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experiences for K-12 classes are offered.

## In Memoriam

Ilkorucu-Gocmencelebi, S. and M. Seden Tapan. 2010. **Analyzing students' conceptualization through their drawings.** *Procedia Social and Behavioral Sciences* 2: 2681-2684.

Less than 45% of fifty preservice primary teachers in Turkey asked to draw a flower as part of a study on assessing student conceptualizations were able to label the flower correctly. The authors also report that flowers that were drawn more accurately were also more comprehensively labeled.

Kazilek, C. 2010. **Ask A Biologist: Bringing Science to the Public.** *PLoS Biology* 8(10): e1000458. Doi:10.1371/journal.pbio.1000458  
Dr. Biology's Pocket Seed Viewer, an online collection of data, images, and animations that support student investigations of seed germination, is featured in this review article about the Ask A Biologist website.

Mentors and teachers who have students investigating the PlantingScience Wonder of Seeds module may find seed information both the Eyester and Kazilek articles of interest.

Morris, Amy. 2010. **Investigation of Essential Oils as Antibiotics.** *The American Biology Teacher* 72: 499-500.  
Traw, M. Brian and Nancy Gift. 2010. **Environmental Microbiology: Tannins & Microbial Decomposition of Leaves on the Forest Floor.** *The American Biology Teacher* 72: 506-511.

These two articles in the October issue illustrate two plant applications of the traditional "antibiotic disk" experiment used in microbiology. The second has the advantage of having students produce their own extracts for testing against bacteria. The first follows up on several recent reports of the antibiotic properties of spices, especially those in use in the cuisine of hot climates.

Thompson, S. 2010. **Classroom Terraria: Enhancing Student Understanding of Plant-Related Gas Processes.** *Science Scope* 33(8):20-26.

This article addresses common student conceptions about plants through extended observations following initial middle school student speculations about what will happen to a plant sealed in a jar.

See Ecological Restoration Volume 28, Number 2, June 2010 for a special theme on education and outreach in ecological restoration.

View all titles in JNRLSE Volume 39 at <http://www.jnrlse.org/issues>

## Lawrence Joseph Crockett (1926-2010)

The City College of New York lost one of its most beloved teachers last spring. Professor Emeritus Lawrence J. Crockett died of complications of Parkinson's disease and cancer on June 8, 2010 in San Antonio, TX.

Larry Crockett was born in Brooklyn, New York on September 3, 1926. He attended Columbia College as an undergraduate on a scholarship, and earned his degree in 1949. Following service in Korea in the early 1950s, he continued his studies at Columbia, this time as a graduate student under Dr. Edwin B. Matzke, earning his MA (1954) and PhD (1958).<sup>1</sup> His first publication, *A Study of the Tunica Corpus and Anneau Initial of Irradiated and Normal Stem Apices of Nicotiana Tabacum L.*, appeared in the Torrey Botanical Society's Bulletin in 1952<sup>2</sup>. In 1958, he authored a study on the irradiated stem apex of *Coleus blumei*.<sup>2</sup> Subsequent research on the same species resulted in another paper in the American Journal of Botany.<sup>3</sup> His interest in the unusual resulted in yet another paper, this time on *Stylites*.<sup>4</sup> During that time he also taught botany at Barnard College (1955-1959). From 1959-1961 he taught botany at Fairleigh Dickinson University in New Jersey. Larry joined the faculty of the Biology Department of The City College of New York (CCNY) in 1961, where he taught courses in vascular and nonvascular plants in addition to field botany. When the CCNY Urban Landscape Program was introduced he also taught budding landscape architects in a course specifically designed for them. While at CCNY he served as a member of the school Senate from 1968-1971, as Deputy Chairman of the Biology Department from 1969-1972, and was also a member of the Faculty Council from 1968-1969.

Crockett was a member of the Botanical Society of America (BSA) and served for many years as Business Manager (1961-1972) of the American Journal of Botany (AJB) and also as Business Manager (1961-1964) of the Plant Science Bulletin (PSB). From the early 1960's to the mid 1970s he served the BSA as a member of the editorial board of the AJB and



Lawrence J. Crockett (ca. 1970) at  
Brookhaven National Laboratories

the PSB. He was an active member of the Torrey Botanical Club (now the Torrey Botanical Society), serving as its president twice (1970, 1985), and regularly organizing programs for its members. He also wrote twenty articles, several of them in two parts, entitled “*On the Trail of John Torrey*” which highlighted significant achievements and episodes in the life of one of America’s most celebrated early botanists. All were published in the Bulletin of the Torrey Botanical Club.<sup>5</sup> In addition, he coauthored several papers and presentations with other noted scholars.<sup>6,7</sup> Over the years his work has been cited many times by numerous researchers. Larry also served on the Steering Committee for the Centennial Celebration of the New York Botanical Garden. He authored “*Wildly Successful Plants: a Handbook of North American Weeds*”, published in 1977 and recently reprinted. In 1989 he appeared twice on Cable TV on the interview program WORLDWIDE, speaking on the topic of “Evolution of Photosynthesis and its Effects on the Living World” and, on a later show, on “Seeds and Civilization.”

