

BIOLOGY CURRENTS

QUEENS COLLEGE

Fall 2005

THE QUEENS COLLEGE BIOLOGY ALUMNI NEWSLETTER

VOLUME 8

LETTER FROM THE CHAIR

Dear Biology Department Alums and Friends:

I hope this has been a productive and fulfilling year for everyone. As always, it has been a very busy one for the department. Professor Jared Rifkin retired, effective February 1, 2005, after more than 30 years of service to Queens College. He plans to continue his research on *Dictyostelium* chemo-attraction but in a "new to him" space in Colwin Hall.

In September 2004 the Biology Department added two new faculty members, Drs. Mitchell Baker and John Waldman. Details about their background and research interests can be found elsewhere in this issue.

Some retirements are anticipated this spring and the department hopes to search for at least one more faculty member next year. Faculty recruitment requires a great deal of effort on the part of the entire department. But over the last few years, it has been a very worthwhile and gratifying effort. With each addition, more of our faculty members are actively involved in scholarly research and provide more opportunities for our students to become involved in hands-on science.

Moreover, a larger faculty contributes to our ability to offer more courses on a greater diversity of subjects. We are creating a more exciting curriculum and there is a renewed vitality in the air. Students are responding positively. The number of biology majors in fall 2004 increased by 30% compared to fall 2003, and enrollment in our spring 2005 classes increased 20% compared to spring 2004! This is heartening because college-wide enrollment increased by only 3% over the same period.

There is much going on at Queens College, and the Department of Biology is in the center of many of these changes. One exciting new development is the establishment of the Institute to Nurture New York's Nature of CUNY, which will be based at the college. The institute will focus on urban ecology and environmental issues. A national search for a director of the institute is currently underway. Professor John Waldman was instrumental in the establishment of this institute. Drs. Peter Chabora and Waldman are members of the committee charged with searching for the new director, and will continue to play crucial roles in building the Institute in the future.

The college received its fourth award for Enriching Undergraduate Research in the Sciences from the Howard Hughes Medical Institute; Drs. Stephane Boissinot and PoKay Ma participated as members of the proposal preparation team. Thanks to Professor Zahra Zakeri, who spearheaded the effort with the assistance of Drs. Ma and Susan Croll of the Department of Psychology, the college was awarded an NIH Minority Access to Research Careers (MARC) grant.

Over the past year I heard from a number of you, and many more of you contributed generously to the department's Alumni Fund. Although I have not been able to thank everyone personally, we are, nevertheless, extremely grateful for your support. The Alumni Fund is a critical supplement to the department's discretionary budget. Unlike our operating budget from CUNY, Queens College, and extramural grants, contributions from our alumni do not have the same kind of restrictions, giving us the ability to accomplish a variety of projects to enrich the educational environment for our students.

I look forward to hearing from you and invite you to visit the department or our Web site www.qc.cuny.edu/Biology. On behalf of the department, I thank you for your generous support.

Sincerely,

Corinne A Michils

Corinne A. Michels, PhD Distinguished Professor and Chair

Dr. Jared Rifkin Retires



After 34 years, Dr. Jared Rifkin has ended his teaching career at Queens College.

Jared was born and grew up in Manhattan. He graduated from the Bronx School of Science and the City College of CUNY with a degree in chemistry. He was then admitted to the doctoral program in biochemistry at Columbia University. Events did not quite turn out as he had planned;

he left the program without completing his degree and decided to join the U.S. Army. This was kismet. He was sent to the Medical Research Laboratory at the Edgewood Arsenal in Maryland, where his chemistry background came in handy. There, he participated in studies of nerve gas. After his stint in the army, Jared remained in Maryland and landed a job at Johns Hopkins University in Baltimore. He enjoyed the environment so much that he decided to stay on as a graduate student. The program at Johns Hopkins suited him better than the one at Columbia, and he earned his doctoral degree by completing a thesis on protozoan osmoregulation.

