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DR. STEVEN CLEMANTS

July 22, 1954–November 2, 2008



Dr. Steven Clemants, a senior scientist at Brooklyn Botanic Garden, died in Brooklyn on Sunday, November 2, 2008.

A passion for plants came early for Clemants, who went on to become a leading botanist of his day. Born in Minnesota and raised in the towns of Edina and Minnetonka, Minnesota, and Chicago and Normal, Illinois, Steve developed a love of nature as a young boy. He had an affection for the flowers that grew in his family's garden, particularly tulips, but he especially admired wildflowers. Throughout his childhood, his mother, Doris, nurtured his interest, teaching him about local wildflowers and where they grew.

After completing high school in Minnetonka, Steve attended the University of Minnesota. He initially majored in computer science, but he missed the out-of-doors and his nature studies. This led him to change his undergraduate major to botany, his childhood love. His dual interests of botany and computer science served Steve very well later in his career; he was instrumental in developing a number of important databases for plant location records. Steve was graduated from the University of Minnesota in 1976 but remained there to pursue a master's degree in botany with a minor in horticulture, which was obtained in 1979.

Steve's botanical pursuits took him to the City University of New York (CUNY) where, working at The New York Botanical Garden with curator James Luteyn, he pursued a doctorate in botany. His graduate work focused on New World members of the blueberry family in the genus *Bejaria*, and this allowed him to conduct field trips in the tropics. He obtained his doctorate in botany from CUNY in 1984. It was during his graduate studies that his friend and fellow graduate student Brian Boom introduced Steve to Grace Markman, then a volunteer tour guide at the New York Botanical Garden. They later married in 1984.

After a brief teaching appointment at Bard College in Annandale-on-Hudson, Steve accepted a position as a botanist with the New York Natural Heritage Program, and he and Grace moved to the Albany area in 1985. Utilizing his skills in botany and computer science, Steve developed a database of rare plant occurrences in New York State. He also conducted extensive fieldwork in search of rare plants. During this time his interests in plant research expanded beyond the blueberry family to other families, including the rush, amaranth and goosefoot families.

In 1989, Steve accepted a position as a research taxonomist at Brooklyn Botanic Garden, where he later served as director of Science; vice president of Science, Publications, and Library; and senior research scientist. As Steve continued his botanical research, he developed additional interests in urban ecology and conservation. Shortly after arriving at the Garden, he founded the New York Metropolitan Flora program, which has become a model for studying plants in urban environments. Data from this pioneering project are now yielding important information on how human-caused phenomena, such as

global warming and development, are affecting the region's plants.

During his time at BBG, Steve published dozens of research papers. In 2006 he coauthored *Wildflowers in the Field and Forest: A Field Guide to the Northeastern United States* (Oxford University Press) with New York Botanic Garden researcher and photographer Carol Gracie. This book has become one of most popular field guides for the Northeast. It is also used as a college textbook for field botany, enabling people to learn more about the wild plants Steve had admired since he was a boy. Steve also furthered botanical education by serving on the faculty at Rutgers University and the City University of New York.

Steve recognized the need to protect the plants he loved so much and served on numerous committees and boards of organizations active in local, national, and international conservation efforts. During his career he was president of the Nature Network; chair of the Invasive Plant Council of New York State; president of the board of Botanic Gardens Conservation International's U.S. office; historian of the Torrey Botanical Society; chairman of the Long Island Botanical Society; and member of the Woodland Advisory Board of Prospect Park. He was also codirector of the Center for Urban Restoration Ecology (CURE), a collaboration between Brooklyn Botanic Garden and Rutgers University, the first scientific initiative in the U.S. established to study and restore human-dominated lands. He served as editor-in-chief of *Urban Habitats*, a peer-reviewed scientific e-journal on the biology of urban areas around the world, which was launched in 2003. In 2008, Dr. Clemants was instrumental in developing an agreement between the NYC Parks Department and Brooklyn Botanic

Garden committing the resources of the two institutions to the conservation of plants native to New York City, the first comprehensive conservation initiative targeting the City's native plants. "Steve was a colleague and the leader of our mutual efforts to discover, preserve, and publicize local botanical biodiversity," said Adrian Benepe, NYC Parks Commissioner. "He will be deeply missed by all who care about natural New York and the great beauty of its parks and wild spaces."

