

VOLUME LXXXV • NO. 6
MARCH 26 - APRIL 9, 2004

BRIEFS

Dinner and Art Exhibit

Station Club will be sponsoring the 4th Annual Artists Among Us Art Exhibit, which has been planned for April 28 and 29, 2004. For the first time, the art exhibit will be held over a period of time two days and we will be celebrating the event with a Station-wide International Spring Fling Dinner.

As you may recall, we had a special Spring Fling a couple of years ago where staff brought a dish to pass (which represented their heritage and culture) and we shared in a sit-down meal with various staff providing entertainment. We would like to host the same type of event with this year's art show.

About the Art Exhibit

We are looking for professional and amateur artists and craft people who have that spark of creativity hidden some where inside each of us! We are an equal opportunity exhibit.

Current and former staff members are eligible to participate, as well as Station retirees and staff member's families.

If interested in displaying your work, please send an e-mail confirmation to Amy Andersen at ada10@cornell.edu, or call 787-2331. Further details will be sent to you regarding the Art Exhibit guidelines.

We look forward to another successful year and in sharing the talents of our Station family.

(Continued on page 2)

Station Scientists Participate in Workshop on Applied Technology in Agriculture

“Can we put an apple in a bag before it’s an apple and have the package provide water and nutrients and protection from insect pests and diseases?” Sound farfetched? – well, perhaps – and even though this represents an extreme example, it’s not too far off the mark of some of what was discussed during a workshop held at the Ramada Inn



Bob Seem addresses the group at the beginning the workshop.

on Monday and Tuesday, March 16 and 17.

The workshop, entitled ‘Strengthening Links To The Food Chain: A Collaboration On Applied Technology For Food and Agriculture,’ was designed to bring together individuals from very disparate disciplines to learn about, and discuss challenges facing the agriculture and food industries. “The immediate goal of this initial effort was to create a common ground from which to work; the ultimate goal is to solve problems.” Said Bob Seem.

The workshop was sponsored by Ontario County, the Experiment Station, The Cornell Agriculture and Technology Park, and The Infotonics Technology Center. Infotonics, based in nearby Canandaigua, is a collaborative, industry-led Center of Excellence for applied R&D and commercialization of photonics and microsystems.

In addition to scientists and representatives from the above groups, speakers included faculty from Cornell’s main campus, and representatives from Bird’s Eye Foods, Constellation Wine USA, Pactiv (food packaging), Red Jacket Orchards and CY Farms.

Audience/Participants represented a diverse group in their own right – some also from the Station, Ithaca and Infotonics, but others from places like RIT, Xerox, Clarkson University, the University of Rochester and Suny Cobleskill, just to name a few.

Geof Astles, Ontario County Executive, told the group in his welcome to the workshop, that agriculture and economic development can go hand-in-hand in both creating both agricultural opportunity and jobs. “And we want to be part of that adventure,” he said.

Station Interim Director Bob Seem, and Infotonics Technology Center’s CEO Duncan Moore, shared the podium for the opening remarks. Seem welcomed everyone on behalf of the Experiment Station and the Cornell Agriculture and Food Technology Park saying that “this is first-of-a-kind workshop to build a bridge between the biological sciences, in this case agriculture and food, and the physical sciences that deal with emerging technologies in chemistry, physics, and engineering, especially the micro- and nano-sciences.”

(Continued on page 2)



SAVE THE DATE

The next Station
Blood Drive is
April 5, 2004.
9 AM - 2 PM

Jordan Hall Lounge

(BRIEFS, continued)

As for our Spring Fling, all that is required is an R.S.V.P. (to ada10@cornell.edu), a dish-to-pass, and your own table setting. If you wish to provide entertainment, please specify. We are looking for magicians, musicians, comedians, dancers, poets, jugglers, just to name a few. The Spring Fling Dinner will be held Thursday, April 29, beginning at 5:30 PM in the Jordan Hall Auditorium.

Station Club and The Art Exhibit Committee (Holly King, Michele Mannella, David Kain, Gemma Osborne and Amy Andersen)

Bag Lunch

The third Bag Lunch with the Interim Director will be on Wednesday, April 7, in the Jordan Hall Lounge, from noon to 1 PM. Of course this is not mandatory, but you are most welcome to come. Drop by for a few minutes or stay for the hour. If you cannot make it but have a question, please send it to Kathy DeRosa (kad2). Hot water, tea bags, and coffee will be provided.