Joining the Army and being dispatched to Maryland were the most fateful events in his life. To Jared, it was in Baltimore where he finally grew up. There, he met his future wife, got married, and started a family. (In that order, he assured us.) With a doctoral degree in hand, Jared and his family started their northward migration. The next stop was Princeton, New Jersey, where Jared joined the laboratory of Dr. John Bonner of Princeton University as a post-doctoral fellow. Bonner was a premier biologist of his time, and is probably one of the great intellects in the field in this country. It was from Bonner that Jared learned to think about science and biology. He started projects on the slime mold *Dictyostelium*, which he continues to study to this day.

Toward the end of his tenure at Princeton, Jared checked his compass and headed north again with his family. In 1971 Jared returned to New York to join the Department of Biology at Queens College. In those days, the faculty recruitment process was much more casual than it is now. Jared came up to Flushing, met with the chair of the department for an interview, and was offered a position within days. He was then given a desk somewhere, assigned to a laboratory space that he shared with three others, and started teaching.

For almost two decades, Jared was responsible for the second part of the Introductory Biology course for all biology majors. He surmises that between 1972 and 1989, almost all biology majors, and others who had taken Introductory Biology, had heard his lectures. He took a break from these lectures when he became chair of the department between 1991 and 1997. When he resumed full-time teaching, he developed the Cell Biology Techniques course, which he continued to teach until his retirement.

At Queens College, Jared continued with his research in *Dictyostelium*, focusing on receptor-mediated chemotaxis during aggregation, morphogenesis, and the formation of the fruiting body in this slime mold. Most recently, Jared has utilized confocal microscopy to examine subcellular structures and filopodia movement, and employed computer-assisted imaging and analy-

sis to track migratory trajectories of many cells simultaneously.

Over the decades, Jared had served as mentor to many undergraduate and high school students, one of whom became a Westinghouse semi-finalist, and another won the Feigelson award for outstanding undergraduate research last year. Although he is retiring from teaching, Jared will maintain a laboratory in the department and continue to track his beloved amoebae.

Jared has been a well-respected member of the department as well as of Queens College. He endeared himself to others in part by his sense of humor. He had been the origin and disseminator of many jokes—including some of the dirtiest ones—which had reverberated through the college's email network. Most of all, the respect that he commands was derived from his leadership quality. He had served as chair of the Department of Biology for six year, and as a member and vice chair of the Executive Committee of Queens College, which is one of the most important bodies charged with overseeing the functioning of the college. As a testimony to the high regards he enjoys from his colleagues, his retirement party was well attended by former and current staff and faculty members and students, many from outside of the Department of Biology.

In his other life away from the college, Jared has an artistic bent. He has a deep love for ceramics, a passion that started in Princeton, and carpentry, a skill he put to good use in building his house. He is also an avid photographer. As a retirement present, the department gave him a digital camera, which has already followed him around North America and Europe. His shutter-happy finger has been busy. Jared had always bemoaned the fact that he had no spare time to pursue his hobbies and interests. Now that he has spare time aplenty, his lifelong interest in optical techniques may expand into new and unexplored territories.

Dr. Corinne Michels Appointed CUNY Distinguished Professor



Dr. Corinne Michels, current chair of the department, has been named City University of New York Distinguished Professor. The title of Distinguished Professor is the highest honor that CUNY bestows upon a faculty member. There are 100 Distinguished Professors in the entire CUNY 21campus system, ten of whom are members of the Queens College faculty. The criteria for and review process

involved in granting Distinguished Professorships are stringent. Distinguished Professors are nationally and internationally recognized scholars. In addition to scholarship, they are expected to be outstanding teachers and to have provided valuable service and leadership in their colleges. In all these areas, Corinne has indeed distinguished herself.

Corinne has distinguished herself as a scientist, a mentor, a teacher, and, since assuming the chair of the department, an administrator. Her study of the regulation of maltose transport and metabolism in baker's yeast is widely recognized. The strongest testimony for the quality of her work is her remarkable record of funding for her research, including 32 years of contin-

uous support from the National Institutes of Health. The NIH funding process includes a vigorous peer review of grant proposals. Only about 10% of grant applications are selected for support. Continuous funding, therefore, requires not only productivity, but also high ratings by one's peers.

