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URBAN ISSUES

Newsletter of the Urban Resources Initiative at the Yale School of Forestry & Environmental Studies

"...OUR LITTLE THING"

Photo by Mary Alice Lamb

In this issue:

A Forest Never Stands Still

by Mohamad A. Chakaki

"Have you ever wondered where forests come from and how they grow?" I read this first line to the fifth-graders sitting attentively in their seats in front of me.

This is the story of what I learned from my experiences as a URI intern, from teaching forest ecology in a fifth grade classroom in Fair Haven Middle School to gardening with elders in a vacant lot turned "Garden of Eden" on Bristol Street in the Dixwell neighborhood. I've had the good fortune of interning with URI's Open Spaces as Learning Places and Community Greenspace programs. I spent the spring of 2005 as an environmental educator at Fair Haven Middle School and the summer of 2006 as a community forester in Dixwell, among other neighborhoods in New Haven.

Every Tuesday and Thursday afternoon in the spring of 2005, I would leave the Yale campus after my last class and hurry across town, down Grand Avenue, to Fair Haven Middle School. As I stepped into a classroom almost as big and as bright as the smiles of the fifth-graders that filled it, I left my graduate school worries at the door. On a clear spring day in early May, midway through the Open Spaces as Learning Places curriculum, the children and I set out on a journey through the story of a forest. The lesson is based on a book entitled *How the Forest*

(continued on page 3)

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FROM THE DIRECTOR

"It's the little things citizens do. That's what will make the difference. My little thing is planting trees."
— Wangari Mathai, Nobel Peace Prize laureate

Wangari's quote resonates at URI not only because tree planting is 'our little thing,' but also because our mission is based on empowering citizens in their personal acts of stewardship. As I read the articles written by interns and staff for this newsletter, I realized that Wangari's sentiment is expressed in different ways by each of them.

Over our 16 year history, three Yale students have chosen to intern with both URI programs, Community Greenspace and Open Spaces as Learning Places. These former interns are continuing to make a difference in their own way: Nao Teshima teaches science in a public high school in New Haven; Madeleine Meek serves in the US Peace Corps in Morocco; and Mohamad Chakaki, who has written our cover story, works with the Islamic community on using energy saving strategies at mosques. Mohamad writes beautifully of how forest succession works as a metaphor for our own cycles of life, and different stages of learning. His article points out how people, at every stage of life from youth to old age, have their time and way to contribute to their communities.

In her article, Kim Yuan-Farrell describes working with 6th graders and helping them understand the connections between their experiences in school and the natural world. Both Kim and Mira witnessed wonder through the eyes of their students as they explored New Haven's natural landscape. In her incredibly moving and personal story, Mira shares her childhood experiences of rambling in the woods with her best friend, Leah Deni. In the joy and curiosity of her Open Spaces as Learning Places students Mira sees the familiar excitement of her friend Leah whose life was tragically cut short in 2004. Leah lives on in many of us, including in the lives of her colleagues at the Urban Ecology Institute at Boston College as they teach inner city kids about their environment.

Our newsletter editor Rosi Kerr interviews Josephine Bush, who has led the New Haven URI board for the past 8 years. Jody reflects on design and the value of nature. She sees the connection between humans and nature, even on a small scale, as critical to human well-being. Good design, she feels, can help enhance this effect. Jody also uses her perspective to frame how URI has impacted New Haven over time: "Without a connection to [nature]," she observes, "without a sense for the context we operate in, we become deprived and alienated." URI helps citizens reestablish this connection.

Jody's leadership has driven URI to grow and to reach for new horizons. Last year, with Jody's encouragement, we embarked on a pilot project to address soil contamination. We will expand the project this year. In addition, as Suzy Oversvee writes, we are learning to capture the value of the ecosystem services provided by our street tree canopy. Suzy explains how using computer modeling we can demonstrate the positive impact of tree planting on energy savings, air quality, global warming, and more. We know that planting trees connects neighbors of all ages, and connects children to the wonder of nature. We now also know there is a dollar value for the benefits that trees provide for us. By sharing this information with neighbors and city administrators we can help them understand the value of tree planting.

As the planting season draws near, we once again look forward to doing "our little thing." We have joined Wangari Maathai and the United Nations in the Billion Tree campaign. Together, we believe, all our little things will add up into something quite spectacular, here in New Haven and all around the world.

