

Outstanding UVM Students Story Collection

University Communications has begun collecting information and creating short stories about outstanding University of Vermont student that are displayed on the University's home webpage.

http://www.uvm.edu/about_uvm/?Page=stories/stories.html

Below are a collection of some stories and notes for potential highlight spots grouped by topics related to the University's strategic goals and mission.

Liberal Studies

- **Ethan Bond-Watts, environmental major.** "Time burns up. It goes up the chimney, man," says Ethan Bond-Watts. Time — he's talking about long stretches of it — up to nine hours straight immersed in his art. And the chimney? It's the stack over the furnace where molten glass glows orange as the UVM junior practices his craft in a Burlington studio co-op.

When Bond-Watts first encountered glass blowing as a 15-year-old Champlain Valley Union (CVU) High School student in Hinesburg, Vt., the pull was intense. "Finding glass that was so hot, so dangerous, so immediate — it's the same reason young people are attracted to snowboarding, that instant gratification," he says.

Back then, Bond-Watts recalls, the talk as graduation approached wasn't "What are you doing next year?" but "Where are you going to college?" Bond-Watts wasn't. He had a far clearer sense of his next step than most his age. After working at Church and Maple Glass Studio through high school, he was ready to apprentice with noted Burlington glass artist Alan Goldfarb.

While he built his skills in a four-year apprenticeship, pursued experiences with the world's top glass artists in Venice, Seattle and Corning, N.Y., and gained the business sense necessary to an artist's survival, Bond-Watts grew more committed to his path. "It became apparent at some point that I could spend my whole life in front of the furnace," he says, "and I realized that an education was really important to me." Bond-Watts enthuses about how UVM's Environmental Program has deepened his perspective as an individual and an artist. You can see his one of his commissioned glass sculptures hanging in the Davis Student Center sometime during the fall 2008 semester.

http://www.uvm.edu/about_uvm/?Page=stories/students/watts.html

- **Nate Berg, community development and applied economics.** Nate already has his dream job lined up when he graduates. The hours are terrible, it's physically demanding, and his dad was hoping for a different career path. But as far as Berg

is concerned, it doesn't get any better than captaining your own lobster boat on the Atlantic Ocean every day.

For Berg, a community development and applied economics major, there was never a question about his future employment once he started working on the Emily Manning for a local lobsterman in Warren, R.I. His dream wasn't initially shared by his father, Geoffrey Berg, a Providence physician who got the job for his son 10 years ago as a summer gig at the age 15.

"Initially he wasn't too happy about it as a career option, but now he's on board," says Berg.

Berg says it can cost upwards of \$500,000 to get a boat, license and equipment. He was fortunate enough to work as a deckhand for a local fisherman who sold him the Emily Manning and equipment in May of 2007 for well below market value. Berg works with 800 traps weighing 60 pounds each that make up a string of pots.

Owning and operating a fishing boat and a business while also attending UVM full time has been challenging. Berg drives four hours almost every weekend to Warren, a well-known whaling port and ship-building town in the mid-1700s, to prepare for a 12-hour day that starts at 3 a.m. He plans to work this schedule seven days a week starting the summer after he graduates.

To supplement his on-the-job training, Berg has taken numerous courses at UVM while working on a dual major in community and international development and community entrepreneurship. In his latest course, Strategic Planning for Community Entrepreneurs, Berg is using his business as his semester-long project to make sure it's as efficient as possible. "We're using all my financial information dating back five years to project five years ahead," he says. "It can be an unpredictable history."

http://www.uvm.edu/about_uvm/?Page=stories/students/berg.html

- **Emma Vick, political science/anthropology double major.** Emma is an excellent student with a GPA of 3.6 who has developed a passion for Africa, generally, and specifically for a program called the New Sudan Education Initiative, or NSEI. NSEI, founded by several Lost Boys of Sudan who live in Burlington, opened the first of 20 planned secondary schools in southern Sudan in May. An essay Vick wrote about NSEI won first place in a writing contest sponsored by Teen Vogue magazine. Vick is using the \$5,000 award she received to start a microlending program in southern Sudan, administered through NSEI. She spent the summer teaching in a refugee camp in Liberia and helping run a microlending program there (at times using funds supplied by her parents), skills she will bring to the NSEI microlending effort. A tireless advocate for NSEI, Vick ran a Sudan education week at UVM last spring, heads up the campus's Sudan club, and buttonholed United Nations representatives, telling them all about the

initiative, at a conference she attended in Washington last year. Vick will spend both semesters next year at the University of Ghana.