Queens College President James Muyskens provided the most epigrammatical approbation for Corinne. In introducing her to the CUNY Board of Trustees at their meeting ratifying her appointment as Distinguished Professor, he said: "If I were asked to explain in two words what makes Queens an exceptional college, my answer easily could be *Corinne Michels*. As a teacher and researcher, she has few peers."

While these remarks are flattering, those of us who know Corinne find them to be entirely befitting. Corinne is a product of Queens College and this department. She graduated *magna cum laude* in 1963 with a major in biology and a minor in chemistry. She went on to Columbia University, where she earned her MS and PhD degrees in molecular genetics in 1965 and 1969, respectively. After additional post-doctoral work at Columbia, she returned to Queens College to join the biology faculty in 1973. In 2000 Corinne became chair of the department.

Within the department, Corinne has participated in the teaching of introductory biology, genetics, and molecular biology. Her tenure at Queens coincided with the most stunning paradigm and technical revolutions in her own field. Molecular genetics has undergone a major makeover since the 1970s. Corinne has played a key role in developing and updating the molecular biology and genetics curricula in the department over the last two decades. As part of this process, she has written a textbook, *Genetic Techniques for Biological Research: A Case Study Approach*, which is widely used. As a mentor, Corinne has guided over a dozen doctoral and master's students through their thesis research, and has had scores of undergraduate students working in her laboratory over the years.

NEW FACULTY MEMBERS



Dr. John Waldman Coming Home

Thomas Wolfe told us that You Can't Go Home Again. But John Waldman would have none of it. In the fall of 2004 he joined Queens College as Professor of Biology. This is, in his own words, "coming home" to CUNY. A New Yorker born and bred, John earned his bachelor's degree from Lehman College and his

doctoral degree through the Joint Program in Evolutionary Biology between the Graduate School of CUNY and the American Museum of Natural History. In between, he also earned a master's degree in marine and environmental sciences from C. W. Post. Before moving to his current residence on Long Island, John lived in Kew Gardens after he married. Joining Queens College is coming home in more ways than one.

By training, John is an ichthyologist. By vocation, he is an ecologist and conservation biologist. By passion, he is an angler.

He is one of those enviable individuals who manage to build a career out of all three. His early research interests were in the ecology and systematics of fishes, spurred by a love of angling and a childhood spent on the waters of Long Island Sound and exploring the wild shores of the Bronx where he grew up. (John assures us that the Bronx has wild shores!) His doctoral research was on the morphological systematics of Moronidae (the family that includes striped bass and white perch).

Upon graduating from CUNY, John joined the Hudson River Foundation for Science and Environmental Research (HRF), where he spent 20 what he calls "enjoyable and formative" years. The mission of the HRF is to promote sound management and conservation of the Hudson River and its watershed through research and public awareness programs. It provided John with an unusual environment and opportunities. On the one hand, John oversaw the many funding programs of the foundation. He became conversant with the scientific, social, economic, and policy issues surrounding the ecology of the Hudson River. He also forged contacts with private organizations and public agencies involved in many aspects of this drainage system. On the other hand, he pursued research and collaborations in a foundation setting. He turned his attention from Moronidae to anadromous fishes-those that migrate between fresh and salt waters, including salmon, sturgeon, and shads. Through these collaborations and through organizing international conferences on conservation, he has authored and co-authored over 60 journal articles and many book chapters, and co-edited several volumes. He has brought with him to Queens College editorial projects started at the HRF, including the completion of The Hudson River Ecosystem, which is slated to be published this August. Another volume, Hudson River Fishes and Their Environment, will appear in 2006. At Queens College, he will have the luxury of dedicating even more time and effort to his editorial work.