Colleen Murphy-Dunning

A Forest Never Stands Still

(continued from page 1)

Grew (written by William Jaspersohn and illustrated by Chuck Eckart).

"It takes two hundred years back in time," I read to the children, "to see how the forest land looked back then and how it has changed over time." Slowly, I flipped through the pages of the book as I walked up and down the isles of the classroom, alternating between reading aloud and holding the pages so all the children could see the book's illustrations in their exquisite detail. As I read, the children and I stepped through the stages of forest succession: an initially abandoned open field gradually grew into a grassy patch of land "filled with wildflowers and weeds," right under our feet. Christopher, a round and jovial boy, chuckled to himself as I read. I could see him and the other students picturing this progression.

Five years later, the first small pine seedlings sprouted up around us in the grassy patch. These pioneering pine seedlings grew into saplings and then, some twenty years later, became the pine trees that formed the forest canopy we imagined towering over our heads. Omar was skeptical at first, so he just stood at the edge of the forest with his arms folded. It was clear that he didn't want any part of our tromp through an imaginary forest. But as the children and I moved further and further along, Omar caught up with us. Before long he, too, was tromping through the understory.

It was at this point in our stroll through the forest story that the children and I started to worry about the pioneering pines. "Lightning struck the tallest pines," I quickly read to explain the flash, crack and tumble we could almost hear overhead, "killing some and damaging others." Some of the little ones were startled by all the noise, but not Kenya. She stood her ground, taking it all in as she looked around the forest. Many of the other pines began to die and decay around us, though not as dramatically. "This is how forests grow," I quietly quoted the book to the children in explanation of the pines' demise. "Every time one of them died," the book explained, "it made room for the new and different trees that had been sprouting on the forest floor."

Photo by Mary Alice Lamb

Mohamad teaching at Fair Haven Middle School.

We walked on through the stages of the forest, as the red oaks, red maples and ash trees that once succeeded the pines were, themselves, succeeded by sugar maples and beeches. Juan, wide-eyed and mouth agape, stood frozen as he stared at the kaleidoscopic succession of color and texture in the canopy overhead. It was almost one hundred and fifty years into our two hundred year journey, and the forest was still changing all around us. "A forest never stands still..." ends the book, "Old trees are dying and making room for new trees every day."

This group of urban fifth-graders moving through the understory, ducking under branches and jumping over logs, was captivated by the story of forest succession in the classroom that day. The forest engaged Christopher, Omar, Kenya and Juan in unique but equally powerful ways. In the growth of the forest, I believe the children sensed the growth they had undergone and were undergoing in their own lives. I could picture them wanting to grow big and strong like the pine trees. Unlikely as it may seem, I wondered whether the children sensed that they would also grow old like the pines one day, setting the stage for another little crop of seedlings to emerge.

No Sit-Down-Seniors at the Bristol Street Garden of Eden

I must admit that I was a little skeptical about the Bristol Street Blockwatch's capacity as a community group early on in the summer. "They're old, really old" is what I think I told Chris Ozyck, the Community Greenspace Manager, when I first spoke to some of the group members on the phone. I thought "old" would also mean slow and certainly not strong, but I was wrong.

Looking back, the seniors that made up most of the Bristol Street Blockwatch happened to be one of the higher-capacity community groups I worked with last summer, though perhaps unconventionally so. In fact, I found myself trying hard to catch up and keep up with them—in terms of both the group's goals and their physical work—towards the end of the summer. Mr. Mack, the Blockwatch Captain, put it best when he said, "we're no sit-down-seniors!"

This group's goal was to transform the vacant lot at 117 Bristol Street into the Bristol Street Garden of Eden, a Southern style garden in the heart of a lively New England city block. The group of seniors, many of whom come from Southern states like North and South Carolina, had already planted a Southern Magnolia (with the help of the previous year's Greenspace intern, Esther) in the lot last year.