Steve was a remarkably kind, giving, and patient man, who always found time to assist students and other members of the public who came to the Garden with questions and requests. Shortly before Steve's passing, his extraordinary kindness was displayed when he learned that a Ukrainian colleague and his wife—who had never before been to New York—would briefly be in town during a flight layover. Steve picked them up, took them on a whirlwind tour of Brooklyn, and returned them to the airport in time for their flight. Gerry Moore, director of Science at Brooklyn Botanic Garden, said, "Steve's extensive knowledge of botany and willingness to help all who came to him with questions was a combination that served the Garden and the public well. His example inspires us to continue our research in the plant sciences, while always finding time to share our knowledge and our curiosity with individuals, from kindergartners to international researchers."

Meg Wilkinson, Invasive Species Database Program Coordinator, New York Natural Heritage Program: "The first time I met Steve Clemants I was a new and nervous Program Coordinator for the Invasive Plant Council. At the time Steve was Vice Chair for the Invasive Plant Council. He made a special effort to meet with me early on in my tenure to see how things were going; it made a significant

impression on me. The last time I saw Steve in person was at the IPC "Pass-the-Baton" event last Spring where Steve served graciously and ably as the moderator.

The next time I expected to see Steve was at the next "Legislative Education Day" to be held by Friends of the Environment in support of the Environmental Protection Fund. He would have been wearing at least one of his many "hats": Vice President at Brooklyn Botanic Garden or member of the Long Island Invasive Species Management Area or founder of Nature New York. I will still expect to see him there. It will take a long time to adjust to his absence. He will be missed.

As news of his passing spread, BBG science staff received messages from around the world from colleagues who admired Steve and his work. Peter H. Raven, president of the Missouri Botanical Garden, said, "Steve Clemants was a bright light in the field of botany, a lovely man who was utterly fascinated with plants, loved people, and made a marvelous contribution by combining his passions into every facet of his life. No one has done a better job in involving the public in the joy of learning about plants, finding them, thrilling in new discoveries, and understanding their traits. Steve's contributions to science were deep and numerous, and his contributions to development of the Brooklyn Botanic Garden over the years, through good times and difficult ones, were of fundamental importance in keeping that fine institution on an even keel. His bright, friendly, pleasant personality will be missed as much as his outstanding professional skills, not only in research and in administration but in education and in his ability to uplift the spirit of everyone who knew him."

"The one word that comes to mind immediately is commitment. Another is

openness. He was one of the most committed people I have ever met with regard to understanding preserving what little remains of our natural heritage. His ability to engage scientists, academics, students, and the general public was truly remarkable. And he took very little, or no, credit for his vision and accomplishments. His commitment extended to (or maybe emanated from) his relationship with his wife. Steve was also a very open person, who would willingly accept others into a group and readily modify an approach to a problem to achieve a win-win result. To top it all off, he had a great sense of humor and a ready laugh. I sorely miss him" wrote Christopher P. Dunn PhD, Director Harold L. Lyon Arboretum in Honolulu, HI.

"We will always remember Steven, as a gentle person and excellent botanist, and I am sure he will be remembered by many people in the U.S. and around the world. His articles and treatments of North American, South American, Chinese and Japanese plants will be cited for many years to come", said Sergei L. Mosyakin, Professor, Director of Science, Vice President of Ukrainian Botanical Society.

Steve is survived by his wife, the painter Grace Markman of Brooklyn; his mother, Doris Seward, and stepfather, Thomas Seward, of Minnetonka, Minnesota; his brother, Thomas Clemants, of Vail, Colorado; his sister, Judith Yess, of Winona, Minnesota, his half-sister Nancy McLean of Hopkins, Minnesota; his half-sister Elizabeth Clemants of New York City; his half-brother, Robert Clemants, of St. Louis Park, Minnesota; his stepsister, Ellen Dahlquist, of Edina, Minnesota; and his stepmother, Phyllis Clemants, of Minneapolis, Minnesota.

The Dr. Steven Clemants Wildflower Fund has been established to honor our late colleague and friend. Steve's widow, Grace Markman, is

working with the Greenbelt Native Plant Center to plan a living memorial that will foster the planting of native wildflower species in New York City parks. Donations in his memory should be made out to "City Parks Foundation, Dr. Steven Clemants Wildflower Fund," and mailed to City Parks Foundation, c/o Greenbelt Native Plant Center, 3808 Victory Blvd., Staten Island, NY 10314.