- **Jennifer Fricke, biological science, Asian Studies double major.** Jennifer is a top student who has two abiding passions: scientific research and Chinese. Fricke began working in the malaria lab of biology professor Joseph Schall as a freshman. Her work there focuses on plotting the genetic diversity of the parasite that causes malaria. She spent the summer in California doing research both for Professor Schwall, looking at the malaria parasite in the lizard population there, using her people skills to gain cooperation from suspicious ranchers whose land she needed to access. For another professor, she studied the genetic diversity of a species of invasive wasp in California to see if its genetic makeup changed as it adapted to its new environment.

As part of her Asian Studies course of study, Fricke also spent six months doing independent study in China with the Vermont Governor's Institute on Asian Cultures, becoming fluent in Chinese in the process. Her career plan is to earn an advanced degree, then work as a research scientist in the public health area for the Chinese government.

This service orientation manifests itself in other ways. Fricke spent her spring break two years ago in Mississippi putting roofs on houses destroyed by Hurricane Katrina. Fricke is also a dedicated runner and finished her first Boston Marathon this year, logging a respectable time of 4:21.

- **Jacqueline Bell, engineering major.** Bell founded the Vermont Chapter of Engineers without Borders. Serving as president. Very active in student organizations. Awarded the Social Justice Activist Award. Dom Grasso says she's in the same league as Gloria Steinem at Smith and Jody Williams at UVM.

Environment

- **Julia Meurice, self-designed major.** Julia arrived in Senegal an environmental science major. So inspired by her work with Senegalese villages, she left planning to design a new major around issues of ecology, resource management and intercultural communication. "Study abroad gave me direction and because of it, I feel like I've got a firmer grasp on where I want to go with the rest of my life," says the UVM undergraduate. Working directly with Senegal villages as part of the Living Routes program, "Sustainable Development in Ecovillages," Meurice met with villagers in order to help plan for, and ultimately fund, a sustainable business idea.

http://www.uvm.edu/about_uvm/?Page=stories/students/meurice.html

- **William Young, undergraduate forestry major.** When October leaves have ripened to the fall, who hasn't stood under a flaming maple and wondered why it goes red? As part of a United States Department of Agriculture (USDA) minority scholarship he received through the Rubenstein School, each week forestry major William Young works with researchers in labs at the Forest Service and on campus as they measure sugar levels, record chlorophyll content, and search for clues about how a maple makes a living.

"Me? I just climb up and down ladders with duct tape," says Young, with a grin, as he carefully places tiny disks of chopped leaf into a test tube of methanol.

"In Natural Resources 1, my first day here, we talked about why leaves turn red," he says. "This is Vermont. Everyone cares about red leaves."

The role that red leaves play in Vermont's landscape — and economy — may be under threat from climate change. As a result, UVM researchers from the Rubenstein School to the Proctor Maple Research Center are working to answer a basic question: How will climate change impact the region's fall color displays? http://www.uvm.edu/about_uvm/?Page=stories/students/young.html

- **Dan Koenemann, sophomore biology major.** To the legions of chefs and food connoisseurs who admire the curled fronds of the fiddlehead fern, add University of Vermont sophomore biology major Dan Koenemann. Koenemann's admiration isn't exactly culinary, though. As part of a U.S. Department of Agriculture-funded project designed to measure the genetic resiliency of the fiddlehead — as more and more of the plants are picked by food lovers — Koenemann conducted a special kind of DNA analysis on the fern variety called AFLP (Amplified Fragment Length Polymorphism).

The research, combined with an essay he wrote about the significance of a larger project his work contributed to, his 4.0 average and three glowing letters of recommendation won Koenemann a prestigious Goldwater Scholarship in the spring of 2008, awarded to the country's top college science and math students.

While others enthusiastically heap on the compliments — plant biology professor Dave Barrington describes him as "brilliant, passionate and possessed of remarkable self-discipline" — Koenemann, naturally modest, would prefer to focus on the environment that helped him succeed.

Three years ago, UVM's Honors College launched a university-wide outreach effort to encourage students to compete for national and international awards and to support and mentor them during the application process.

"They definitely got the word out," Koenemann said. Once he expressed interest, Koenemann was assigned a supportive faculty mentor who spent months helping

him hone his application.

http://www.uvm.edu/about_uvm/?Page=stories/students/koenemann.html

- **Ross Nizlek, economics major.** "I'm a big believer in not accepting what is. I'm pro-active about doing things," Ross Nizlek says. In addition to his classes — his major is economics, his minor, business administration — Nizlek tackles "a project" each semester. His weekly schedule last year included 20 hours at his Kinko's job, 20 hours on UVM Rescue, flying lessons, SGA committee work in his second semester, and a solar energy project that included living off-the-grid for 20 days at his Living/Learning suite.