When we got around to starting work in the lot that summer, I noticed that

(continued on page 9)

The Wonder In Our Bones

by Mira Manickam

Before coming to Yale School of Forestry and Environmental Studies, I lost my best friend, Leah Deni, who died in the struggle to fight off a vicious blood infection. Leah and I grew up together in an unassuming New Jersey neighborhood. Our friendship began as small children playing outdoors together and exploring the small strip of green behind our houses, which for us was an endless magical kingdom. We crept along forest paths in autumn, listening to the leaves crunch under our feet, looking for hidden clumps of vines or abandoned old sheds where we could set up our woodland headquarters. In summer, we skipped stones under the bridge on the small creek that ran across the fields under the power lines. In the evenings, we stalked deer on our hands and knees. And when we got older, we snuck onto the roof of my house to lie on our backs at dusk and watch the stars come out. I am pretty certain that these experiences are what made us both into avid lovers of nature and are the root reason that we both focused our careers on conserving the natural world. I used to say we had it in our bones.

When I went to do environmental work in Southeast Asia after college, Leah got a job with the Urban Ecology Institute (UEI) in Boston, coordinating their education program in the Boston public schools. Much like URI, UEI has a science curriculum that brings field research into high school science classrooms. Leah's excitement bubbled across the phone line when she told me about her new job. She recounted one project, linking high school students to a university research project tracking the spread of coyotes into urban areas. Many of the students had truancy problems at their high schools, but their teachers observed that they always showed up on the days when they worked on coyote research. I shared her excitement that her program fostered such engagement in the natural world.

Photo courtesy of Mira Manickam

Mira and Leah enjoying Flower Hill Pond.

Over the years, I would hear more about UEI's philosophy of connecting children with nature in the urban environment as she told me about her new endeavors and the challenges in her working life.

Moving to New Haven marked the beginning of a new stage in my life cycle—one where I had to learn to live without my best friend a phone call away while I found ways to keep her spirit a part of my life. The city's vast network of parks and open space were welcoming and healing places. I spent many afternoons riding my bike along the Mill River or sitting on rocks by its edge, looking for a lone gray heron across the water, the way Leah and I used to along the creek behind our houses.

I was attracted to URI's work because I worked as a teacher for a year after college, and I missed the raw engagement of working with children in a classroom. I hadn't thought too much about the connection to Leah's work, yet as we moved through the curriculum, I saw Leah in every part of it. As I learned more about urban environmental education, I remembered her commitment to developing a sense of wonder in all parts of nature, and the way she was inspired by even the smallest plant determinedly emerging from the sidewalk. I remembered a picture I saw of her standing among a group of children pointing out birds in a Boston city park, showing them that nature was all around them. With this in mind, I learned the names of birds in New Haven and encouraged my students to get lost in the avian world.

Teaching was a challenge, but this time around, with the mentorship I never had in my previous job, I learned tools and techniques for dealing with the perennial problems of classroom management, and the tendency towards chaos that accompanies attempts to bring children outside of the structured school environment into the world outside. The biggest challenge, as is often the case in URI's Open Spaces program, was the canoe trip. We had discipline problems on earlier field trips and many kids were faced with the possibility of being excluded from this most exciting of outings. The principal of Hill Central, Mr. Arroyo, was admirably committed to giving all the

kids a chance to go canoeing. After a severe lecture on discipline, we took off with everyone on board. The weather that day was a gift—a perfect crisp blue sunny autumn sky—and we spent two hours captivated by the magic of the river in its finest fall colors. The kids' behavior was a living example of nature's transforming influence. The children I had expected to be the rowdiest in their canoes took on the greatest responsibility, and with wide eyes described the magical feeling of gliding across the river to their classmates who were about to embark on the same journey. George was one student who risked being excluded from the field trip, but in the end was allowed to come, provided his mother accompanied him. I had never seen George behave so well. He used his keen scientific mind—which too often was masked by his disruptive behavior—to guide his mom through our nature walk, explaining to her with care all the animal prints and clues we were seeing.

I left that trip feeling full to bursting with love for everything around me—the kids at Hill Central, the trees, the river. I remembered reading David Sobel's *Beyond Ecophobia*—in preparation for my job as a teaching intern—it had made my chest hurt as I remembered Leah. Sobel writes about how experiences in nature help form our sense of connection with the world. I thought about how I had the gift of growing up with a little patch of woods and a person who would become my best friend to explore it with. As we rambled, Leah and I had developed a shared understanding of ourselves, and of the world—an understanding that would link us for as long as we lived. I thought about how I shared this with the kids by the river, and felt Leah particularly strongly in my bones that day, and on the water and in the breeze blowing off the trees. As I sat under the oak tree outside the Forestry School I thought about how we, the kids of Hill Central and I had experienced nature together, and had a chance to be our best selves for a few hours in the woods, sharing our delight at the geese that flew overhead and at the feeling of gliding across the water. I knew that the feeling of wonder would be in all of our bones when we went to sleep that night.