Back home at CUNY, John hit the ground running. He is developing new courses, organizing conferences, and setting up a laboratory for sundry projects on aquatic ecosystems, all the while continuing with his editing and writing projects. John's arrival at Queens coincided with the initiation of Theodore Kheel's Nurture New York's Nature (NNYN) Project. This turns out to be a perfect match between Kheel's vision and John's background and interests. In the fall of 2004, John was the cocoordinator of, and lectured in, a broad, CUNY-wide course funded by NNYN held at Baruch College titled The Nature of New York. He hopes to bring a version of it to Queens as a "capstone course." Kheel has since underwritten the establishment of a new CUNY institute at Queens College to promote education and research on our urban environment. A new program in Natural Resources Management, to be developed jointly by the School of Earth and Environmental Sciences and the Department of Biology, will be allied with the institute. As a kick-off event for the new institute, John is organizing an autumn event at Queens College that will present a number of respected natural history authors speaking on "Why Should Nature Matter to New Yorkers?" John also launched a graduate seminar in urban conservation biology in the spring semester that generated considerable student interest.

After having spent seven months at Queens College, John

NEW FACULTY MEMBERS

was convinced that he had made a wonderful career change. He is impressed by the high quality of the faculty and student body. He is also enjoying the freedom and opportunities afforded by academia and looking forward to pursuing studies that he was unable to find time and resources to do at the HRF. He has placed many projects on the front burner. One of his main efforts is to initiate a program of comprehensive study of eastern North America's anadromous fishes. His plan is to pen a popular treatise, a monograph that illustrates the relevant river systems and associated information in 50-year timelines since 1600, and a richly annotated Web site. He is also setting up a laboratory that will host basic aquatic ecology work, not only of fishes, but also of aquatic birds and invertebrates. Another project, funded by the CUNY Initiative in Ecology, is to study the biology of the recently recovered double-crested cormorant population in New York Harbor. John is also planning to elucidate the causes of the steep decline in winter flounder in the New York region and will continue to collaborate on molecular studies of anadromous and marine fishes and, no doubt, other studies as opportunities arise.

John enjoys both reading and writing narrative prose on natural history and the outdoors, and has written or edited several books in these areas; he also makes occasional contributions on these topics to the *New York Times*.

In his years with HRF, John received a crash course in the problems and management of the huge, urbanized Hudson River and New York Harbor complex. But as the system cleansed itself following the implementation of the Clean Water Act of 1972, he was struck by the lag between the new reality of its rejuvenated ecology and the old perceptions of a morbid harbor. His studies of the history of New York Harbor instilled in him a deep respect for the power of historical ecology to inform present-day issues. His insights on how the lessons of history may be learned, and forgotten, are articulated in Heartbeats in the Muck: The History, Sea Life, and Environment of New York Harbor, a book that received the Book Critics' Award for Natural Science Writing in 2000. In this book, John offers his optimistic prognosis of the future health of New York Harbor. Backed by a new institute at Queens College that seeks to nurture the nature of New York, John is in a unique position to promote responsible and far-sighted stewardship of his beloved waterway.

Welcome home, John.



Dr. Mitchell Baker

Art, Science, Beetles, and Potatoes

Is it possible for a boy growing up in Manhattan's Upper West Side to become interested in birds and insects and wind up as an ecologist studying Colorado potato beetles and desert isopods? It is possible if his family's apartment is within walking distance of the American Museum of Natural History. As a youngster, Mitchell Baker spent many hours absorbing the lore of natural history, getting to know the staff, and sketching birds and mammals in their "natural" settings. One of his paintings shows a group of eider ducks in flight. Mitchell entered the work in the annual Duck Stamp Contest but did not win, and concluded that perhaps a career in ecology and behavioral biology might be more rewarding. But his commitment to art was as intense as his commitment to every other sphere of his intellectual world. Before finally settling on biology following his junior year in college, he spent a year studying art at the Art Institute of Chicago. This September Mitchell returned to New York to join the Department of Biology, and has since been teaching courses in ecology and animal behavior.

Mitchell earned his B.S. at Cornell University, majoring in neurobiology and behavior. It was during this time, while still an undergraduate, that he wrote his first scientific paper, a study of clutch size variation in house sparrows. The paper was published in *The Auk*.