Winter Beech

By Frank Knight, NYS DEC



One of the most satisfying things about a snowshoe hike for me is coming upon tan leaves shivering in the breeze above the snow, stark against the dark winter forest. Like many of its oak relatives, American beech (*Fagus grandifolia*) retains its dead leaves through the

winter; especially wind-sheltered young trees. Tenacious dry leaves are a bittersweet reminder of autumn's glory and a promise of new growth to come. In a forest full of dark bare tree trunks for half the year, it is inspiring to see animated leaf shimmer against smooth gray bark. If only hopeless romantics with pocket knives would be less inspired!

The lovelorn are the least of beech's worries. More than 70 species of decay fungi – a record for hardwoods – are known to attack beech. Now a one-two punch by the alien beech scale insect (*Cryptococcus fagitsuga*) and a *Nectria* fungus is devastating stands of trees across the Northeast. Beech Bark Disease infects through wounds made by the scale insect. How tragic if another forest dominant were to go the way of the American chestnut! Since a small percentage of trees are disease resistant, promising research on cross-pollinating healthy trees may eventually restore decimated populations.

A member of the beech-birch-maple-hemlock association of cool, moist hardwood forests, beech (as was chestnut) is important to our economy and ecology. *Fagus* (from the Greek *phagus*, food) has fed humans and wildlife for countless tens of thousands of years here and across Europe. Chestnuts are large enough to have been commercial, but small beechnuts lose themselves in autumn leaf litter. Wild foods enthusiasts, though, are rewarded with nuts delicious, raw or prepared for their oil, flour and pecan-like pie.

Game birds like grouse, wood duck and turkey fatten on the sweet nuts. With wood nearly as strong and hard as oak, beech takes a high polish for furniture and flooring. An excellent landscape tree, but perhaps because of its large size, beech isn't often seen in suburbia. In parks and estates, the even larger European

species (*F. sylvatica*) and its copper, cut-leaf and weeping varieties, are majestic.

The European beech tolerates severe pruning well, and thus is commonly cultivated as hedges in England; something rarely done here. The nature-loving British have brought autumn's reminder and spring's promise from forest to English dooryard. And so might we.

Genera Quest Wrap-up 2008

By Steve Young, New York Natural Heritage Program

Our last trip of the season was to Niagara Falls on September 20 with members of the Niagara Frontier Botanical Society. We had group of 11 plant enthusiasts that made the trek from Goat Island to the American falls in the morning and to the gorge north of the whirlpool in the afternoon. It was a beautiful day and we saw many interesting plants. One of the most beautiful sights was a large area of *Solidago caesia* growing under the trees along the trail to the gorge at Robert Moses State Park. We saw total of 155 genera which are listed below. This is the second-highest total we saw during the year. Participants included Ed Fuchs, Ken Hull, Emily Magoon, Marg Partridge, John Titus, Michael Suita, Joanne Schlegel, Patricia Eckel, Barb Seeger, Eric Lamont and Steve Young.

For the three trips we took this year we saw a total of 315 of the 1086 genera in New York or about 30%. Twenty-two percent of the 315 genera were exotic. For the year we saw 41% of the native genera in New York and 14% of the exotic genera. We saw 60% (216) of the native genera we had ranked as easy-to-find, 21% (25) that we ranked medium and 4% (4) that we ranked hard-to-find.

As a final tally we saw 92 genera at the ice meadows in Warrensburg, 237 genera at Alley

Pond Park in Queens, and 155 genera at Niagara Falls. A total of 26 happy plant people participated in what were three enjoyable and productive days in the field.

In 2009 members have the opportunity to add to the number of genera they have seen by