The first contact I got from UVM was a big envelope; the outside said 'Green is Good,' and it was on recycled paper," he says. Intrigued, he and dad visited campus. "We went past Bailey/Howe and saw the solar panels," which immediately upped the stakes in UVM's favor. "But it was the whole atmosphere of the campus," he says. "We went downtown on Church Street, and I said, 'I have to go here.' Ironically, in a state most people view as having nothing, I found a great place ... I love UVM and I love Burlington.

What I'm interested in is consumption, how much do we need to consume," he says. "I want to pursue something in the environmental area, but I want to look at it from an economic perspective." Politics likely will be part of that future, he adds. Whatever the path, he'll continue "trying to live what I advocate and trying to raise awareness."

http://www.uvm.edu/about_uvm/?Page=stories/students/nizlek.html

- **Melanie Lloyd, biology major,** received a 2006 American Society of Plant Biologists Summer Undergraduate Research Fellowship (**SURF**), which comes with a \$3000 stipend to support her studies. Lloyd has been studying the interaction between Rhizobium, a bacteria, and Medicago truncatula, a legume.

Understanding the interaction is important because legumes "are a huge part of agricultural industry," explains Lloyd. The nitrogen-fixing process, which enables the legume to make its own fertilizer, also has important agricultural — and environmental — implications.

While Lloyd's endeavors may advance research in agricultural and environmental studies, her findings are sure to benefit her own future. "The impact this will have on (Lloyd's education) is going to be enormous," says Jeanne Harris, professor of botany and Lloyd's advisor. "In this case, no one knows the answer; she has to figure it out for herself."

http://www.uvm.edu/about_uvm/?Page=stories/students/lloyd.html

- **David Seekell, Resource Ecology with a minor in Geospatial Technologies.** David is a remarkable student, having been involved in helping to instructors in developing and delivering upper class courses as early as in his Sophomore year.

He has conducted independent research through a summer internship at the Institute for Ecosystem Studies that will likely lead to a publication on temperature changes in the Hudson River in recent years. He is a very experienced long-distance hiker and is the holder of a scholarship provided by the Cassella Waste Management Corporation.

Health

- **Trevor Pour, medical student.** At an after-school youth center, a bunch of teens gather to play a game and learn about making healthier dietary choices. Trevor Pour probably already had enough on his plate as a student at the College of Medicine, but Pour still managed to find time to create some lessons on health information for young people at Burlington's King Street Youth Center.

"I had taught school for a year before coming to med school, and this experience at King Street reminded me how much I liked working with middle-school aged kids," says Pour. His community project developed out of an encounter brought about by his Medical Student Leadership Group, a key component for first-year students in the Vermont Integrated Curriculum. Pour put together a project based around 20 planned health information sessions for youths. He found that, in practice, even the most careful planning sometimes has to be adjusted.

http://www.uvm.edu/about_uvm/?Page=stories/students/pour.html

- **Alice Ford, math/biological science major.** According to biology professor Joseph Schall, Ford may be one of the top one or two students at UVM. Her 4.0 GPA obscures the many A pluses she has received. In addition to her coursework, she also does research in Professor Schall's malaria lab, using the tools of genomics – which requires a knowledge of both biology and advanced mathematics – to track the interactions of varying strains of the malaria parasite within a host, highly original work that could have a major impact on our understanding and treatment of the disease. Schall, Ford, and a graduate students have co-authored a paper on this work that has been submitted for publication in a peer reviewed science journal.

This summer, Ford won a highly competitive, fully funded position in Professor Jane Carlton's malaria lab at the New York University Medical School, one of the top three or four malaria labs in the world – as a junior. All the other students were seniors.

Ford is also a highly successful student in an experimental program at UVM funded by the National Science Foundation called the Math/Biology Program, which seeks to interest students in combined study of these disciplines, crucial for the growing field of genomics.

Ford plans to attend medical school with the goal of earning a combined MD/PhD degree. To learn more about the field of medicine, she is currently job shadowing

a physician who teaches in UVM's College of Medicine and practices in the university's teaching hospital. Her career goal is to be both a research scientist and a physician, with her clinical and research work complementing one another in a synergistic way that will benefit patients.

Ford is a member of UVM Honors College and is on the leadership team there. She is responsible for coordinating the overnight program for high school students interested in coming to our Honors College.

- **April Orleans, community and international development major, green building minor.** April was a student participant in 2007-2008 St. Lucia course and worked on an initiative to start a Football for Lives project to incorporate HIV/AIDS education through soccer, based on the Grassroots Soccer curriculum. April just returned from six-weeks in St. Lucia where she was working to lay the foundation of Football for Lives with community partners. She will be the service-learning TA for CDAE 195 Sustainable Development in an Island Economy.
- **Alison Krywaczyk** - another one of our Goldwater nominees (she was awarded Honorable Mention in the national competition); and another Biology major; transferred from Union College, but is from VT; doing research on the use of mesoporous nanoparticles for targeted delivery of chemotherapeutic drugs (with Daniel Weiss in the VT Lung Center).

