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Pop Goes the Fleming



Pop pastoral: Andy Warhol's 1970 print *Flowers* is now up at the Fleming. (Detail courtesy of the Fleming Museum.)

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A Class for One

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THE WEEK IN VIEW

Jan. 30 12:30 p.m. Lecture: "The Psychology of Well-Being," Richard Howarth, Environmental Studies, Dartmouth College. Carpenter Auditorium, Given. 656-3269

Jan. 31 - Feb. 1 9-11 a.m. UVM Ski Carnival, Stowe, Vt. Information: [Athletics](#)

Jan. 31 7:30 p.m. Lane Series Concert: Brazilian Guitar Quartet. Tickets: \$25/\$5 students with ID at door. UVM Recital Hall, Music Building, Redstone Campus. 656-4455

Feb. 1 9 a.m.-7 p.m. Tennis Marathon: Support the UVM Tennis Program; participate in a tennis marathon and silent auction. Patrick Gym, Tennis Facility. Information: [Athletics](#)

Feb. 3 7 p.m. Film: *Catfish in Black Bean Sauce*. An African-American couple adopts Vietnamese orphans. Part of Chinese and Vietnamese New Year Celebration. 427 Waterman. UVM ID required. 656-7730

Feb. 5 3 p.m. Chinese and Vietnamese New Year Celebration: Year of the Sheep. Displays, food, music, and more. North Lounge, Billings Student Center. 656-8833

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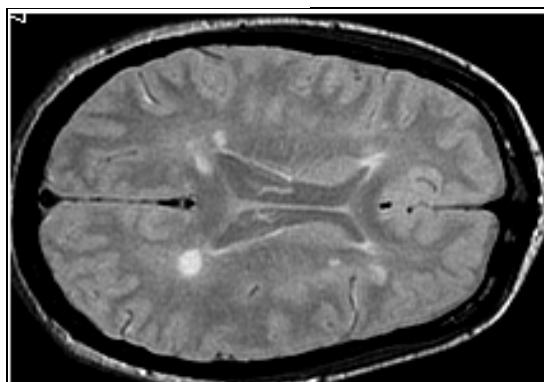
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The MRI image here, rotated 90 degrees clockwise to fit our layout, shows the white brain lesions typical for a patient in the early relapsing-remitting stage of MS. UVM/Fletcher Allen clinical trials are helping to establish the effectiveness of new therapies for the disease. (Scan courtesy of Dr. Hillel Panitch)

Clinical Trials Offer New Options for Multiple Sclerosis

Kim Patnaude works 45 hours a week as assistant chief financial officer at the Northwest Medical Center, plays tennis, practices yoga each day and looks the picture of health. But 10 years ago, at the age of 24, she thought she was looking at a death sentence when she was diagnosed with multiple sclerosis.

Patnaude is one of an estimated 1,500 Vermonters with MS – a slowly progressing, autoimmune disease in which the myelin sheath that covers the white matter of the central nervous system is destroyed. MS can affect vision and balance and cognitive abilities.

Patnaude was at risk from gender and geography. Twice as many women suffer from the disease as men, a statistic consistent with other autoimmune diseases. Dr. Hillel Panitch, professor of neurology, says the average age of onset of MS is 30, but women generally are diagnosed even younger. And, Vermont has one of the highest MS prevalence rates in the world.

Panitch directs the MS Center of Northern New England, which he established at Fletcher Allen in 2001 and which serves 600 to 800 patients. In addition to providing comprehensive care for MS patients, the center also is the site of several UVM/Fletcher Allen clinical trials, which test cutting-edge therapies for the treatment of MS.

UVM Now "Live On-Line"

Classroom teaching? Ancient news. Online teaching? Old news. *Simultaneous* classroom and Internet teaching? Something new – both at UVM and within higher education generally.

The first class in Continuing Education's "UVM Live On-Line" program launched this semester to 13 students in Lafayette 411 and three students at computers in Brattleboro, Springfield and Burlington. It is the first "synchronous" on-line/in-person course ever in Vermont. Jane Kolodinsky, professor of community development and applied economics, is the instructor of the research methods seminar. Teaching in the new medium involves some style and etiquette adjustments for both pupils and professor, and it imposes some dexterity challenges as well.

"I feel like a television weather lady, because I have to learn how to write in one place while looking at it on the screen," Kolodinsky says.

Despite that adjustment, she's excited about the technology's promise. "I'm in front of the classroom, and my notes are on the screen. The online students can hear me, and I can hear them. They can see everything I write on the white board, and we can all go together to visit exercises on the 'net," she says. Kolodinsky has taught non-synchronized Internet courses, so she found that the preparation involved in transitioning her notes and classroom material to the new medium was extensive but manageable.