For his doctoral degree, Mitchell traveled to the West Coast and studied at the University of California at Davis, an institution renowned for its programs in the life and behavioral sciences. Mitchell's thesis research focused on natal dispersal in a desert isopod, Hemilepistus reaumuri. The animal resembles a sow bug but has few of the behavioral repertoires of its North American cousin. Instead of living in the leaf litter of damp forests, Hemilepistus lives in the Negev Desert of Israel, where it digs burrows to escape the dry air and raise its young. It is a good parent, bringing food to its young and defending the burrow. When an isopod reaches the age of independence, it leaves its natal burrow and embarks on a long and hazardous journey of natal dispersal. It may travel more than 1000 meters over the desert floor, until it either finds a new burrow or chooses an appropriate site to excavate its own. It was this process of natal dispersal that Mitchell studied by marking and tracking individual animals; his goal was to uncover how these sojourners assess risks and rewards. The results of these studies have been published in four articles (most recently in Ecology and in Animal Behaviour).

After completing his doctoral thesis in 1998, Mitchell embarked on a series of instructorships and post-doctoral positions at the University of Massachusetts at Amherst and at Franklin and Marshall College in Pennsylvania. It was during his time at UMass. that Mitch developed a second research program: a study of insecticide resistance in the Colorado potato beetle. The potato beetle is a pest that has major impact on agriculture economy; U.S. potato farmers spend an average of \$130 per acre defending their crops. Nowhere is this burden more apparent than on the potato farms of Long Island.

Mitchell is exploring an idea, on both the theoretical and empirical levels, that the beetle will develop insecticide resistance more slowly if a farmer leaves a portion of his fields free of insecticide as a refuge for the beetle. In the insecticide-sprayed zone, all beetles will be killed save a handful naturally resistant to the insecticide. These would normally go on to establish next year's population, which will be fully resistant. But by leaving an unsprayed refuge, the insecticide-sensitive wild-type beetles from the refuge will migrate and mate with insecticide-resistant individuals, generating offspring that remain susceptible. As a result, insecticide-resistance will not have an opportunity to take hold in the farm. For his field studies, Mitchell is collaborating with a farmer on the South Fork of Long Island. He notes with great relief that the farm's 2005 potato crop had not failed because of his intervention!

For this kind of study, Mitchell has learned to drive both a tractor and a computer algorithm. At the annual meeting of the Ecological Society of America in Montreal, he presented a theoretical model of how insecticide resistance evolves in the presence of refuge crops.

Mitchell is already planning future avenues of research. One of these involves a study of remote sensing in the beetle: from how far away can a potato beetle detect a potato field? He is designing experiments to carry tethered, telemetered beetles up in controlled weather balloons to learn something about this animal's circle of awareness.

Although he has just arrived at Queens College, Mitchell's laboratory is already crowded with students. He is mentoring one PhD graduate student, three undergraduates, and two high school students from Townsend Harris High School. In addition, an undergraduate from UMass Amherst spent the summer in New York in order to participate in the potato beetle study. Mitchell's own successful research experience during his undergraduate years has convinced him that student research is an important component of biology education. Perhaps future Queens College biology undergraduate students will retrace the trail that Mitchell had blazed: leaving the cement pavements and concrete jungles of metropolis to chronicle life and death in forests, fields, and deserts far away.

Faculty Notes 2004

Stephane Boissinot gave four meeting presentations. Oral presentation at the Mid-Atlantic transposable elements meeting, University of Pennsylvania, Philadelphia, June 2003. Three poster presentations at the meeting of the American Genetics Association, University of Connecticut, Storrs, July 2003:

Boissinot S., and Furano AV. Different rates of LINE-1 (L1) retrotransposon amplification and evolution in New-World monkeys. 1. Khan, H., and **S. Boissinot**, Molecular Evolution of the active lineage of L1 retrotransposons in humans.

2. Savage, A., and S. Boissinot, Ancient Polymorphism at the Flavivirus-resistance gene in mice.

3. **Boissinot, S.**, and A.V. Furano, Different rates of LINE-1 (L1) retrotransposon amplification and evolution in New-World monkeys.