Other

- **Barbara Dewey, math major.** Barbara's dark eyes grow guarded when you ask about her summer internship. In answer, the senior math major produces a scrap of paper and reads only the cryptic words that she helped create a "tool that will aid in the exploitation of target systems." If her behavior seems clandestine, it should. Dewey spent her summer at an elite government intelligence operation, the National Security Agency (NSA), in Fort Meade, Md., one of only 24 math majors from around the country selected by the NSA for its prestigious Director's Summer Program. Dewey needed a top security clearance for the position and cannot deviate from the NSA-approved description of her work. But she can speak freely about some aspects of the internship: that she briefed the Senate Select Committee on Intelligence on the student team's project, was treated and paid like a real staff member, and helped create a real intelligence tool currently in use. http://www.uvm.edu/about_uvm/?Page=stories/students/dewey.html
- **Heather McLaughlin, biochemistry major.** There was an element of self-sacrifice in '08 grad Heather McLaughlin's decision to choose Harvard over Johns Hopkins for graduate school. If the biochemistry major and Red Sox fan had gone with Hopkins, she could have watched the visiting Sox play the Orioles in

Baltimore's Camden Yards for \$20 a ticket, much less than scalpers demand at perennially sold out Fenway Park. In the end, Harvard's preeminent life sciences faculty and 200 labs were enough to tip the scales in favor of the Crimson over not only Johns Hopkins but also Yale and MIT, where she was also accepted.

That McLaughlin would be pursuing a career as a research scientist at all, never mind choosing between four top grad schools, might have surprised her four years ago. "I barely knew what a pipette was," she says. McLaughlin did know she wanted to be a science major, so the first year Honors College student began systematically "knocking on doors of labs" to see if she could join a faculty member's research team.

She found a taker in Doug Johnson, a professor in UVM's department of microbiology and molecular genetics. She had "an amazing experience" in his lab, eventually co-authoring a paper on her work there that was published in a scientific journal.

McLaughlin's experience isn't unusual, Johnson says. At UVM even first-year students have an opportunity to work with faculty on their research.

"That's a big selling point," he says, especially for "students in the life sciences, since there is a medical college right on campus."

McLaughlin, who took advantage of that proximity by also logging lab time at UVM's College of Medicine, will pursue a Ph.D. at the Harvard Medical School in chemical biology and molecular pharmacology.

http://www.uvm.edu/about_uvm/?Page=stories/students/mclaughlan.html

- **Katherine Sadis, communication sciences major.** Academically I was a little lost for the first couple years here. I was in communication sciences, but I wasn't grounded in the field," recalls communication sciences major Katherine Sadis. "I'm very average academically. I'm not an honors student — but give me a project and I'll show you what I can do. The entire experience has given me such a sense of confidence."

The ability to detect regional accents in small children is the subject of Sadis' research project: "Learning to Talk Native: Listeners' Perception of Speech from Three Dialect Areas."

That (children) can physically reproduce the sounds when they are just two-years-old is remarkable," says Julie Roberts, professor of communication sciences and Sadis' advisor for the project. As toddlers, most children are still acquiring single words and are not yet able to string together complete sentences, so the possibility of detecting such nuances as dialect features in their speech has captured the interest of scholars in the field.

Sadis began studying accents while enrolled in Roberts' "American English Dialects" class as a sophomore. The following year, Sadis contacted the communication sciences professor to enquire about continuing her studies. "It's very unusual for an undergrad to seek a professor out," Roberts says. "I think she's incredibly ambitious and motivated."

http://www.uvm.edu/about_uvm/?Page=stories/students/sadis.html

- **Atem Deng social work major.** Although he only has a 2.9 GPA, this is incredible given his background. He is a "Lost Boy of Sudan" and a leader at UVM and Vermont around development assistance in Africa. Specifically, he is working to build 20 secondary schools for 20,000 students in the Sudan. The first school broke ground in May. His goal is to provide the opportunity for African young to develop the skills and expertise necessary to build and sustain one's country socially, economically, and politically. For more detail, see this story on Atem in the Burlington Free Press:
http://www.burlingtonfreepress.com/apps/pbcs.dll/article?AID=/20080728/BUSINESS/807280301/1003%22target=%22_blank%22
- **Susan Cirilli, secondary education major.** She is a scholar athlete and has a 3.97 GPA. She is one of the top soccer players at UVM. She has made the America East Commissioner's Academic Honor Roll for 3 years. She works to promote literacy among youth, especially as a means by which young people come to understand notions of identity development.