MIRA MANICKAM, F&ES 2007, roves the globe seeking to add her shoulder to the wheel of justice and environmental equity where she can. She has been known to dance 'til dawn. After graduation, Mira hopes to make a living saving the world by spreading environmental awareness through hip hop music.

Update on the Urban Ecology Collaborative

Since two articles in this edition of Urban Issues touch upon the Urban Ecology Collaborative (UEC), which URI is an active partner, it's time to give our readers background and an update. The UEC is a partnership among the U.S. Forest Service, universities, non-profit organizations, and city agencies working in northeastern cities. Realizing that there were real opportunities to learn from each other's successes and challenges, Charlie Lord, of the Urban Ecology Institute in Boston, Colleen Murphy-Dunning of URI, and others launched the UEC to maximize efforts of urban ecology groups in Boston, New York City, Washington, D.C., Baltimore, Pittsburgh and New Haven. UEC has four working groups: Restoration Tools, Environmental Education, Research, and a Steering Committee. Suzy Oversvee gives a good example of how URI has learned from other UEC partners to implement the STRATUM model in her article "Money Doesn't Grow on Trees, or Does It?" And, Leah Deni, mentioned in Mira Manickham's article "The Wonder in Our Bones" led the UEC's Environmental Education working group.

UEC develops practical "tool kits" for each city when programs or strategies are successful. The tool kits help groups in other cities replicate programs that are working. The US Forest Service provides the important role of compiling the large volume of data produced by UEC members so that regional trends can be observed. For more information visit **www.urbanecologycollaborative.org**.

The Urban Ecology Institute, where Leah worked, is home to the Leah Deni Fund and a memorial in her honor. For more information about Leah, the Urban Ecology Institute or the Leah Deni Fund, please visit: **www.urbaneco.org**.

Photo by Christopher Ozyck

UEC members at a strategic planning meeting.

Money Doesn't Grow on Trees, or Does It?

by Suzanne Oversvee

Although the mythical money tree has yet to be discovered, cities are starting to realize the economic value of trees. There is a longstanding rural tradition of thinking of trees in terms of dollars paid for their wood. Now a number of cities across the country are using computer models to calculate the dollar value of the other things trees provide. Non-profit organizations and city agencies in Washington, D.C., New York City, Baltimore, Pittsburgh, Boston, and New Haven have come together to form the Urban Ecology Collaborative (UEC), and to share the results of their work, including using these models. Last November, I had the opportunity to attend a meeting of the UEC Restoration Tools working group, where each city presented on their experience and their progress towards determining the economic value of their urban trees.

Trees are important to us for many reasons, offering things of both tangible and intangible value. For instance, one intangible value we cherish is their beauty. They are also valuable because they provide certain tangible services, often called ecosystem services, to the city and its residents. Trees provide cleaner air, which is important in cities because cleaner air helps control asthma, a common problem for urban children and one that costs money to treat. Tree branches and roots also help slow storm water runoff, which causes flooding that many cities spend millions of dollars to address. These are just two examples of the many ecosystem services provided by trees. Because these services have tangible value, US Forest Service researchers reasoned that we could assign dollar values to them, and by extension to the trees that provide them. Determining the value of a tree helps organizations like those in the UEC make the case to city government for increased budgets for tree planting and maintenance. Like the other cities involved in the UEC, New Haven is starting down this road by determining the value of the existing street tree population.