Above all, Larry loved teaching, and it was as a teacher that Larry might have made his most valuable contribution to biology and his students. His enthusiasm for botany was

infectious, and stimulated many who had resisted even taking a botany course into making it their life’s work. One of us (LBK) recalls begging the dean at CCNY to waive the botany requirement because she saw no relevance to her major in Zoology. His wise refusal of her request became a turning point in her career as she became mesmerized by Professor Crockett’s lectures and devoted her future to Plant Biology. Another of us (ESC) became a horticultural librarian. Yet another (ML) is on the faculty of the University of Texas at San Antonio. Larry was an absolutely spellbinding lecturer. Many of his students have gone on to become well known researchers, and some became members of the National Academy of Science. He received the Charles Edwin Bessey Teaching Award from the Botanical Society of America in 1984 and won the Outstanding Teacher Award of CCNY in 1988. Larry was also so honored by the American Association for Higher Education in 1989. He managed to meld botany and history in a way that brought new life to both. His writings on the flora of the Unicorn tapestries at the Cloisters of the Metropolitan Museum of Art in New York City brought him international recognition, and are just two examples of Larry’s ability to connect science with art<sup>8,9</sup>. It comes as no surprise that he was once a member of the Renaissance Society of America. He was a true Renaissance man, and an accomplished scholar of the history of science as well as botany.

Other examples of his talent for melding history with botany took the form of writing and acting in plays about noted scientists. His “*Market Day in Delft: An Hour with Henry Oldenburg and Antony van Leeuwenhoek*” and “*An Evening with John Torrey*” were produced at many universities and professional meetings, including the International Congress of Protozoology, the BSA, the New York Microscopical Society, as well as on the campus of CCNY. BSA members may recall our current PSB editor, Marshall Sundberg, as he played Henry Oldenburg opposite Larry’s Leeuwenhoek at the American Institute of Biological Sciences meeting in Knoxville, TN, in August 1984. Perhaps the only play which he wrote and in which he performed that did not touch upon his botanical interests was *Alexander VI: The Bull of the Borgias*. It was

performed several times for various audiences, but most memorably for the public at the Cathedral of St. John the Divine in upper Manhattan in the early 1970's. The noted drama critic for *The New York Times*, Clive Barnes, attended the performance and reviewed it very favorably in that newspaper, which Larry cherished for many years.

What was it like to be a student of Dr. Crockett? Enrolling in Field Botany at CCNY meant enrolling in a never-to-be-forgotten adventure. When, during the first meeting of the field botany class, he informed us that over the course of the semester we would learn to recognize and name about 500 plants, we sat in disbelief. But he was right. Local botanical gardens and beaches, New York State bogs, the New Jersey Pine Barrens, the Sharon Audubon Nature Sanctuary in Connecticut, even New York City's own Central Park were all fair game for Larry's weekly field trips. Rain or shine we tramped through mud, sand, and dirt, and occasionally fell into one of the quaking bogs that brought botany to life for us.

When we weren't wading through surf grabbing pieces of algae and learning about *Rhodophyta*, or marveling at a tiny *Drosera* or the walking fern, *Asplenium rhizophyllum*, we were trying (in vain) to keep up with Larry as he plunged ahead into yet another of Nature's collections of local plants. Specimens gathered were passed back from the front of the often single-file column to those bringing up the rear, by which time the plants looked very sorry indeed. All were carefully collected in plastic bags and reexamined as we took our buses and subways back home at the end of the day. But he was right – we *did* learn the scientific names of close to 500 species – and remember most of them to this day. Even now, when purchasing plants at local nurseries, it's likely that most graduates of his course still ask for composites, grasses, trees, shrubs, etc., by their scientific name before buying them; daisy, foxtail, oak or beach plum simply won't do.

We can think of no greater tribute to a teacher than the letter found in his CCNY file from Paul Friedberg, the Director of what was then the CCNY Urban Landscape Program: "...students...would move mountains and perform incredible feats to get into your class.

