



# THE ENVIRONMENTAL MOVEMENT COMES OF AGE

By Dr. John Harris, Dr. Paul Kotila, and Ms. Jess Gerrior

The 1962 publication of Rachel Carson's *Silent Spring* is often cited as the beginning of the “environmental movement” in the United States.

Her documentation of the environmental effects of widespread pesticide use was quickly followed by many other environmental publications, including *The Population Bomb* and the *Limits to Growth* report. In 1970, the first Earth Day and passage of the National Environmental Policy Act (the regulatory source for environmental impact reports) marked the beginning of a new era in humanity’s response to these issues.

The early 1970s also saw a proliferation of undergraduate environmental programs, reflecting both the new

awareness of ecological relationships as well as the complexity of these problems. By the late 1980s, such programs were found across the United States in colleges and universities of all types. Unlike more traditional disciplinary majors (Biology, Sociology), these new programs sought, from the beginning, to address environmental issues from an interdisciplinary, problem-based perspective. This perspective recognized that solutions to environmental problems were not simply technical (science-based), but were also inherently about individual and societal ethics and behaviors.

## UNIQUELY FRANKLIN PIERCE

The Franklin Pierce environmental science program began in 1989 with a major in Environmental Science designed by Dr. Paul Kotila, who had been hired as associate professor of biology in 1988. While Franklin Pierce was relatively late to the environmental curricular movement, Dr. Kotila saw the program as “ideally suited to the liberal arts college [as Franklin Pierce was then] and its traditions of interdisciplinary . . . education.” The major also sought to capitalize on Franklin Pierce’s rural location, easy access to diverse natural habitats on its 1,000-acre campus (forests, wetlands, lakes, and streams), and other distinctive campus characteristics, including its own water supply, sewage treatment facility, and forest management plan.

Based in the Natural Sciences Division, the curriculum was initially built largely from existing courses in other departments (Biology, Chemistry, Sociology, Economics), formulated into a set of courses for breadth (the Environmental Science core and electives), and depth (an area of emphasis; Biology/Ecology, Anthropology, Economics). While the particular course offerings have diversified considerably since its inception, the basic three-part format of the major remains to this day.

The program has evolved significantly since its creation with the addition of new faculty (Dr. Catherine Owen Koning, Dr. Rhine Singleton), the creation of new courses specifically designed for the Environmental Science major (Environmental Impact Assessment, Wetlands and Forest Ecology), and a University-wide commitment to sustainability as reflected by the President’s Commitment to Climate Neutrality Statement and the hiring of a sustainability coordinator in 2010. The addition of the Monadnock Institute of Nature, Place & Culture in 1996 added interdisciplinary depth and community outreach opportunities to the environmental program.

## SHIFTING GROUND

Since the 1970s, broader public awareness of environmental issues has led to significant improvements in air

and water quality and a reduction in certain environmental abuses. Problems that were relatively easy to identify and control (e.g., sewage outflows) have given way to more dispersed and difficult hazards (e.g., non-point pollutants such as fertilizers and toxins). In addition, the focus has expanded to global-scale problems, reflecting both progress in control of “local” challenges as well as recognition of the interconnectedness of environment, economy, and society. These shifts are evident in higher education as well. According to a 2012 Princeton Review study of nearly 7,500 college applicants, 7 out of 10 students use information about a school’s environmental commitment in their decision to apply or attend.


When Franklin Pierce joined the list of now over 650 signatories to the American College & University Presidents’ Climate Commitment (ACUPCC) in 2007, the University pledged to eliminate net greenhouse gas emissions and accepted responsibility to meet the global climate challenge. To this end, Franklin Pierce submitted its first Climate Action Plan in 2010 and will complete its third greenhouse gas inventory in 2013. The University’s commitment is also reflected in the work of the Sustainability Council, which is responsible for the coordination of institution-wide initiatives and the incorporation of sustainability objectives into the latest Strategic Plan.

Results of the Council’s work are evident throughout the campus: wood pellet boilers for freshman residences and Northfields Activity Center, the replacement of incandescent bulbs with fluorescent and LED lighting, new purchasing policies for energy efficient appliances, and the recent switch to single-stream recycling, which makes recycling easier and more cost-effective. Its commitment to reducing greenhouse gas emissions also means educating the University in the interrelated nature of local, regional, and global systems.

Franklin Pierce is also an institutional member of the Association for the Advancement of Sustainability in Higher Education (AASHE), the leading organization for sustainability in higher education. Franklin Pierce’s Sustainability Coordinator, Jess Gerrior, together with Sustainability Certificate student Corey Hogan ’12, represented Franklin Pierce at the annual AASHE Conference in October 2012. Jess’s presentation,



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Light refreshments served!