To figure out how much a tree is worth, U.S. Forest Service researchers developed several computer programs to analyze tree data entered about each city. The Forest Service then made these models publicly available. Dr. Gregory McPherson at the Pacific Southwest Research Station developed a model called STRATUM (Street Tree Resource Analysis Tool for Urban Forest Managers) that specifically assesses urban street trees. As part of my thesis work, I ran New Haven's street tree inventory through the STRATUM model. The results I generated demonstrate clearly that street trees are an economic asset to the city because of their ability to reduce energy consumption, clean the air, absorb storm water, and

Species	Energy	CO_2	Air Quality	Stormwater	Aesthetic/Other	Total ($)	Standard Error
Norway maple	364,093	12,014	67,231	79,991	362,612	885,941	(±0)
Pin oak	243,172	8,232	47,592	73,069	244,744	616,809	(±0)
London planetree	197,535	4,763	34,299	52,746	146,404	435,748	(±0)
Sugar maple	100,764	2,445	17,193	27,330	89,695	237,426	(±0)
Northern red oak	137,329	3,750	25,387	37,866	85,169	289,502	(±0)
Honeylocust	95,848	1,886	16,652	19,216	85,504	219,106	(±0)
Littleleaf linden	62,844	1,112	10,489	12,690	36,800	123,934	(±0)
Red maple	89,433	1,691	16,223	23,052	52,861	183,260	(±0)
Callery pear	27,342	915	5,346	6,331	78,126	118,059	(±0)
Japanese zelkova	46,766	867	6,835	6,704	66,273	127,445	(±0)
Elm	46,161	1,229	8,846	11,825	56,586	124,647	(±0)
Ash	29,013	636	5,414	6,844	22,490	64,398	(±0)
American elm	45,525	1,315	9,437	13,155	46,643	116,077	(±0)
Kwanzan cherry	5,896	138	925	843	3,407	11,209	(±0)
White ash	18,999	422	3,563	4,521	14,721	42,227	(±0)
Apple	4,577	77	737	735	3,363	9,490	(±0)
Other street trees	180,164	4,448	32,959	46,502	157,634	421,706	(±0)
Citywide Total	1,695,461	45,939	309,129	423,421	1,553,032	4,026,983	(±0)

Figure 1. Total Annual Benefits

because their aesthetic value is reflected in real estate prices.

First, I used STRATUM to determine the amount of energy saved each year by New Haven street trees. In summer street trees help to save energy by shading homes, which means lower energy costs from air conditioning. In winter, trees can reduce heating costs by sheltering homes from wind and harsh storms. In New Haven, the electricity and natural gas conserved due to street trees equates to an economic value of approximately $1.7 million.

Next, I looked at the effect of trees on air quality. STRATUM can be used to estimate the amount of harmful air pollutants that urban trees capture in their leaves as they transpire ("breathe") and the amount of air pollutants that are not released to the atmosphere due to decreased energy use. According to this model, New Haven's street trees capture approximately 30,000 pounds of air pollutants (O3, NO2, PM10 and SO2) each year and prevent approximately 37,000 pounds of pollutants from going into the atmosphere. This equates to an economic value of nearly $309,000 annually.

I also used STRATUM to determine the value of several other ecosystem services supplied by street trees. Trees reduce storm water runoff and associated flooding, provide aesthetic benefits and decrease the amount of atmospheric carbon dioxide (a greenhouse gas) emitted in cities. In total, it is estimated that the street tree population in New Haven has an economic worth of approximately $4 million annually when taking into account the benefits that are evaluated in STRATUM (see figure 1).

By understanding ecosystem services and giving them a dollar value, we get a more complete picture of the value of trees, beyond the nursery price tag. This is great news for the many Greenspace volunteers who plant trees in the heat of the summer. They can be rest assured that their efforts pay off…literally. When we understand the value of trees, city governments may be more willing to invest in planting, and in tree maintenance to increase their value, as well as increase the quality of life for city residents living under the urban forest canopy. Maybe some money really does grown on trees!

SUZANNE OVERSVEE is a second year Master of Environmental Management student at Yale F&ES. She spent last summer working as a URI intern.

Our Little Thing Is Planting Trees: The Billion Tree Campaign

Urban Resources Initiative has joined the United Nations program to plant 1,000,000,000 trees in 2007. The United Nations Billion Tree Campaign raises awareness about the benefits of trees, especially their value as a way to combat global warming. Urban locations, such as New Haven, are one type of planting target of this ambitious program. URI has committed at least one hundred trees to be planted through the Community Greenspace program, but we expect to far exceed this number. So far the U.N. program's planting commitments total a little over half of their goal, but this number will rise as awareness increases and spring comes to the northern hemisphere. If you would like more information, look online at www.unep.org/billiontreecampaign/index.asp.