Faculty, and students can join Bob with a bag lunch to discuss...anything. Answers will be attempted to the best of his ability, but not guaranteed. Discussion is open to any topic, although it is expected most people will be interested in current events at the Station.

(Continued on page 3)

Congratulations!



On March 12, 2004, Dan Peck (Ent.) and CiCi Coen de Peck (IPM) became the proud parents of a little girl, Rena Cameo. She weighed 8 lbs. 11 oz. and is 20.5 inches long. Rena has two brothers, Satchel and Milo.

Congratulations also to first-time parents, Bruce (Ent.) and Joy Wadhams on the birth of their son, Hunter Thomas Wadhams who was born on March 11, 2004 and weighed 5 lbs, 4 oz.



(WORKSHOP, continued)

Seem said that the Experiment Station has its own faculty and staff entrepreneurs who develop new products, processes and tools for the agriculture and food industries. "But of equal importance," he added, "is the potential to partner with others who have the knowledge and the know-how to speed the solutions to those problems for which we seek answers."



Marc Smith speaks during one of the breakout sessions.

Commenting on the diverse nature of both the speakers and audience, Moore remarked that, "The best ideas come from people who don't know one another." He also pointed out that that the group was not meeting to solve any problems. "We're here to identify issues," he said. "We'll solve them later"

Marc Smith, Assistant Director at Station echoed Moore's thoughts saying, "What we want to do is build relationships between smart people"

A recurrent theme, throughout the workshop was 'From the seed – or farm— to the fork', and just how a multidisciplinary approach or effort might best ensure a fresh, safe and nutritious food supply by monitoring food products over the course of their long journey to the consumer's table. Craig Yunker of CY Farms, Inc. said "I know what the problem is – I just don't know the solution." He went on to point out that we do a very crude job of monitoring the process of growing food. "This is an area we need to develop to the level of other industries."

Brian Nicholson, of Red Jacket Orchards in Geneva, who characterized his business as 'a jack-of-all-trades operation' spoke about the issue of monitoring and trace-ability saying, "We do everything right in our system but once you hand it away to the wholesaler or retailer, how do we know they're doing it right?"

Subsequent speakers also addressed the issue of product monitoring as it might be applied to their respective fields of expertise. Alan Bell, Chair of the Department of Animal Science at Cornell, said that "There is no excuse in this country for not developing a system for animal product tracing like the one that exists in Europe." Bill Belias, of Pactiv touched upon the role that packaging might play for not only providing information about a product, but protecting it as well, and Anil Shrinkhade of Constellation Wines, talked about the need for more efficient measuring methods in the area of winemaking. Mary Ellen Burris, from Wegmans discussed some of these ideas, along with some issues related to nutrition, from the perspective of a large retail outlet.

Other topics of discussion included: management of waste and the use and recycling of byproducts, automation and mechanization, and the competition of cheap overseas labor. Tom Facer, of Bird's Eye Foods was among those who addressed some of these. "What do we do," he asked, "with the pieces left over from the production of one-inch green beans?"

Guest Speaker Rodney Brown, Deputy Undersecretary for Research, Education and Economics with the USDA, reminded the audience that this year was the 50th anniversary of the discovery of DNA, and that biologists, chemists, physicists and others worked together to achieve this important milestone. "See what happened when all these different people were brought together," he said, "biology was never the same."

(Continued on page 5)

(BRIEFS, continued)

Ontario County Agriculture Leaders Honored

Three outstanding agriculture industry leaders were honored before a crowd of over 140 at The Ontario County Agriculture Appreciation Banquet held March 19 at the Ramada Inn in Geneva.

The first annual Rodney Lightfoote Agricultural Innovation Award was presented to George Mueller, founder of Willow Bend Farm in the town of Manchester and partner in the recently established Spring Hope Dairy. Mr. Mueller was honored for his long history of leadership and accomplishment in the industry and the community. Through sound management and innovative farming practices Willow Bend Farm grew from humble beginnings in 1957 into today's successful modern operation. Along the way, George and Mary Lue Mueller influenced and created opportunities for many young people in the industry. Some of these young talents now have their own successful farming operations. He is an active policy leader and advocate for the agricultural industry, serving with several industry associations, speaking frequently to groups across the country, and promoting the industry through farm tours.