The first two class meetings were afflicted with minor technical glitches, but since then the system has worked unobtrusively. "The technology is fine," says Sara Coblyn, a graduate student and youth horticulture coordinator working out of UVM Extension's Brattleboro office. "The real challenge is adjusting to the etiquette – like how to break in and ask a question. But we're working it out. It's amazing that I can be so far away and hear the instructor talking with other students and feel like I'm part of the class."

For Coblyn, who is just starting to pursue a master's degree in CDAE, the technology is a blessing. She had worried about whether graduate study was even possible from Brattleboro, and she expects earning a degree will eventually require some commuting, but so far distance learning has let her take two crucial first-semester courses from Brattleboro via the Internet and Vermont Interactive Television.

"It is challenging for people down here to get access to the university," she says. "I think this is a really valuable effort that will probably bring the

Prior to the 1993 FDA approval of the first of five new treatments, MS patients had limited options. With five treatments now available, the future for most MS patients seems brighter than ever. "MS patients are doing better, are less disabled and are remaining active longer than they were 10 years ago," Panitch says. "Providing early treatment has made the most difference in patient outcomes."

Even with these encouraging results, specialists like Panitch are aggressively continuing to search for better treatments. Effective therapy for patients with more advanced MS remains elusive. A November 2002 *Neurology* paper he authored reported on the findings of a multi-center, international trial called EVIDENCE that compared the effectiveness of Rebif and Avonex, two Interferon-based drugs. Interferon, originally used as an anti-viral agent, slowed the growth of malignant cancer cells and was effective in reprogramming immune cells and preventing inflammation. Rebif was found to be more effective in preventing MS symptom relapses and new lesions. The next step is to look at the effectiveness of these drugs, and others, beyond two to three years.

Patnaude, who participated in a clinical trial of Rebif and who continues to receive the medication, credits Rebif with keeping her symptom-free. Her attitude is upbeat. "The way I see it," she says, "is, sure I have MS, but it's not going to beat me."

To find out more about clinical research studies at the MS Center, call 802-847-4589.

Parking Fees go Pre-Tax

Beginning with the first payroll in March, non-union employees with a Zone 1 or 2 parking sticker will have payments deducted from their paychecks on a pre-tax basis.

That means you'll save a bit on parking costs – though you'll still have to circle for a spot during the after-lunch rush.

Taking advantage of the new program requires no action by eligible employees, unless they choose not to participate. Those employees must exchange their Zone 1 or 2 permits for a Zone 3 permit at the Transportation and Parking Services office, 622 Main St. by Feb. 14. Zone 3 locations are off-campus and parking is free.

Information: 656-8686

university to many more people."

Teaching to students live in the classroom and over the Internet is a difficult technological trick for the university, requiring a specially equipped classroom, but it doesn't ask as much of students. Taking part requires only that they download client software, plug in a headset and microphone, and then take the course on a regular dial-up connection.

If the experimental pilot course continues to go smoothly, the program soon will expand to include several more course offerings.

Student-Athletes Garner America East Academic Honors

Forty-eight student-athletes, representing five fall sports, have been named to the America East Conference Academic Honor Roll. UVM was one of only four schools to have more than 40 students honored.

The Catamounts also had 24 student-athletes named to the Commissioner's Honor Roll for achieving a GPA of 3.5 or higher. Three of those student-athletes compiled perfect 4.0 grade-point averages in the fall while competing.

The women's soccer and field hockey teams led the Vermont contingent with 13 members of each team making the academic honor roll. The men's and women's cross country teams placed 17 members combined on the elite team.

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**The Beat of Mali**

Habib Koite and Bamada will bring the infectious rhythms of Malian music to the Flynn Center on Thursday, Feb. 6 at 7:30 p.m.

Koite, the biggest pop star in his West African homeland and deemed "a brilliant triple threat as a singer, composer, and guitarist" by *Pulse! Magazine*, is backed by his four-piece band, Bamada. Tickets are \$28 and \$25, but through the university's "Building Our Community" initiative UVM affiliates may obtain two-for-one ticket vouchers in advance on a first-come, first-served basis at the Center for Cultural Pluralism and ALANA Student Center.

Information: 656-8818 or Habib Koite at Flynncenter.org

Professors to Speak on the Middle East

Bogac Ergene, assistant professor of history, will discuss "The Ottoman Empire and Influence on the Middle East" on Feb. 5 as part of a Middle East lecture series sponsored by Burlington College.

Abbas Alnasrawi, professor emeritus of economics, will share his perspective on "Oil, Politics, Arab Nationalism and Iraq" on Feb. 19. The lecture series will run Wednesday evenings Jan. 29 through April 30, starting at 5 p.m. in the Burlington College Community Room (corner of North Ave. and North St.).