In order to boost our own tree planting campaign, URI is seeking new opportunities to add trees to the New Haven landscape, in addition to tree planting with volunteers through Community Greenspace. Next fall, URI will partner with the New Haven Department of Parks, Recreation and Trees to fill street tree planting requests they receive from citizens. We hope to involve many of our City's youth in our new fall planting program, which is still in the planning stages. To support these new initiatives, URI will also pilot a tree nursery and experiment with bare root planting.

"When we plant trees, we plant the seeds of peace and the seeds of hope." – Wangari Maathai, 2004 Nobel Peace Prize recipient and former visiting professor at the Yale School of Forestry and Environmental Studies.

Photo by Josh Schachter

Nature's Transforming Influence

by Kim Yuan-Farrell

The transformations you see in a child when they realize something new about the world around them are amazing. That is one of the things I love about environmental education—it's almost like revealing magic before a student's eyes. Nature is full of these treasures, these tidbits of wonder that even full-grown adults are surprised to discover.

Sadly, there is a time in many kids' lives when surprises and child-like wonder begin to end, when peers and being cool become important, when overt enthusiasm for learning is an embarrassment. These are the forays from childhood into adolescence—tough years, negotiating new identities and relationships. Add to that the challenges of living in neighborhoods facing the hardships associated with poverty, and preserving wonder, understandably, doesn't make the priority list of some kids, teachers or parents.

The first day of my internship with Open Spaces as Learning Places (OSLP), I was a little nervous watching the 6th graders at Lincoln-Bassett Elementary stroll coolly into the room, gazing at me with decidedly unimpressed, uninterested curiosity. This was a crucial moment of first impressions and sizing each other up. A number of them didn't seem much shorter than I, and I struggled internally with which educator hat to wear: peppy, cheery can't-wait-to-learn-about-nature-with-you-guys hat or stern don't-test-the-limits enforcer hat. Fortunately, it didn't take long for Justin's dynamic introduction of the Open Spaces environmental science curriculum to catch at least the mild interest of many of the students. Of course, how could it not?

Within the first lesson, students were spreading out their freshly handed-out New Haven Greenspace Maps on their desks, locating their own neighborhoods among the grid of streets and parks, and seeing where they fit into the landscape as they learned about the settlement, history, and change of their city over time. They learned the names of birds of which they had only been vaguely aware existed until then and, almost instantly, started to see more. The students visited a nearby park, a greenspace restored by neighbors near their school, and even their familiar schoolyard, exploring each space with fresh eyes searching for secrets they'd never noticed. Open Spaces provided them with a new lens through which they saw their community as an interesting place where nature lived and moved all around them.

All the while, these Lincoln-Basset 6th graders were absorbing a place-based, hands-on science curriculum that meets state science education requirements. The beauty of OSLP is that it provides rich experiential learning while fulfilling the strict teaching standards that often limit field-based opportunities. The program builds on itself over the course of six integrated units during eighteen classroom and field trip sessions. OSLP applies science in a tangible, relevant way and connects students with elements that are simultaneously familiar and yet undiscovered to them: local bird species, New Haven Harbor, the process of erosion that carved the West River.

During a field trip to a greenspace, I crouched with a group of students to look at a low-lying spider web. It struck me that this was a crucial moment to reach these kids, as they wavered in the space between childhood and young adulthood. Richard Louv, author of the critically acclaimed *Leave No Child Inside* believes that nature experiences have an "enormously positive impact on [children's] cognitive development, creativity, and emotional health." David Sobel, another expert in environmental education, claims that from ages seven to eleven, a child should be exploring her world—the home, school, neighborhood, and beyond—and seeing how she fits into it. Then, around age twelve and later, she can engage in social and environmental action. For many New Haven kids, nature exploration, even within their neighborhoods, is limited. If we hope for children to become environmentally conscious adults, we must foster nature appreciation first. Perhaps more importantly, changing the way a student sees her neighborhood—as a place alive with nature—can work to improve her quality of life, pride in her community, and her connections to other places, people and creatures. From OSLP, she can realize that science is fun and empowering, as she becomes a local expert who can share nature's secrets with family and friends. This might inspire future interest and, I hope, success in the science classroom.