The Lightfoote award serves as a perpetual memorial in honor of Mr. Rodney Lightfoote (1920-2002), former Agriculture Program Leader and County Coordinator of Cornell Cooperative Extension of Ontario County, one of the original founders of Ontario County Farm Bureau, farmer, and friend of agriculture. Family members, Mr. Fred Lightfoote and Mr. Robert Lightfoote, presented the award to Mr. Mueller.

Ms. Karen Amberg was honored with the Jackie Kunes Award. The Ontario County Farm Bureau established this award as a tribute to Jackie Kunes (1937-1977), a distinguished and devoted leader in the industry, her family business and the community. Jackie Kunes' son, Mr. Casey Kunes, presented the award to Ms. Amberg who is Secretary and Treasurer of Amberg's Nursery in the town of Seneca. She was recognized for her distinguished service to Ontario County Farm Bureau and her dedication to the industry. Ms. Amberg has held several leadership and committee positions in Farm Bureau. She is a true partner in her family busi-

(Continued on page 5)

Food Scientist Wins Award

John Roberts, FST, received the International Young Food Engineer Award at the Ninth International Conference on Engineering and Food (ICEF) held in Montpellier, FRANCE, March 7-11. He was presented with a certificate and cash award of \$1,000 at the conference's Gala Dinner by Prof. Matsuno Ryuichi of Kyoto University, Japan. This honor is accorded to the best paper submitted by a food engineer who is less than 40 years old. "This award is given just every three years, so I was very honored to have received it in recognition of my work on heat and mass transfer in hygroscopic materials," John said.

Robert's approach to investigating mass transfer during a simultaneous heat and mass transfer process, such as drying, is novel in that transient heat transfer is eliminated. Using controlled microwave energy and convective hot air, isothermal conditions are established and maintained at any drying temperature below 100 Celsius. Therefore, accurate measurements of temperature-dependent moisture transfer properties are obtained. "From accurate measurements of moisture diffusivity," Robert said "we have been able to model moisture transfer in hygroscopic non-porous material, such as potato, using Fick's Second Law Diffusion Equation. For hygroscopic porous material, such as bread and apple, evaporation was shown to be the mechanism for isothermal drying, and evaporation/re-condensation was the mechanism for convective drying when temperature gradients exist. An irreversible first-order reaction equation to model evaporation was shown to impressively predict moisture loss in hygroscopic porous materials during isothermal drying." Roberts is currently working on quantifying the re-condensation during convective drying.

"I'm delighted that John has received the International Young Food Engineer Award," said Cy Lee, Chair of FST. "He is a young, very energetic, and imaginative scientist, and above all, a very pleasant person to be around. We look forward to his continued success and future scientific contributions to the field."



John Roberts

Be A Hero, WALKAMERICA

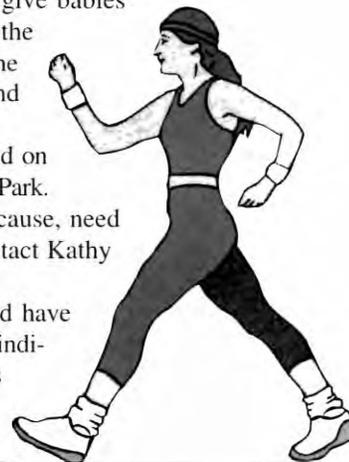
When you join March of Dimes WalkAmerica, you give babies born prematurely a fighting chance. Unready to meet the world, many of these babies struggle just to survive. The funds you raise (or give) support lifesaving research and innovative programs.

This year the March of Dimes WalkAmerica will be held on Sunday, May 2, beginning at 1:00 PM, at Seneca Lake State Park.

If you're interested in participating, donating to this cause, need more information or need a registration card, please contact Kathy DeRosa at x2236 or kad2.

Those of you who have participated in the past should have received registration material at home. Please be sure to indicate you are on the Geneva Experiment Station team. Thanks for your continuing support.

K. DeRosa



SBIR/STTR Workshop Held



Gary Harman was one of the speakers at the SBIR/STTR workshop held on the campus last week.