Sessions will include question and answer periods and are free and open to the public. Information: 862-9616.

Memoirist to Discuss His Craft

Greg Bottoms, assistant professor of English at Sweet Briar College, will discuss "Writing and

Getting Rural Areas Moving

Rural and small urban transportation systems face challenges – large service areas, limited funding and few choices for populations that need services. Ken Hosen, an influential consultant in the field, will offer his take on the dilemmas on Jan. 30 at 5 p.m. in John Dewey Lounge.

Hosen's talk is titled "Meeting Organizational Challenges in the 21st Century: The Culture of Innovation in Rural and Small Urban Transit." Hosen, a principal of the KFH Group, has guided more than 100 rural and large transit systems across the country. He and his colleagues recently wrote a comprehensive study covering change and innovation in small transit systems.

The seminar is followed by a reception at 6:30 p.m. Hosen's visit is part of the speaker series on rural transportation. Information and accommodations: 656-0009.

Remembering "An Imprudent Man"

Neil Stout, professor emeritus of history, will illuminate a key player in Revolutionary-era politics, Sir John Temple, in a seminar on Feb. 6 at 7:30 p.m. in John Dewey Lounge, Old Mill. Stout's talk is titled "An Imprudent Man" and is sponsored by the Center for Research on Vermont.

Temple played an important role in American and British politics for nearly 40 years. The son of a powerful family, he used his connections to secure the posts of surveyor general of customs for the northern district of America and lieutenant governor of New Hampshire, and he later served on the controversial American Board of Customs Commissioners. But at the same time he was an implacable enemy of the royal governor of Massachusetts, Francis Bernard. In 1771 he became surveyor general of customs for England, but lost the post in 1774 after fighting a famous duel when accused of espionage for Benjamin Franklin.

Neil Stout taught at UVM for 36 years. His books include *The Royal Navy in America, 1769-1775* and *The Perfect Crisis*. Information: 656-4389

Teaching Creative Nonfiction" on Friday, Jan. 31
at 3:30 p.m. in John Dewey Lounge, Old Mill.

Bottoms is the author of *Anglehead*, a memoir,
and *Sentimental Heartbroken Rednecks*, a
collection of short stories.

Information: 656-3166.

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*Jan. 29 - Feb. 5***Publications and Presentations**

Will Miller, assistant professor of philosophy, spoke on "The Missing Last Years in the Media Coverage of Martin Luther King's Life," as an invited speaker at Dr. Martin Luther King, Jr. Observance in Burlington City Hall on Jan. 20.

Awards and Honors

Michele Cranwell, a graduate student in the Masters in Public Administration program, and **Teresa Hill**, an undergraduate student double-majoring in women's studies and math, received scholarships from the Vermont Community Foundation to attend a women and public policy seminar in Washington, D.C. This conference was sponsored by the Public Leadership Education Network.

*Jan. 22 - Jan. 28***Awards and Honors**

Sederick Rice, a doctoral student in the department of pediatrics and an adjunct faculty member of Race and Culture, is featured in the February 2003 issue of *Ebony Magazine* as a recipient of the Ebony Young Leaders Award. Each year, the magazine selects 30 individuals who have reached an outstanding level of achievement at or before 30 years of age. Rice came to Vermont in 1996 and joined the laboratory of his mentor Dr. Barry Finette, professor of pediatrics. His doctoral research is focused on the genetic effects of chemotherapy in children treated for acute lymphocytic leukemia.

The American Medical Equestrian Association recently recognized **Betsy Greene**, associate professor of animal science, with an Executive Director's Award for dedicated service and support. She serves on the AMEA board of directors and as the technical editor of the *AMEA News*. The award was presented at the United States Eventing Association annual meeting in December, where she presented an invited talk, "Is Your Barn Really Safe for Horses and Clientele?"

Publications and Presentations

Dan Baker, lecturer in Community Development and Applied Economics, returned from a trip with students to Honduras saying, "CDAE/UVM is getting to be a household name." He was interviewed three times for radio and television about the GIS project he and student **Dave Chappelle** are working on.

An article by **Anne Geroski**, associate professor of education, has been selected outstanding article for 2002 by the editorial board of the *Journal for Specialists in Group Work*. The article was published in June 2002. The award will be presented at a conference March 25 in Anaheim, Calif.

*Jan. 15 - Jan. 21***Publications and Presentations**

Will Miller, assistant professor of philosophy, attended the 5th Biannual Radical Philosophy Association – the conference title was "Activism, Ideology and Radical Philosophy" – at Brown University, Nov. 7-10, 2002.