Over the course of these class visits and fieldtrips, I witnessed small transformations in how the Lincoln-Basset students saw and interacted with their environment. They became observant and enthusiastic, shouting excitedly, "Miss Kim! Miss Kim!" after recognizing a tree species they'd learned to identify the prior week or pointing out the

Photo by Mary Alice Lamb

Exploring the life in a pond.

delicate, ornamental adaptations of a plant's seed structure. On fieldtrips especially, students emerged from their self-conscious selves, becoming more engaged, showing glimmers of delight when touching surprisingly soft deer fur and outright wide-eyed wonder when spotting Great Blue Heron while canoeing on the West River. In one memorable instance, a sullen student, displeased that I'd scolded her and her friends for continual talking, repeatedly flashed unfamiliar hand gestures at me. These experimental gang signs were harmless threats, yet they represented realities that this girl and her classmates face daily. Only a week later as I greeted students climbing out of their canoes, this same student ran up to me and held my arm as she bounced, carefree and child-like, detailing the events of her trip with excitement. I felt excited for her and proud as she proceeded to point out nearby tracks in the mud, and she seemed to have grown years younger in that short week.

In these moments of exploration and discovery, I could establish familiarity and even some trust with the students, and I found that I could put a little more weight on the fun, enthusiastic side of the balance between educator and disciplinarian. For me, a lasting image from my internship with Open Spaces As Learning Places is of skyward-tilted, laughing faces—once purposefully bored—of a small group of 6th graders as they exuberantly tossed maple tree seed pods into the air and stood in a shower of nature's whirling helicopters.

KIM YUAN-FARRELL is a first year Master of Environmental Management student at Yale F&ES. She is interested in environmental awareness and community-based stewardship. Kim enjoyed serving as Education and Volunteer Programs Coordinator at the Santa Clara Valley Audubon Society prior to her studies at Yale.

A Forest Never Stands Still

(continued from page 3)

the young Magnolia the group planted in the previous year was in bloom. I walked through the chain-link gate and over a small patch of asphalt that remained of the old driveway, to the middle of the lot. There, bathed in light coming through a gap in the canopy overhead, stood the Southern Magnolia. Its large white blossoms looked almost as lovely as they smelled, sweet with a subtle scent of citrus.

Only two or three of the community members on the Bristol Street Blockwatch could actually take part in the manual labor involved in the garden work that summer. There is so much more to Community Greenspace work, however, than the physically demanding tasks of planting and gardening. As Greenspace members tend to their neighborhood's soil and plants, they cultivate community in the process.

This is how it happened on Bristol Street: The less physically able community members brought the drinks, ice cream, music, jokes and smiles. They kept those of us working company, kept us fed and kept us happy. What was particularly special for me at Bristol Street last summer was that, whenever I was out there working, the neighbors always kept me feeling like a part of their community. In return, I planted a little piece of myself in the Bristol Street Garden of Eden.

A Community Never Stands Still

Like our plants and gardens, none of us will be around forever. Each of us, however, can leave our little mark. The Garden of Eden and the sense of community that the "no sit-down-seniors" are cultivating on Bristol Street will be their legacy.

URI works with school children and community members all over the City of New Haven. The Open Spaces as Learning Places program aims to connect children to the natural world within their urban environment. In doing so, the program also strengthens the children's academic achievement in subject areas as diverse as science, mathematics, history and language arts.

The work that the seniors spearheaded last summer on Bristol Street does well to reflect the goals of the Community Greenspace program at neighborhood sites all across New Haven. Not only did the Bristol Street Blockwatch take steps toward restoring their urban environment, they cultivated community and nurtured neighborhood stewardship in the process.

Both the children at Fair Haven Middle School and the elders on Bristol Street were learning about their urban environment, and I—as I now realize—was learning about life. I learned that old trees are stronger, and young trees more adaptable, than I first thought. I learned to be inspired by the passion for life I saw in both the children and the elders I spent time with.

In the children I sensed an awe of nature, and receptivity toward the lessons it has in store for us, that I hope the child in me will never lose. The elders, on the other hand, taught me what it meant to have the dedication and the drive to follow through with a commitment to an idea and to a neighborhood.