The Small Business Innovation Research and the Small Business Technology Transfer Workshop (SBIR/STTR) sponsored by the Cornell Center for Advanced Technology (CAT) in Biotechnology and the New York Office of Science, Technology and Academic Research (NYSTAR) was held on Thursday, March 18, 2004 in the Food Science building. Maureen Sonneborn, an SBIR specialist with the Central New York Technology Development Organization and the Onondaga Small Business Development Center in Syracuse, provided an overview of the Small Business Association's grant program. These grants are highly competitive federal programs that encourage small businesses to explore their technological potential and provide the incentive to profit from their commercialization.

According to Sonneborn, academic researchers can benefit from the program by partnering with small businesses (those with fewer than 500 employees), to provide technological research and development. The SBIR/STTR funds exploitation of scientific breakthroughs, innovation through emerging technologies, novel applications of existing technologies, and major improvements to existing technologies. Federal agencies, such as the Department of Agriculture and the National Science Foundation participate in the SBIR program by providing money to promote research. Research in plant production and protection and biotechnology can be sponsored for as much as \$300,000 through SBIR and \$750,000 through STTR. Each program consists of two phases of funding along with a third phase of implementation.

Donna Chaudhuri, of CAT, will assist Cornell researchers and employees with grant writing for these programs. Ms. Chaudhuri has worked with Phytobials, LLC whose co-founder, Gary Harman, professor of Horticultural Sciences here at the Station, expressed his appreciation for the guidance and assistance that Donna provided while he was preparing his grant application.

(Continued)

(SBIR WORKSHOP, continued)

Donna says that she is always on the lookout for compatible working relationships between companies and researchers. Ms. Chaudhuri pointed out that it is not necessary to be an existing business to apply for the grant, but if you are selected to receive money, you must form a company. Companies can apply for more than one program at a time.

Another presenter was Richard Montagna, President and CEO of Innovative Biotechnologies International, Inc. who is the Principal Investigator for grant projects totaling over \$1 million being researched at Cornell including some here at the Station.

Contact information:

Richard A. Montagna, Ph.D.
716-773-4232 (Ext. 11)
rmontagna@ibi.cc

The principal theme of the workshop was to stimulate and encourage broader SBIR and STTR participation to increase the number of awards, to outreach to small businesses and provide assistance in applying for awards.

For additional information contact:

Donna K. Chaudhuri
NYS Center for Advanced Technology in Biotechnology
Cornell University
130 Biotechnology Building
Ithaca, NY 14853
(607) 254-4877
dtk3@cornell.edu
<http://www.biotech.cornell.edu>

C. Leach



**A Little
Local
History,
Please**

Charles Bauder, the director of the Geneva Historical Society will be giving a talk on "The History of Geneva", Monday, April 12 at 10:30 AM in the Plant Pathology seminar room. This event is sponsored by SAGES. We hope you can join us.

(WORKSHOP, continued)

Norm Scott, from Cornell University's Department of Biological and Environmental Engineering, in his 'Charge to Assembled Scientists,' spoke about nanotechnology, the use of bio-energy and sustainability.

The group was then divided into smaller breakout sessions to further discuss, and then draft preliminary reports, covering the topical areas of food and agricultural production, processing, packaging, distribution and environmental control.

Some of the terminology permeating these initial drafts (selective electrodes, real-time monitoring, micro-UPC codes, robotic-assisted sorting and molecular tagging) reflected not only the diverse backgrounds of the participants, but the multidisciplinary approach taken within the groups in mapping a direction for the future of agricultural research.

Duncan Moore said that he was very pleased with the interaction of the scientists, engineers and others who have different backgrounds and speak with different vocabularies. "This is exactly the environment in which exciting breakthroughs are made," he said. "Now we need to build on this momentum and take a look at some specific projects."

Marc Smith agreed with Moore that we need to take advantage of the momentum adding that collaborative grant proposals based on breakout-session conclusions should be explored. "Experiment Station Scientists and personnel at Infotonics should try to learn more about one another's respective areas of

expertise," he said." Marc also later pointed out that the Station already has a history of this kind of cooperation in the development of the gene gun – a project that involved a biologist, John Sanford, with experts from the Nanofabrication facility in Ithaca.

Jan Nyrop, Entomology, believes that the opportunities for incorporating infotonics technology are great, though at this point, largely unexplored. "From the perspective of crop protection, these technologies offer the opportunity to incorporate sensing and measurement along with intelligent software to produce instruments that could greatly advance integrated pest management and precision agriculture," he said. "The small size and mass production of these instruments might finally allow for the widespread deployment of knowledge-based decision guides in agriculture."