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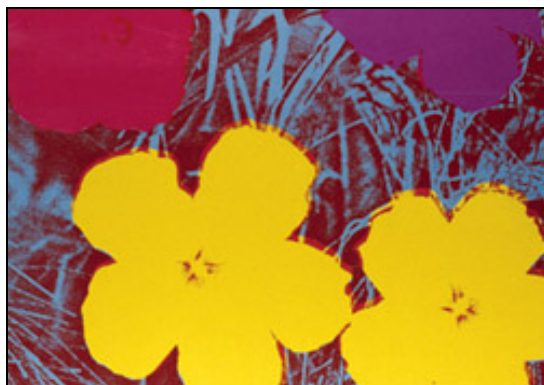
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Pop Goes the Fleming

By Tom Weaver



Pop pastoral: Andy Warhol's 1970 print *Flowers* is now up at the Fleming. (Detail courtesy of the Fleming Museum.)

brought a Warhol-certified sense of irreverence to the staid Marble Court and the biggest art show in the Fleming galleries since the 1995 Picasso exhibit.

Last week's response to a triple play of a presidential preview party/benefit, an academic community preview, and the bona fide public opening promises that for patron appeal the Warhol show will rival the Picasso prints of 1995, which drew 18,000 to the museum over three months.

A call well taken

Serendipity made "Work and Play" a possibility, says Fleming Director Janie Cohen, but as she describes the evolution of the show, it's clear that a great deal of hard work and thoughtful planning by the Fleming staff has gone into turning that possibility into reality. Cohen traces the roots of "Work and Play" to an afternoon several years ago when she was forwarded a call from photographer and poet Gerard Malanga, Warhol's studio assistant during his fertile "Factory" years of the 1960s. Attempting to locate an old friend on campus, Malanga had been passed to Cohen, who recognized the name and gladly took the call. As she recounts the out-of-the-blue call, it isn't clear whether Malanga ever found his UVM friend, but he did find an intrigued curator and a place for his photography.

"Work and Play" began to truly take shape when Cohen learned that Class of 1978 alumnus Jon Kilik, a prominent film producer, had begun to collect art after his work on a film about Jean-Michel Basquiat, an artist Warhol collaborated with in the 1980s. A guest of honor at last week's opening events, Kilik says that part of his initial attraction to Warhol's work stemmed from its relevance to his own life as a child of the sixties and seventies, and grew as he became immersed in the world of painters while researching and filming "Basquiat." Kilik's Warhol collection numbered eleven works when he first offered it to Cohen for a Fleming show, but quickly doubled into a diverse assemblage that forms the heart of the exhibit.

Perhaps the quirkiest bit of luck fueling the show came about when Cohen happened upon several rare Warhol works in the exotic locale of downtown Burlington. Browsing North Country Books, a used bookstore on Church Street, Cohen says she did a "triple take" when she glanced in a glass case and saw what looked to be very early Warhol drawings and prints. The pieces, created by Warhol during his student years at the Carnegie Institute of Technology in Pittsburgh, had been kept for years by a Winooski resident who had been

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Warhol's college classmate. Before moving away from Vermont, the man had passed along the Warhol works to the owner of North Country, who didn't quite know what he had until the Fleming director's catch. Cohen smiles and notes that the very early Warhols – which include a rare example of his "blotted line technique," the first unique style that he would develop as a commercial artist – weren't on display for long after her visit.

Warhol in context

Building from the cornerstones of North Country's rare early glimpse, Malanga's photographic documentation of the artist and his milieu, and Kilik's broad collection, Cohen strove to create a retrospective exhibit that would show not only Warhol's work, but the creative environment and cultural context that spawned it.

That's essential for a museum such as the Fleming, Cohen stresses. "The fact that we're in northern Vermont where many of these pieces have never been displayed and being at a university are two facts that have always informed my curating," Cohen says. "We want people to go away from this show with a deeper sense of what Warhol was about and a context to look at his work in the future and understand it better."

Though many of the pieces you'd expect in a Warhol show are there – "soup, Marilyn, Jackie," Cohen catalogs – she strived to show some surprises such as the early work and the religious dimension of later work. Also essential to the exhibit is an exploration of recurring Warhol themes such as death and celebrity, "some of the things that just had him by the neck," Cohen says.

By definition, a strong Warhol retrospective will also be a walk, at times on the wild side, through American history and society epochal or ephemeral, Birmingham race riots or drag queens. "He was such an American artist and really had his finger on the pulse of popular culture," Cohen says. "Warhol understood this country so well and helped us all to understand it better at a very crucial time in our history."