Andrew Greller continued as President of the Torrey Botanical Club and presented two lectures and a field trip report: 1. Seatuck Lecture series, Islip Public Library in November : *Forest types of Long Island: Ice Age to present.*

2. Yokohama National University in April: Broadleaved evergreen forest zones in southeastern United States and eastern Mexico.

3. Field trip report: *The Quarterly Newsletter of the Long Island Botanical Society* 15(1): 8–9 (2004) **Corinne Michels** and her team continue their studies of maltose transport and signaling with external grant support from the NIH. They presented part of their results at the special Meeting of the Biochemical Society on Nutrient Sensing Through the Plasma Membrane in Eukaryotes, Cirenchester, England. N. Gadura, L.C. Robinson, and C.A. Michels (2004), A novel Glc7–Reg1–Yck1, 2 signaling pathway in the glucose-induced inactivation in *Saccharomyces* maltose permease.

Paul Mundinger presented two invited seminars:

1. Behavioral Genetics of Canary Song: An Overview, at the Annual Birdsong Workshop, Rockefeller University, in July. 2. Canary Song: An Empirical Model of Bio-cultural Co-evolution, at the Graduate Student-Sponsored Seminar in the Department of Anthropology at New York University in the fall.

Uldis Roze presented a seminar at St. Lawrence University in April: *Geophagy and coprophagy in the porcupine*. In August, the *Toronto Star* published a science column featuring his 2002 article in *J. Mammalogy* on facilitated quill release in the porcupine.

Cathy Savage-Dunn is making progress with dispatch in her study of TGFB signaling in the nematode *Caenorhabditis ele*gans. Her work is being supported by an award from the American Cancer Society. She presented two seminars: 1. Probing Tissue-Specific Outcomes of BMP/TGFB-Related Signaling in C. elegans, at Albert Einstein College of Medicine in November.

2. Functions of Smad and Schnurri Transcription Factors in TGFB-Related Signaling in C. elegans, in December at the Annual Meeting of the American Society for Cell Biology.

John Waldman received the Norcross Wildlife Conservation Award of 2004. He also delivered 10 seminars, including presentations at the Steinhardt School of Education, New York University; Eastern New York Chapter of the Nature Conservancy; Stevens Institute of Technology; New York State Marine Education Association; Friends of Hudson River Park; New York City Guides Association; Stuyvesant Cove, Sandi Simmons Ecology Series; and the Herbert Johnson Lecture Series of Gateway National Park.

Zahra Zakeri was awarded a five-year grant by the NIH to enhance access of under-represented minorities to research careers in the biomedical sciences. She continues to be busy as president of the International Cell Death Society. She organized the 5th International Cell Death meeting in Ireland in July, and participated in the 12th Euroconference on Apoptosis in Greece.

ALUMNI NOTES

Ellen Cho France '98 successfully defended her PhD thesis at Yale University and received her degree on May 23, 2005. She hopes to see her findings in print soon in *Journal of Cell Science*. She and her husband Ralph celebrated their ninth wedding anniversary this summer. For five of those years, they have lived apart, with Ellen working at Yale, and Ralph teaching physics in Georgia. With the couple now reunited in Georgia, Ellen writes, "I realized all of a sudden it was so nice to have all our kitchen tools in one place and to be able to cook without having to wonder who has a certain tool." For the time being, her future plans remain in flux.

Herbert Jernow '58, who earned his MD degree from the University of Chicago in 1962, has now retired after 30 years of practice in Internal Medicine in White Plains, New York.

Roy Kisliuk '50, writes: "This is to let you know how much I appreciate receiving *Biology Currents* . . . I was greatly moved by the memorial for Arthur Colwin. He and Laura encouraged my interest in research as well as motivating me to go to Woods Hole in the summers (five summers in all). I remember particularly their work with *Uricelaria*, a beautiful ciliate protozoan from the intestine of sea cucumbers." Dr. Kisliuk (PhD) is now professor emeritus of biochemistry at the Tufts University School of Medicine.