In summarizing the event, Bob Seem said, "What we experienced here was not a chance encounter but a deliberate attempt to bring together two disparate groups to discuss challenges facing the agriculture and food industries." He went on to say the next steps are critical, beginning with sharing the success of this workshop with those who could not attend. "The Experiment Station and Infotonics must also continue to educate one another as to what each of us do and try to maintain the level of enthusiasm shared by both groups of scientists at this meeting— It was exciting and it was unique."

J. Ogrodnick

(BRIEFS, continued)

ness and an active community leader.

The Paul Zimmerman Outstanding Young Farmer Award was presented to Mr. Jonathon Taylor. Mr. Taylor owns and manages a growing dairy farm in Ontario County where his Cornell University degree is put to work. He is a National Distinguished Member, state director, and past county president of the Holstein Association. As Chairman for the Policy Development Committee, Mr. Taylor is an active leader for Ontario County Farm Bureau and a dedicated advocate for the industry.

This award is named in memory of Paul Zimmerman (1929-1977) who was an outstanding young leader and innovative farmer in Ontario County. He served as president of Ontario County Farm Bureau in 1975-1976. Jamie Zimmerman, Paul's son, made the presentation.

Nathan L. Rudgers, State Agriculture Commissioner, addressed the gathering of producers, researchers, educators, county officials, and town legislators. Commissioner Rudgers praised the county for its commitment to agriculture. "Successful agriculture is best defined by the quality and longevity of the people who work the land," said Rudgers. "The fact that nearly 150 people, including your town and county officials, would come out to this celebration on a cold winter evening says a lot about the success and importance of agriculture in Ontario County."

Cornell Cooperative Extension of Ontario County, Ontario County Farm Bureau and Ontario County Agriculture Enhancement Board sponsor the annual event.

"Cornell Cooperative Extension provides equal program and employment opportunities."

PLEASE JOIN US FOR THE SEVENTH ANNUAL

Gala Dinner & Wine Auction

Friday, May 21, 2004

Rochester Riverside

Convention Center Galleria

For more information contact Nancy Long at x2288 or NPL1@cornell.edu

It's Spring Cleaning Time.

This is your chance, "Empty Nesters"! The kids are out of college, and on their own. Doing very well I might add.

When Junior was 16 years old he wanted a body like Arnold's so you gave him a set of weights for his birthday. Now he's an accountant, living in an apartment in Manhattan, belongs to a gym and has a personal trainer.

After studying fine art for two years, Betty Jean switched majors. She is now practicing law in Washington DC and lives in a small townhouse in Virginia and doesn't have room for the easel, drawing board and potters wheel.

So what do you do with all this stuff? How about selling it in Station News. Take a few minutes to write a classified ad and email it to Donna Boyce at dmb62. Your ad should contain a brief description of the item, the price and your Station phone number and/or email address. You'll make some extra cash and Edna's 16 year old son who wants to be governor someday will need the weights.



CALENDAR of EVENTS
MARCH 26 - APRIL 9, 2004

MEETINGS

Chairs

Date: Wednesday, March 31, 2004
Time: 10:30 AM
Place: Director's Office

Chairs & Unit Leaders

Date: Thursday, April 8, 2004
Time: 1:30 PM
Place: G-19, Hedrick Hall

SEMINARS

Plant Path

Date: Tuesday, March 30, 2004
Time: 3:30 PM, Coffee at 3 PM
Place: Rm. A113 Barton Lab
Speaker: Chris Wallace, The Pennsylvania State University, PA
Subject: Impacts of Host Shifting and Mode of Transmissions on PPV Micro-evolution

Date: Tuesday, April 6, 2004
Time: 3:30 PM, Coffee at 3 PM
Place: Rm. A113 Barton Lab
Speaker: Philip Forsline, ARS-USDA, Geneva
Subject: 20 Years of Apple, Grape, and Cherry Germplasm Management: Geneva, NY to the Forest of Central Asia, China, Russia, and Turkey

Food Science & Technology

Date: Wednesday, March 31, 2004
Time: 4 PM
Place: FS&T Conf. Rm., 2nd Floor
Speaker: Dr. Peter Cousins, Geneva
Subject: Plant Breeding and Genetics at the PGRU