A Whirl of Warhol

The Fleming Museum has arranged a number of events around "Work and Play," including a poetry reading and talk by Gerard Malanga on Feb. 9, art workshops for adults and children, a series of Wednesday lunchtime lectures, and potential appearances by Warhol-influenced musicians Lou Reed and John Cale of the legendary Velvet Underground.

For details see www.warholatthefleming.org or call 656-0750.

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A Class for One Season

By Lee Griffin

Students averse to 8 a.m. classes probably shouldn't sign up for the winter ecology course taught by Bernd Heinrich, unless they're ready to raise their sights, maybe even their competitive metabolism.

Class time: dawn to dark, during winter break. Class begins indoors with a serving of oatmeal and coffee and moves to the great and cold Maine woods each day, all day, for a week, with mini-breaks for lunch. In the evening, it's a simple dinner, which you help cook, in the wood-stove heated cabin (after lugging the water from the stream a half-mile away). Then it's stimulating conversations about science and nature before you crawl into your sleeping bag, exhausted, wondering how you ever stayed up past 9:30. If you're awake long enough to have a thought, it might be one like senior biology major Tom Lawrence recently expressed to *the view*: "The trip was absolutely the best educational experience of my UVM career – thus far. I learned more in one week than in most of my four-month courses."

Heinrich, professor of biology, believes in learning from life's laboratories. The woods have been his, and this course – formerly a full-semester campus/woods combo – has made many a convert. "I feel biology for most kids starts not at molecules but at organisms in nature," he says.

Cycles and strategies

This year's course, gently tutorial and heavily experiential, adjusted to each day's findings. "If it got too chilly," Lawrence says, "a short run was incorporated into the hike to rewarm the extremities," even as the group investigated the winter adaptations and solutions wrought by nature's smaller and likely hardier critters.

"It was the best way of gaining new knowledge," junior biology major Dan Elmowitz says. "I learned how to ID more trees in one week – just using the buds and bark, no leaves. I could ID animal markings and differentiate between many marks just by looking at them. ... It strengthened my understanding of lifecycles ... It was very exciting to learn."

Elmowitz, from West Caldwell, N.J., spent much of the time observing gold-crowned kinglets, the petite birds (despite their regal name) that have been the recent focus of Heinrich's work. The two compared observations and interpretations regularly. "Bernd is best at teaching in the field," Elmowitz says. "The woods are his home. Every person knows a lot about his own home. He just has a huge home, the woods and all the organisms that live there. ... He is a naturalist, biologist and wonderful person to spend time with."

The 10 students in the course learned to identify tracks and trees and studied the "overwintering strategies for all kinds of critters from invertebrates to moose, birds to shrews," Lawrence said. "We did an entire morning on stream invertebrates. ... We followed porcupine tracks to their food source. We learned how to make a fire outdoors in the winter. ... All this in just a week. Plus on the last two days we were encouraged to do some of our own observations – just go out and apply what we had learned."

Completing the circle

Graduate student Joe Reznik, a sometime native of 13 different states, so he's not sure where he's from, focused his solo time on lichens and aquatic insects. He cut through ice to collect aquatic organisms, studying them through the microscope he'd brought along. "There is no baseline data for winter aquatics," he says, "because everyone likes to go out in the summer. I'm interested in streams, but we don't know the complete life cycle, especially what happens in winter." It will be the subject of his future doctoral dissertation, he adds.

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Fleming Pops

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The learning became seamless. Knocking on trees felled caterpillars that were doused in chemicals resembling antifreeze, their perfected solution to making it through the winter. Lugging water from the stream consumed precious time each day, a ritual critical to human self-preservation. Studying winter ecology is interesting, Reznik says, "because this is where you find out who shakes out."

Cooperation became a valued lesson. "We learned to depend on one another," Lawrence says. "There was no set list, everyone just kinda helped where and when it was necessary. The food would not have been complete if Amy (Wakefield) had not made bread each day. My insight of the invertebrate community would have been dull without the help of Joe. Everybody had something worth adding to most discussions, which ranged ... from loon management to sushi."

The lessons apparently continue to reverberate. Elmowitz says the class "opened up a new world" to him. It "redefined how I look at and treat my study of biology."

"Not only did I learn about nature and trust of others, but a little about myself and the serenity of nature," Lawrence says.

Heinrich remains a student as well. "There are always some little things that are new. The woods are different every year," he says.

Heinrich will retire in May, anxious to continue his scholarship and spend time with his young children, 3 and 6. He'll likely continue to lead occasional classes like this one. And, he'll be polishing the draft of his new book on Canada geese in summer, which focuses on the specific ones he got to know in Hinesburg.

"Everyone who has ever met, worked, taken a class, or took this winter ecology class with him will miss him dearly," Elmowitz says. "Who he is as a scientist and biologist is a rare and priceless thing."