From the children and the elders and the forest, I learned that interdependence—both within and across generations—characterizes life. Each generation may like to believe that they are the pioneers of their own open fields. More often than not, however, we are simply growing up and into the gaps left by the previous generation.

MOHAMAD A. CHAKAKI graduated from Yale FES in May of 2006. He now lives and works in Washington, DC—his home-away-from-home—stirring things up both socially and environmentally.

A Decade of Leadership

Adapted from an Interview by Rosi Kerr with URI Board Chair Josephine Bush.

Josephine Bush, URI Board Chair

I come from a background in landscape design and, before that, art history. One of the most fun projects I ever did was in Harlem, for a small private school. I did lots of research into what teachers and kids want and need and responded with suitable plantings. The project was quite successful and it piqued my interest in working with people who are interested in landscape, design and beautifying their neighborhoods but don't necessarily have the means to do it. I think this is what led me to URI. My first project with URI, in 1997, was Arch Street, now an emeritus group. I was, at that time, working directly with neighbors and getting my hands dirty. I did it with such enthusiasm that I think they were amused by me. It added to the project in this case but it's a delicate thing, since our projects work best when there is the right dynamic among neighbors, and we at URI try not to insert ourselves too much. We guide the design process and, in the case of Arch Street, the finished product had the right balance of textures for the space. It was muscular enough to fill the city space. Some element of design is important, whether it is a path or big trees, to anchor the space and give it meaning. But, as I said, ultimately what works best is the right chemistry among neighbors. When people learn via the project, it is really exciting. Whether it's learning about plant biology or security, traffic calming or human behavior, I find that people know a lot more than they thought, but they have never had ideas presented to them in a conceptual way. Most of us rarely conceptualize our own city or neighborhood. When we do, the perspective shift can be very engaging. I find that I see design everywhere, because I have been trained to think conceptually about design. A lot of parks, for example, end up looking incidental because they are not well designed to fill the scale they occupy. The benefit of good design is that it produces a desired effect, whether that effect is restorative, invigorating or casual, without appearing to. URI projects tend to feel cozier and more human than those designed by landscape architects because they are designed on the ground, not on a piece of paper. I don't know any other group that is doing what we're doing. You can tell when we've been there because you can tell a specific block is being maintained. People are empowered to keep it up and it has a human quality about it.

In New Haven the natural elements, whether they are street trees or park plantings, sometimes get neglected, abused and overrun by traffic and use. They don't make the priority list necessarily. It is my view that sooner or later the city will recognize that natural elements meet a need.

It's amazing the difference a tree makes not only visually but also because it gives us a place to be. Street trees help people feel reconnected and at home and help put them back into an appropriate scale. A house without trees feels naked, exposed, while a house that is behind a tree has a place to be. With a tree in front there is logic to where the house is, because the house must, according to our perceptions of nature, accommodate the tree. This is part of what I mean by context. It is my belief that we are innately, genetically, culturally and linguistically formed within the context of nature and that if you eliminate this context, there might be a deep feeling of alienation.

You can't prove this but you can observe the enthusiasm of people for natural things and their pride in restoring those elements in their neighborhood. After we finished at Arch Street, people around the park planted their porches with flower baskets. According to what I have read, there are now as many as three generations that have grown up removed or disconnected from their natural context. URI helps people reconnect and they relish this connection and take joy from it.

I firmly believe that humans need to have a connection to nature and need to be able to see natural elements in their everyday lives. Life without trees and nature can make us brittle. Without a connection to this basic part of the world, without a sense for the context we operate in, we become deprived and alienated. It's like love, faith and hope. Heating oil, food and shelter are important but without love and faith and hope these necessities do not have meaning. They are essential to our lives. What is the point of having heating oil without hope? Or wonder? Trees provide context, a psychological umbrella and shade. Without heat or food, true there is no life but without hope, wonder, love, joy and context there is no meaning.

ROSI KERR is graduating from F&ES this spring. She has edited the newsletter for two years, setting a URI record for longevity. She has written several articles for various newsletters and was a pioneering co-teacher in the Yale-New Haven Saturday Seminar Environmental Science course, which was sponsored by URI. URI will miss Rosi dearly when she goes out into the world to work for a renewable energy company in June.

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205 Prospect Street
New Haven, CT
06511-2189

T: 203 432.6570
F: 203 432.0026
www.yale.edu/uri