**Genera Seen at
Niagara Falls**

<i>Acalypha</i>	<i>Circaea</i>	<i>Lepidium</i>	<i>Rhamnus</i>
<i>Acer</i>	<i>Cirsium</i>	<i>Leucanthemum</i>	<i>Rhodotypos</i>
<i>Achillea</i>	<i>Clematis</i>	<i>Ligustrum</i>	<i>Robinia</i>
<i>Actaea</i>	<i>Conyza</i>	<i>Linaria</i>	<i>Rosa</i>
<i>Aesculus</i>	<i>Crataegus</i>	<i>Lithospermum</i>	<i>Rubus</i>
<i>Ageratina</i>	<i>Cystopteris</i>	<i>Lolium</i>	<i>Rumex</i>
<i>Agrimonia</i>	<i>Dactylis</i>	<i>Ludwigia</i>	<i>Sagina</i>
<i>Alliaria</i>	<i>Daucus</i>	<i>Lycopus</i>	<i>Salix</i>
<i>Ambrosia</i>	<i>Dianthus</i>	<i>Lysimachia</i>	<i>Sambucus</i>
<i>Amelanchier</i>	<i>Diervilla</i>	<i>Lythrum</i>	<i>Scirpus</i>
<i>Anemone</i>	<i>Digitaria</i>	<i>Mahonia</i>	<i>Scutellaria</i>
<i>Angelica</i>	<i>Dipsacus</i>	<i>Maianthemum</i>	<i>Setaria</i>
<i>Aquilegia</i>	<i>Dryopteris</i>	<i>Malva</i>	<i>Smallanthus</i>
<i>Aralia</i>	<i>Elymus</i>	<i>Melilotus</i>	<i>Solanum</i>
<i>Arctium</i>	<i>Epilobium</i>	<i>Mentha</i>	<i>Solidago</i>
<i>Artemisia</i>	<i>Epipactis</i>	<i>Morus</i>	<i>Sonchus</i>
<i>Asclepias</i>	<i>Eupatorium</i>	<i>Muhlenbergia</i>	<i>Sorbus</i>
<i>Asplenium</i>	<i>Euthamia</i>	<i>Nepeta</i>	<i>Stellaria</i>
<i>Atriplex</i>	<i>Eutrochium</i>	<i>Ostrya</i>	<i>Symphoricarpos</i>
<i>Barbarea</i>	<i>Fagus</i>	<i>Oxalis</i>	<i>Symphyotrichum</i>
<i>Bellis</i>	<i>Fragaria</i>	<i>Panicum</i>	<i>Taraxacum</i>
<i>Berberis</i>	<i>Frangula</i>	<i>Parthenocissus</i>	<i>Thalictrum</i>
<i>Betula</i>	<i>Galinsoga</i>	<i>Pellaea</i>	<i>Thelypteris</i>
<i>Bidens</i>	<i>Galium</i>	<i>Phleum</i>	<i>Thuja</i>
<i>Butomus</i>	<i>Geranium</i>	<i>Phragmites</i>	<i>Tilia</i>
<i>Calamagrostis</i>	<i>Geum</i>	<i>Physocarpus</i>	<i>Toxicodendron</i>
<i>Calystegia</i>	<i>Glechoma</i>	<i>Pilosella</i>	<i>Trifolium</i>
<i>Carex</i>	<i>Hedera</i>	<i>Pinus</i>	<i>Tussilago</i>
<i>Carpinus</i>	<i>Helenium</i>	<i>Plantago</i>	<i>Ulmus</i>
<i>Carya</i>	<i>Heracleum</i>	<i>Poa</i>	<i>Vallisneria</i>
<i>Celastrus</i>	<i>Hesperis</i>	<i>Polygonum</i>	<i>Verbascum</i>
<i>Centaurea</i>	<i>Hypericum</i>	<i>Populus</i>	<i>Verbena</i>
<i>Cerastium</i>	<i>Impatiens</i>	<i>Portulaca</i>	<i>Viburnum</i>
<i>Chaenorhinum</i>	<i>Iris</i>	<i>Potentilla</i>	<i>Vinca</i>
<i>Chelone</i>	<i>Juglans</i>	<i>Prenanthes</i>	<i>Viola</i>
<i>Chenopodium</i>	<i>Juncus</i>	<i>Prunella</i>	<i>Vitis</i>
<i>Chloris</i>	<i>Juniperus</i>	<i>Prunus</i>	
<i>Cichorium</i>	<i>Lactuca</i>	<i>Pycnanthemum</i>	
	<i>Leonurus</i>	<i>Quercus</i>	
		<i>Ranunculus</i>	

joining us on three more trips. In the works is a trip to the high peaks to observe the rare genera of the alpine areas, a trip to Long Island for beach and wetland species, and another to a calcareous area near Rochester. Hope to see you in the field!



Niagara Falls field trip participants from left to right: Ken Hull, John Titus, Marg Partridge, Emily Magoon, Pat Eckel (in back), Barb Seeger, Eric Lamont, Joanne Schlegel, Ed Fuchs and Michael Suita. Photo by Steve Young.

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