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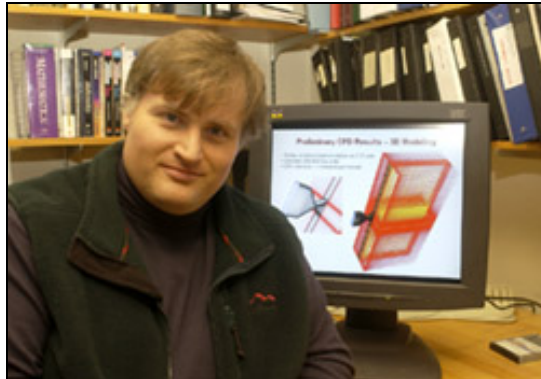
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Small is Bountiful Professor is pushing the technology to drive "nanosats" — the cheap, disposable, infinitely flexible spacecraft of the future

By Cheryl Dorschner



Thrusting ahead: Darren Hitt is working on the propulsion for "nanosats," tiny craft that many believe are the future of unmanned space exploration. (Photo: Bill DiLillo)

Last month marked 30 years since Apollo 17 carried the last people to set foot on the moon. Since then, the Cold War and shifting budget priorities have led to an era of space exploration by mammoth, expensive satellites beaming back data to Earth.

Now scientists such as Darren Hitt, assistant professor of mechanical engineering, are helping launch a small revolution in space technology, and they're very close to a

breakthrough.

Hitt predicts that in just three to five years, the current drum-like, rocket-launched craft will be obsolete – replaced by basketball-sized "nanosats" so precise they will be able to fly in formation. They'll be inexpensive and when their mission ends they'll burn up in the atmosphere so scientists won't have to crash them into the ocean. After spending the summer of 2000 on a NASA fellowship at the Goddard Space Flight Center in Maryland, Hitt is perfecting the technology here at UVM, thanks to a three-year, \$360,000 Air Force grant he just began.

"Now it costs millions of dollars and lots of time to launch satellites – and maybe only a hundred go up each year," says Hitt. "Nanosats will let us send up thousands a year internationally. You could pack a bunch of them on a single launch vehicle. The cost will be drastically reduced."

"They'll be the size of a basketball, cheaper to build, cheaper to launch and disposable," he continues.

The nano revolution

The craft will have a variety of applications. They could act like a hypersensitive telescope. Several universities could coordinate efforts and send up a research vehicle with several projects. "They could be used for military purposes that haven't been disclosed," says Hitt, suggesting perhaps, detection for strategic defense. "I'm not privy to all of the particulars of the missions."

They would be launched from an in-space vehicle as a cluster. Picture satellites soaring like a formation of birds, or, in Hitt's words, "the space equivalent to synchronized swimming." Only these birds fly at Mach 4. (The Concord jet flies at Mach 2, Hitt offers for comparison.)

The challenge to these tiny, science fiction-esque fleets is the gravity wave. "Gravity waves affect the movement of one satellite ever so slightly, and all the

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UVM Bookshelf

The latest books from UVM faculty range widely in subjects, from Iraq's underdevelopment to teaching reading to soap operas.

others must detect it to maintain the formation," explains Hitt. "This is Einstein stuff, we're talking a deflection of 10 to the minus 12 kilometers – that's one trillionth of a kilometer," he figures as he pencils out the math on a pad on his desktop. "We're talking one billionth of an inch."

Hitt likens the flying in triangular formation 500,000 kilometers apart to three rowboats on Lake Champlain trying to keep a constant distance by shining flashlights onto mirrors attached to each boat. If a wave comes along, the boats would momentarily lose their arrangement.

In space, it is lasers that pinpoint the locations of each nanosat. "You can't have these satellites wobbling around, or you wouldn't be able to pick up the measurements of the gravitational waves," Hitt says.

The requirement for precision is daunting, and the nanosats themselves are not even at the research and design stage. "We need new technology first – enabling technology," Hitt says.

The enabler

That's where Hitt comes in.

Creating and maintaining this sort of precision is the work of miniaturized propulsion systems "the size of your small finger with a nozzle the width of a human hair," says Hitt. But Hitt's big project is smaller than that. Out of a glass vial he pours a square black fleck the size of this "bullet" character: • .

That fleck is the micro-thruster that he is developing to power and guide the satellites. It's the piece that the whole nano-puzzle is depending on, but working on something that tiny is hugely challenging. "It doesn't always work to shrink down what works in large scale," Hitt says. "There's some new physics going on here, and no one has a good handle on the physics of things on this micro scale."

Hitt has identified one problem: "heat losses can greatly compromise the device." This will be a topic he and his colleagues will present at a conference of the American Institute of Aeronautics and Astronautics this summer in Orlando. This month he submitted a paper for publication in the AIAA's journal as well.