Furthermore, when I indicated [to them] that you would be teaching the Plant Materials course directly for the Landscape Program, there was a roar of approval and delight...one or two students that have already had the course said they felt cheated..." Likewise, Karl J. Niklas, a past Editor-in-Chief of the *AJB* and a past president of the Botanical Society of America, said of Larry "He was the most splendid teacher and kindest human being I've ever known. He inspired generations of students to follow in his footsteps. I should know. I was one of them! Those of us who had the privilege of having him as an instructor will always cherish our memories of his fabulous lectures and the warmth of his personality. He made us want to become botanists and teachers by virtue of his boundless exuberance and obvious delight in the study of plants".

Larry was cared for in his last years by his former student and great friend, Michael Laverde, and is also survived by his former wife, Edith Crockett. He will be deeply missed. A website has been set up to which friends and former students may post their remembrances, both personal and professional. The name of the site is [www.larrycrockettinmemoriam.org](http://www.larrycrockettinmemoriam.org), and this tribute will be the first posting. Please send what you would like to have posted on the website to: [edith@waterfordconnection.com](mailto:edith@waterfordconnection.com). The site will remain active for two years and its contents archived at the Hunt Institute for Botanical Documentation in Pittsburgh, PA.

Edith S. Crockett, The Waterford Foundation, Waterford, Virginia  
Jane Gallagher, The City College of New York, City University of New York  
Lee B. Kass, Cornell University  
Michael Laverde, The University of Texas at San Antonio

(End notes)

1 Crockett, Lawrence J. Zonation and Tunica Corpus Relationships in the Stem Apex of *Coleus blumei*, Benth., Before, During, and After Irradiation with Cobalt-60. PhD thesis, Columbia University, 1958.

2 Crockett, Lawrence J. In: *Bulletin of the Torrey Botanical Club*, 1957, Vol. 84(4):229-236.

3 Crockett, Lawrence J. Effects of Chronic Gamma Radiation on Internal Apical Configurations of Vegetative Shoot Apex of *Coleus Blumei*. *American*

*Journal of Botany*, 1986, 73(5): 265-268.

4 Crockett, Lawrence J. Stylites of Peru – A Living Fossil. *Garden Journal*, 1967, Vol.17 (1): 26-27.

5 Crockett, Lawrence J. On the Trail of John Torrey...*Bulletin of the Torrey Botanical Club*, Vols. 113 – 119, 1986-1992.

6 Crockett, Lawrence J and Myron C Ledbetter (Abstract). Association of Microtubules With Early Wall Formation In Zoospores of Marine Alga *Cladophora gracilis*. *American Journal of Botany*, 1970, Vol. 57 (6): 741.

7 Lee, John J, Lawrence J. Crockett, Johnny Hagen, Robert J. Stone. The taxonomic identity and physiological ecology of *Chlamydomonas hedleyi* sp. nov. algal flagellate symbiont from the foraminifer *Archaias angulatus*. *European Journal of Phycology*, 1974, 9(4):407-422.

8 Crockett, Lawrence J. Using Works of Art (e.g., the Unicorn Tapestries) in Teaching. *American Journal of Botany*, 1986, 73(5): 798.

9 Crockett, Lawrence J. The Identification of a Plant in the Unicorn Tapestries. *Metropolitan Museum of Art Bulletin*, 1982, 17:15-22.

## Personalia

### Dr. Peter Raven receives the William L. Brown Award for Excellence in Genetic Resource Conservation



Dr. Peter Raven, President Emeritus of the Missouri Botanical Garden, has been chosen as the 6th recipient of the William L. Brown Award for Excellence in Genetic Resource

Conservation. The biennial award recognizes the outstanding contributions of an individual in the field of genetic resource conservation and use. The award is made possible through the generous support of the Sehgal Family Foundation, in cooperation with the family of Dr. William L. Brown. In choosing Dr. Raven as the 2010 winner, the award committee acknowledges a lifetime spent working to preserve the world's plant resources, upon which all life on Earth depends. Dr. Raven will receive the award prior to his keynote address to the 2011 meeting of the Botanical Society of America to be held in St. Louis July 10-13, 2011.

For more information, please visit [www.WLBCenter.org/award.htm](http://www.WLBCenter.org/award.htm).

### Friedman named Director of the Arnold Arboretum

Evolutionary biologist to join Faculty of Arts and Sciences

William "Ned" Friedman has been named the new director of the Arnold Arboretum. He also will be a professor in the Faculty of Arts and Sciences. On Nov. 4, Friedman will deliver a lecture at the Harvard Museum of Natural History on "Darwin's 'Abominable Mystery' and the Search for the First Flowering Plants."

William "Ned" Friedman, an evolutionary biologist who has done extensive research on the origin and early evolution of flowering plants, has been appointed director of the Arnold Arboretum.



Friedman, set to start on Jan. 1, will be the eighth director of the Arboretum, which is

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