Heidi Zapata '00 is enrolled in a joint MD/PhD program at SUNY Upstate Medical Center in Syracuse, NY. Having completed the basic science portion of her MD, she is now doing lab research and starting to write her first manuscript. She presented her findings earlier this summer at the International Herpes Workshop in Turku, Finland, and spent a week touring Germany and Austria.

The Department of Biology, Spring 2005





Dr. Mitchell Baker. 2. Dr. Karl Fath. 3. Mr. Travis David. 4. Dr. Michael Barry.
 Mr. Javier Monzon. 6. Dr. Paul Mundinger. 7. Dr. Stephane Boissinot.
 Dr. Jon Sperling. 9. Dr. PoKay Ma. 10. Dr. Robert Calhoon. 11. Dr. John
 Waldman. 12. Dr. David Alsop. 13. Mr. Michael Tessitore. 14. Ms. Xenia Frielich.
 Ms. Patty Riley. 16. Ms. Maria Birne. 17. Dr. Roberta Koepfer. 18. Dr. Corinne
 Michels. 19. Ms. Carla Pisko. 20. Dr. Joni Seeling. 21. Dr. Timothy Short.
 Dr. Cathy Savage-Dunn. 23. Dr. Zahra Zakeri.
 (Not pictured: Dr. Peter Chabora, Ms. Rosalie Isla, Dr. Areti Tsiola.)

GRADUATES • SEPTEMBER 2003—JUNE 2004

Alfaro, Cindy V. Ally, Alisha N. Badillo, Michael Brijmohan, Nordis A. Chien, Henry, Honors in Biology, Feigelson Award Dimitrakakis, Potoula Esquivias, Leticia Giandira, Honors in Biology, Beta Delta Phi George, Rose Zareen Guerrero, Gabriela Lucia Hill-Sukie, Roger Jackman, George W., High Honors in Biology, magna cum laude, Lancefield Prize Jimenez, Cynthia Gabriela, Honors in Biology

Kantz, Natalie N. Kim, Elijah, Honors in Biology, cum laude, Dr. Jeffrey Hollander Memorial Award, Martin David Dahlmann Memorial Alumni Scholarship, Presidential Scholar, Golden Key, Beta Delta Phi Leontyeva, Natalya, Honors in Biology, cum laude Maltaghati, Kristin Ann Monzón, Javier D., Honors in Biology, cum laude, Colwin Prize, Queens College Scholarship, Ruth Rudowsky Memorial Scholarship, Honors in Math and Natural Sciences Moran, Daniel Joseph Okpych, Christopher M.

Pappas, Elayne S., Honors in Biology, Beta Delta Phi
Rattan, Gurjeev, High Honors in Biology, cum laude, Darwin Prize
Rodríquez, Pablo
Romero, Juliana Bello
Sanders, Donna D., Honors in Biology, cum laude
Solomon, Diana Louise
Sowka, Magdalena, Honors in Biology
Stern, Alana B., Honors in Biology, cum laude
Sukhu, Khamini
Tarachand, Dharmendra, Honors in Biology, cum laude

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2004 BIOLOGY DEPARTMENT PUBLICATIONS

Baker, M.B. and S. Rao (2004). Incremental costs and benefits shape natal dispersal: theory and an example using desert isopods, *Hemilepistus reaumuri*. *Ecology* 85: 1039–51.

Baker, M.B. (2004). Sex-biased state dependence in natal dispersal in desert isopods, *Hemilepistus reaumuri. Journal of Insect Behavior* 17: 579–98.

Greller, A.M. (2003). A review of the temperate broad-leaved evergreen forest zone of the southeastern North America: Floristic affinities and arborescent vegetation types. *Botanical Review*, 69: 269–99.

Levine, M.E. and **Greller, A.M.** (2004). Ecological and floristic analyses of vascular plants along a gradient of disturbed serpentinite on opposing slopes in Staten Island, N.Y. *J. Torrey Botanical Society* 131(1): 62–92.