Hort Science

Date: Monday, March 29, 2004
Time: 11 AM
Place: Jordan Hall Staff Room
Speaker: Mark Sorrells, Ithaca
Subject: Comparative DNA Sequence Analysis of Mapped Wheat ESTs Reveals Complexity of Genome Relationships Between Rice and Wheat

(Continued)

SEMINARS CONTINUED

Hort Science Continued

Date: Monday, April 5, 2004
Time: 11 AM
Place: Jordan Hall Staff Room
Speaker: Jay Scott, University of Florida, Golf Coast Research and Education Center
Subject: Breeding Tomatoes for Everything at the University of Florida

ENTOMOLGY

Date: Thursday, April 1, 2004
Time: 10:30
Place: Rm. 310, Barton Lab
Speakers: Drs. Linda Rayor & Cole Gilbert, Ithaca
Subject: Living Among Cannibals: Social Dynamics In An Atypical Social Huntsman Spider

Date: Thursday, April 8, 2004
Time: 10:30
Place: Rm. 310, Barton Lab
Speaker: Drs. Alan Lakso and Jan Nyrop, Geneva
Subject: Plant-Based Integration of the Effects of Multiple Pest Injury in Apple

SPECIAL CLASS

English as a Second Language

Classes will be held on Tuesdays and Thursdays, 6:30 - 9:00 PM in the Sawdust Cafe, and will continue until May, 2004.
Instructor: Sharon Nedrow
This is a FREE program available to all members of the Geneva community and is presented by the Finger Lakes Community College.

LTC

Date: Wednesday, April 7, 2004
Time: 8-11 AM
Place: LTC
Subject: Open Lab
Facilitator: Jane Irwin

FITNESS

Aerobics

Date: Mon. & Fri.
Time: 12:10 - 1 PM
Place: Sawdust Cafe

Taekardio

Date: Mon. & Wed.
Time: 12:10 - 1 PM
Place: Jordan Hall Auditorium

CLASSIFIEDS

FOR RENT: Quiet one bedroom, single person apartment available immediately. Located 3 miles from the Station. \$450/month plus electric. For more information, contact Sarah at sew36@cornell.edu or 315-521-3975

FOR RENT: One bedroom, furnished apartment. Walking distance to Station. \$450/month includes heat, electric, trash removal, and cable. Call 789-3392, or e-mail kad2@cornell.edu

POSITIONS AVAILABLE

**CORNELL COOPERATIVE EXTENSION
FARM BUSINESS MANAGEMENT
SPECIALIST**

<http://www.cce.cornell.edu/careerops/FBM.htm>

AGRICULTURAL ISSUE LEADER

<http://www.cce.cornell.edu/careerops/pa331.htm>
Feel free to share this information with anyone who might be interested. If you have any questions, please contact Connie Kan at 607-255-0789 or ck236@cornell.edu

**BIOLOGICAL SCIENCE TECHNICIAN
GS-404-02 U.S. DEPT. OF AGRICULTURE
AGRICULTURAL RESEARCH SERVICE**

The Plant Genetic Resources Unit in Geneva, NY is seeking to fill a temporary full-time (40 hrs./wk for 3 months) Biological Science Aide (Vegetable crops) position to provide bioinformatics support. Duties include scripting and programming for biological data analysis in a linux environment. Previous biology experience is not necessary; non-science majors are welcome, only requires coding experience/coursework and an interest to learn. Hours are 8 am and 5 pm Mon-Fri. Possibility to continue part-time through the school year. The salary range for this position is \$9.16 per hour. Candidates must have U.S. citizenship. To obtain additional information and application forms contact Angela Baldo at amb82@cornell.edu.

ARS IS AN EQUAL OPPORTUNITY EMPLOYER
WOMEN AND MINORITIES ARE
ENCOURAGED TO APPLY

**Station
Arboretum
Meeting**



The Station Arboretum Committee will meet with members of the Grounds Staff and with all interested Station employees to discuss plans for Arbor Day 2004, which takes place in late April. We will meet in the basement conference room in Hedrick Hall (G19) at noon, Tuesday March 30. Anyone with ideas on an Arbor Day ceremony is welcome to give us input, either at the meeting or by return email. I hope to see you next Tuesday.

Martin Goffinet, Chairman, Geneva
Arboretum Association
Ext. 2392, mcg2@cornell.edu