '05
Alexa Ball '06
Sewit Haile '05

Fall 2004

Amy Angell '05
Halee Beucler '08
Alexandra Filippelli '07 (Greenhouse Volunteer)
Brady Ford '08
Slavina Georgieva '07
Susan Laszewski '05
Katri Linnamaa '06
Stephen Mery '08
Amanda Mohammed '07
Jenna Rosenwasser '08
Seth Stulen '07
Alex Tenenbaum '07



volunteers

Professor Juli shares his archeology collection with volunteers Ed Suter, Mari Suter and Jean Coyne.



The Arboretum has two fairly well defined volunteer categories, as well as a host of miscellaneous opportunities for people to assist in our operations. Hort Helpers join in the maintenance of plant collections alongside the staff and work-study students. Weeding, mulching, raking, planting are all on their list. Docents conduct free Sunday afternoon public tours of the three major plant collections from May through October. Volunteers also play a vital role in the plant sale, our biggest volunteer opportunity each year, as well as serving a variety of functions in support of our educational and outreach programs. Meetings are held each spring and fall to give volunteers the opportunity to express their ideas and dreams for the program. Each volunteer season is started off with a barbecue at Buck Lodge and closes with a potluck supper.

Another category of volunteers who do not get nearly enough recognition are those who present Arboretum programs and do not ask for compensation in return. Although these people are often, but not always, College faculty or staff members, Arboretum programs are certainly "above and beyond" their normal duties. Many lectures, workshops and field trips are provided by these generous individuals, and the Arboretum is very grateful for the donation of their time and energy.

As a way of thanking volunteers, and as a means of providing continuing education opportunities, the Arboretum offers them exclusive programs. In 2004 the volunteers were treated to a tour of the Berkshire Botanical Garden in Massachusetts. In addition, Professor of Anthropology Harold Juli led an archaeological walk followed up by a guided tour of his lab and archeology collection.

The Arboretum gratefully acknowledges the following volunteers who donated time to the Arboretum in 2004. Additional student names are mentioned in the Arbo Project section of the

Community Outreach page. A total of 889 volunteer hours were recorded this year.

VOLUNTEERS

David Arnold
 Platt Arnold '64
 Jean Baker
 Linda Barbero
 Kathy Bierwirth
 Nancy Burrows '97
 Ginny Butler
 Maryanne Casciano
 Beverly Chomiak
 Richard Conway
 Jean Coyne
 Pat Crandall
 William Cuddy
 Vita Dodson MA '83
 Wendy Dreyer
 Caroline Driscoll '84
 Victoria Engelhard
 Joan Flynn
 Denise Garofalo
 Allen Gauthier
 Kenneth Graham
 Kari Hammen
 Ashley Hanson '82
 Pamela Hebert
 Lisa Hill
 Mimi Hutson MAT '77
 Ken Izbicki
 Art Ives
 Harold Juli
 Peg LaPorte
 Jim LaWare
 Ralph Lewis
 Anne-Marie Lizarralde '91
 Manuel Lizarralde
 Jim Luce
 Ruth MacDonald
 Patricia Mandeville
 Janice McCue
 Sandra Morse
 Susan Munger
 Lois Nadel
 Becky Nortz
 Marlene Oko
 Nancy Patenaude

Lydia Pan
 Betty Pinson
 Barbara Pokorny
 Robert Sherman
 Judy Samokar
 Teresa Schacht
 Arlene Scott
 Christine Small
 Elizabeth Smith
 Louis Sorrentino
 Ed Suter
 Mari Suter
 Sally Taylor
 Barbara Tomasi
 R. Scott Warren
 Sheila Wertheimer '84
 Kathryn Williams
 Michael Wuenscher

CONNECTICUT COLLEGE VOLUNTEERS

Thanks to all faculty, staff, and students who helped to plant the birch trees in the Native Plant Collection on Camel Cleanup Day on April 23rd.

WILLIAMS SCHOOL VOLUNTEERS

Thank you to the Williams School volunteers who, under the direction of Carolyn Kraemer, worked with Arboretum staff in preparing the Caroline Black Garden for spring on Earth Day 2004.

William Bokoff
 Steven Chen
 James Connelly
 Annie Eddy
 Bekah Hall
 Jared Levine
 Gabriella Neusner
 Clara Potter
 Rebecca Powell
 Diana Ramirez
 Catherine Schrage
 Merrick Smith
 Perry Smizer
 Sea Sullivan
 Joseph Weiss

More volunteers, clockwise from top: Arbo Project tour guides Betsey Walker '08 and Susana Hancock '08, Marlene O'ko and Bob Sherman at the Plant Sale, May 2004 volunteer picnic at Buck Lodge, volunteers at lunch prior to a tour of the Berkshire Botanical Garden



members

The Connecticut College Arboretum gratefully acknowledges the financial contributions made by the following individuals and organizations in 2004. We strive to accurately maintain our records and appreciate receiving corrections.

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DeJuliis, Brenda
DiMaggio, Gellestrina T.
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Hill, Lisa
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Hine, Thomas L. Mr. & Mrs.
Hoffmann, Frances L.
Holcombe, Anne
Howell-Heller, Penelope

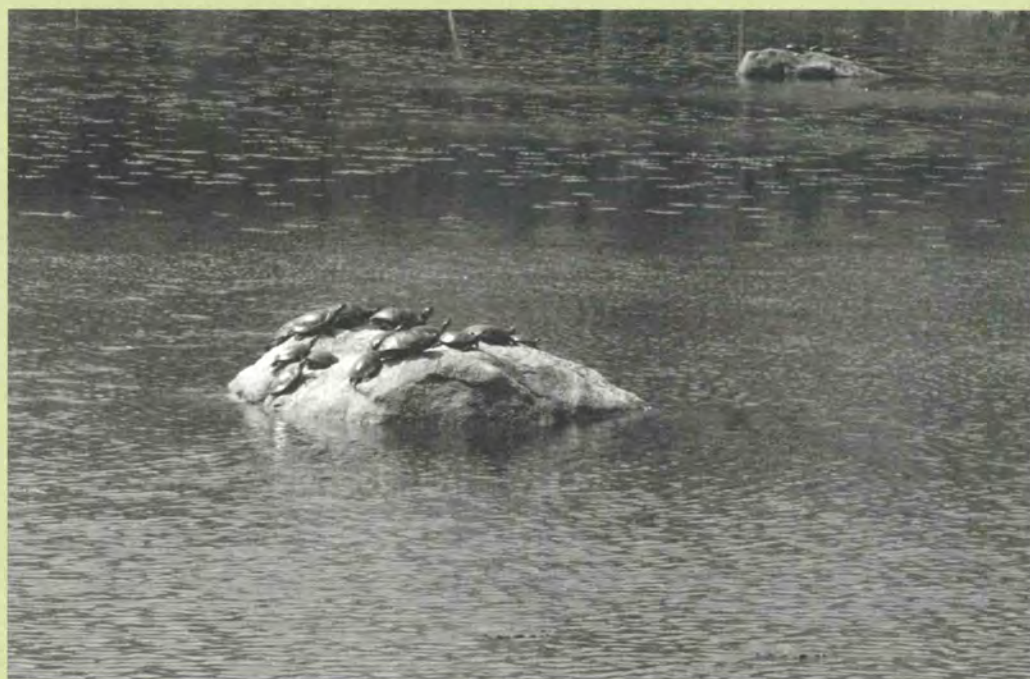
Isbister, Anne H.
Jagger, George
Johnson, Michael D.
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Korecki, Jessica M.
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Krasney, Ethel L.
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Krusen, Gordon
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