Wang, X. and C.A. Michels (2004) Mutations in *SIN4* and *RGR1* cause constitutive expression of *MAL* structural genes in *Saccharomyces cerevisiae*. *Genetics* 168: 747–57.

Wright, T., E.F. Brittan-Powell, R.J. Dooling, and P.C. Mundinger (2004). Sexlinked inheritance of hearing and song in the Belgian waterslager canary. *Proc. R. Soc. Lond. B (Suppl)* 271: S409–12.

Roze, U. (2004). Risk factors for injury in porcupines. *Wildlife Rehab.* 21: 61–63.

Li, J.-Y., G. Ram, K. Gast, X. Chen, K. Barasch, K. Mori, K. Schmidt-Ott, J. Wang, H.-C. Kuo, C. Savage-Dunn, M.D. Garrick, and J. Barasch (2004). Detection of Intracellular Iron by its Regulatory Effect. *Amer. J. Physiol. Cell Physiol.*, 287: 1547–59.

Morgan, E.C. and J.A. Sperling (2004). The bryophyte flora of the Cranberry Bog Preserve, Suffolk County, New York, with notes on their distribution. *Evansia* 22: 78–84.

Rodríguez-Muñoz, R., J.R. Waldman, C. Grunwald, N.K. Roy, and I. Wirgin (2004). Mitochondrial DNA variation in sea lamprey between North American and Spanish rivers. J. Fish Biol. 64: 783–87.

Waldman, J.R., C. Grunwald, N.K. Roy, and I. Wirgin (2004). Mitochondrial DNA analysis indicates sea lamprey (*Petromyzon marinus*) indigenous to Lake Ontario. *Trans. Amer. Fish. Soc.* 133: 950–60.

Waldman, J.R. (2004). Definition of stocks: an evolving concept. In: *Stock Identification Methods*, S.X. Cadrin, K. Friedland, and J.R. Waldman [eds.], Elsevier, San Diego, pp. 5–14.

Friedland, K., **J.R. Waldman** and S.X. Cadrin [eds.] (2004). *Stock Identification Methods*, Elsevier, San Diego.

Waldman, J.R. (2004). Meristics. In: *Stock Identification Methods*, S. X. Cadrin, K. Friedland and J.R. Waldman [eds.],

Elsevier, San Diego, pp. 191-201.

Wirgin, I. and J.R. Waldman (2004). Use of nuclear DNA in stock identification: single-copy and repetitive sequence markers. In: *Stock Identification Methods*, S. X. Cadrin, K. Friedland and J. R. Waldman [eds.], Elsevier, San Diego, pp. 321–59.

Wirgin, I. and J.R. Waldman (2004). Resistance to contaminants in North American fish populations. *Mutation Research*, 552: 73–100.

Nieder, W.C. and J.R. Waldman [eds.] (2004). *Final reports of the Tibor T. Polgar Fellowship Program*, 2003. Hudson River Foundation, New York.

Lockshin, R.A. and **Z. Zakeri** [eds.] (2004). When Cells Die II: A Comprehensive Evaluation of Apoptosis and Programmed Cell Death. Wiley-Liss, New York.

Lockshin, R.A. and Z. Zakeri (2004). Introduction. In: When Cells Die II: A Comprehensive Evaluation of Apoptosis and Programmed Cell Death, R.A. Lockshin and Z. Zakeri [eds.], Wiley-Liss, New York, pp 3–26.

Lockshin, R.A. and Z. Zakeri (2004). Caspase-independent cell death? *Oncogene*, 23: 2766–73.

Lockshin, R.A. and Z. Zakeri (2004). Autophagy, apoptosis, and organelle crosstalk. *Int. J. Biochem. Cell Biol.*, 36: 2405–29.

ALUMNI QUESTIONNAIRE

We want to keep in touch! If you just want to say hello, or tell us what's new in your life, please fill in the information sheet below and return to: Prof. Corinne Michels, Dept. of Biology, Queens College, Flushing, NY 11367 • Tel.: 718-997-3400 • Fax: 718-997-3445 • E-mail: corinne_michels@qc.edu

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