Hitt, of course, isn't the only one trying to crack this new technology. "Ours is just one way of doing it. A lot of businesses and some of the leading universities are all working on this." Hitt is going head to head with the likes of Stanford, MIT and Princeton. But the Air Force has put some of its money on him.

"It's sort of a race. It's hard to say who's going to be the winner," he says. "I just want to do good science."

For details and an abstract of Darren Hitt's work visit: [Hitt Research Page](#).

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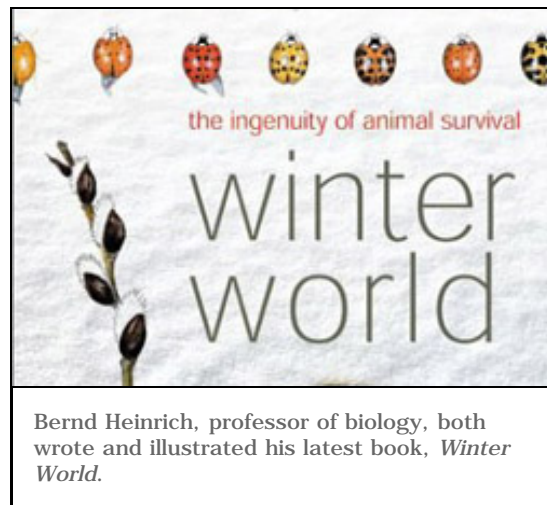
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FEEDBACK

UVM HOMEPAGE

The University of Vermont Bookshelf

By Lynda Majarian and Cheryl Dorschner



From Iraq's underdevelopment to reading to soap operas, the latest crop of books from UVM faculty elucidate dozens of subjects in books of both general and highly specialized interest.

Most of the books here were published within the last six months, or will be published before June, but we have highlighted a few older publications that have not been previously

mentioned in "Bookshelf."

Economics

Iraq's Burdens: Oil, Sanctions and Underdevelopment (Greenwood Publishing Group), by Abbas Alnasrawi, professor emeritus of economics. Oil revenue has been an economic curse for Iraq, says the author, who proposes that the availability of capital is an insufficient condition for economic development, and may in fact retard it, as it did in this now reviled country that has been a constant focus of U.S. foreign policy since 1990.

Education

Assessment and Instruction of Reading and Writing Difficulties: An Interactive Approach (Allyn & Bacon, third edition) by Marjorie Lipson, professor of education, and Karen K. Wixson. This textbook focuses on ability/disability and reading/writing from an interactive perspective and emphasizes the importance of an appropriate learning environment for the individual learner.

When 1+1=10: The Power of Partner Teams (National Middle School Association, forthcoming in March), by Penny Bishop, assistant professor of education, and P. and M. Allen-Malley. The book presents research on collaborative teaching in middle level schools, by examining critical elements for effectiveness, as well as teacher and student outcomes.

Opening Doors: an Introduction to Inclusive Early Education (Houghton Mifflin, forthcoming) by Karla Hull, Jeanne Goldhaber, associate professor of integrated professional studies, and Angela Capon, research associate professor of integrated professional studies.

Supporting Students with Severe Disabilities: A Paraeducator Curriculum (University of Vermont Center on Disability and Community Inclusion), by Timothy Fox, research associate in education. A training manual for people who deliver special education in inclusive classrooms, this book is the result of a grant project.

Spirituality, Ethics, Religion and Teaching: A Professor's Journey (Peter Lang), by Robert Nash, professor of integrated professional studies. Part of a four-volume series of studies on education and spirituality, including Nash's 2001 volume: *Religious Pluralism in the Academy*.

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Fleming Pops

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Small is Bountiful

The era of mammoth, expensive satellites may be ending. Scientists like Darren Hitt, assistant professor of mechanical engineering, are helping launch a small revolution in space technology, and they're close to a breakthrough.

'Real World' Ethics: Frameworks for Educators and Human Service Professionals (Teachers College Press of Columbia University, second edition), by Robert Nash, professor of integrated professional studies. This expanded work incorporates the latest research in applied ethics teaching and in resolving ethical dilemmas in the professions.

Research in the College Context: Approaches and Methods (Brunner Routledge) by F. Stage and Kathleen Manning, associate professor of integrated professional studies.

Elementary Schools Where Students Succeed in Reading (Brown University, 2001), by Jim Mosenthal, Marjorie Lipson, Jane Mekkelsen, Barbara Russ, Susan Sortino, all of UVM's College of Education and Social Services.

Our Stories: The Experiences of Black Professionals on Predominantly White Campuses (University of Cincinnati), edited by Mordean Taylor-Archer and Sherwood Smith, director of integrated professional studies. This book came out of the John D O'Bryant National Think Tank for Black Professionals in Higher Education on Predominantly White Campuses.

English

Having a Good Cry: Effeminate Feelings and Pop-Culture Forms (Ohio State University Press), by Robyn Warhol, professor and chair of English. From soap operas and popular films to theatre and serialized novels, Warhol challenges the "gender/genre" paradigm.

The Drowned Girl (Kent State University Press), by Eve Alexandra, lecturer of English. This chapbook received the Wick Poetry Prize, awarded annually to a poet who has not previously published a full-length collection of poems.

The Dissertation and the Discipline: Reinventing Composition Studies (Boynton/Cook), co-edited by Nancy Welch, associate professor of English. A radical critique of dissertation writing and advising that challenges English teachers/professors to consider practices that expand understanding of composition studies.

Environment and Natural Resources

Winter World (Ecco), by Bernd Heinrich, professor of biology. How do insects and mammals survive winter? Heinrich shares anecdotes from his rambles through Maine and Vermont to describe the ingenious adaptations organisms make to thrive during the barren, frigid season.

Ore Conflicts: Mining, the Environment and Indigenous American Development (University of Arizona Press, forthcoming in July), by Saleem Ali, assistant professor of natural resources. In an era when development is subject to the divisive process of environmental impact studies, Ali explores why indigenous communities support environmental causes in some cases of mining development and not in others, when technical indicators of environmental impact may in fact be comparable.

Ecological Economics of Sustainable Watershed Management (Elsevier Science), edited by Jon Erickson, associate professor of natural resources, Frank Messner and Irene Ring. This book presents new developments in and new approaches to watershed management grounded in principles of ecological economics.

Spreadsheet Exercises in Ecology and Evolution and *Spreadsheet Exercises in Conservation, Biology and Landscape Ecology* (Sinauer Associates, 2001) by Therese Donovan, research assistant professor of natural resources and C. Welden. The exercises in these books allow students to use spreadsheet programs such as Microsoft Excel to create working population models.

Extension

Using Fertilizers in the Culture of Christmas Trees (Racing Dreams LLC, second edition), by Thomas McEvoy, Extension associate professor of natural resources. An updated version of the classic grower's handbook.

Geography

The Penguin Atlas of Women in the World (Penguin, forthcoming in April,

second revision), by Joni Seager, professor of geography. Seager draws on a vast amount of new global data to explore the key issues facing women today. They include equality, motherhood, feminism, beauty, culture, work, the global economy, changing households, domestic violence, time budgets, children, lesbian rights, women in government and more.

German and Russian

'Call a Spade a Spade': From Classical Phrase to Racial Slur (Peter Lang), by Wolfgang Mieder, chair of German and Russian. Includes scholarship on this classical phrase turned proverb from Aristophanes to Erasmus of Rotterdam in literary texts, proverb and idiom collections, mass media, advertisements and cartoons and explores how the phrase became a racial slur.

Also by Mieder: *In der Kürze liegt die Würze: Sprichwörtliches und Spruchhaftes als Basis für Aphoristisches* (Burlington, Vt. Proverbium). Includes 750 aphorisms by authors writing in German during the 18th to 20th centuries.

History and Politics

The Star That Set: The Vermont Republican Party, 1854-1974 (Lexington Books), by Samuel Hand, professor emeritus of history. This historical study documents the rise and fall of Vermont republicanism, exploring the party's personalities and the religious, political, and social institutions.

Committees in the U.S. Congress, 1789-1946 (Congressional Quarterly Press), by Garrison Nelson, professor of political science, with David T. Canon and Charles Stewart III. Nelson's four-volume epic contains more than three million separate pieces of information and completes his 1993 volumes, *Committees of the U.S. Congress, 1947-1992*.

Major Problems in the History of World War II (Houghton Mifflin), edited by Mark Stoler, professor of history, and Melanie Gustafson, associate professor of history. Designed to encourage critical thinking about history, this college textbook covers World War II from the home front and the battlefield, examining both the military and social impact of the war.

Native Americans (Congressional Quarterly Press), by Donald Grinde, professor of history. Explores the political history of Native Americans and explains a wide range of historical, political and social issues that have affected them.

Philosophy

Knowledge and Its Place in Nature (Clarendon Press), by Hilary Kornblith, professor of philosophy. The book argues for a naturalistic approach to investigating knowledge. Knowledge, he explains, is a feature of the natural world, and so should be investigated using scientific methods.

If you are a UVM affiliate with a book published within the last two years that has not been previously publicized in campus media, or will have a book out by June 2003, please send your name, position title, book title, publisher and a brief description of the text to lynda.majarian@uvm.edu.

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