"Weaving Green Threads," highlighted student projects in the Sustainability Certificate program, which have included alternatives to bottled water, reducing waste during move-out days, a documentary film about recycling on campus, and improving the Green Housing program. Corey's conference experience informed a successful project that has helped improve recycling on campus. (See "Sustainability Matters" on p. 11.)

Since 1998 Franklin Pierce has hosted a number of important environmental leaders to participate in symposia and conferences and to receive academic awards. Internationally recognized climate change expert Bill McKibben received an honorary doctorate in 2012, and environmental writer Sy Montgomery was recognized with the same award the previous year. In addition, David W. Orr, author of *Ecological Literacy*; John Elder and Robert Finch, editors of the *Norton Anthology of Nature Writing*; Arctic explorer and educator Will Steger; and MacArthur award winner David M. Carroll have all presented to Franklin Pierce undergraduates.

## FUTURE VIEW

Already anchored by an enthusiastic and talented senior faculty and a sustainability coordinator, the environmental program at Franklin Pierce will further broaden undergraduate opportunities in 2013 by adding a new faculty member whose focus will be environmental policy. This addition will facilitate the introduction of a new Bachelor of Arts in Environmental Studies major to complement the existing Bachelor of Science in Environmental Science degree.

Entering freshmen in either program will enroll in a common core of required natural science, social science, and humanities courses in their first academic year, and will then choose between the Bachelor of Science Environmental Science track or the Bachelor of Arts in Environmental Studies track in their sophomore year. This decision will be based on student interest and aptitude, and on a careful review of their career goals and aspirations. The Bachelor of Science in Environmental Science degree will require additional field and laboratory coursework, whereas the Bachelor of Arts in Environmental Studies major will place greater emphasis on sustainability studies and environmental law, history, policy, and literature.

Both the Monadnock Institute and the Sustainability Center will play important roles in the expanded environmental program. In addition to sponsoring internships with a wide range of regional partners (land trusts, historical societies, farms), these academic centers are pursuing plans to offer undergraduate research fellowships focused on environmental topics. These proposed fellowships will provide opportunities for talented undergraduates to gain expertise in collecting seasonal data related to climate change, designing and maintaining campus trails, monitoring water quality, supporting local agriculture, leading community efforts in recycling, reducing individual and institutional ecological footprints, and contributing to national environmental conferences. Students interested in becoming research fellows will apply after they have declared a major in their freshman year, with the potential to continue being a fellow throughout their academic career, as long as they remain in good standing and continue the research and mentoring roles the fellowship is designed to foster.

## POWERFUL PATHS

Another exciting component of the environmental program is a new affiliation agreement between Franklin Pierce and Antioch University New England Graduate School, a nationally recognized environmental education leader. Students who wish to accelerate their undergraduate education can apply to enter a 3-2 program in which they earn a master's degree in Environmental Studies from Antioch University New England in five years from date of admission to Franklin Pierce. This rigorous program includes two internships and a senior project before graduating with a master's degree. In addition, Franklin Pierce undergraduates who envision careers that help businesses become more sustainable may enroll in the Franklin Pierce M.B.A. program in Energy and Sustainability.

The environmental program and M.B.A. faculty are now designing pathways for Environmental Science and Environmental Studies undergraduates to transition to the Energy and Sustainability track of the M.B.A. and take graduate courses in their senior year. Place-based and community-based learning opportunities also distinguish the environmental program at Franklin Pierce; very few New England universities offer undergraduates such a diverse range of field courses, interdisciplinary experiential opportunities, community partnerships, and graduate school options.

## ENVIRONMENTAL OPPORTUNITIES

Franklin Pierce graduates majoring in Environmental Science have gone on to post-graduate study as well as full-time employment opportunities in the field. For example, Dan Weykman '01 is a soil conservationist with the USDA Natural Resources Conservation Service, and Kelly Henry '03 is enrolled in a Ph.D. in Wetland Science program at the University of Louisiana, Baton Rouge. David Cameron '92 is a senior environmental scientist with AECOM environmental and engineering consultants in Westford, Mass.; and Kristen Bean '10 is an environmental scientist with VHB, environmental and engineering consultants in Bedford, N.H.



Those scheduled to graduate in the program have also earned distinction: Jennifer Bell '13 has been offered a graduate assistantship studying wetlands as part of a master's degree at Ball State University (see "Institutes" on p. 17); Ben DiLauro '13 completed an internship using Geographic Information Systems to map vernal pools in Peterborough; and Jennifer Jones '13 is being recruited to continue her research on threatened turtles with the University of Massachusetts-Amherst. As these successes demonstrate, the Franklin Pierce environmental program continues to prepare its students well.

The program's commitment to environmental education, responsibility, and activism is reflected in its continually evolving curriculum, additional faculty, and innovative opportunities for student engagement. Franklin Pierce University looks forward to graduating environmental leaders with the passion and expertise needed to address the challenges posed by a rapidly changing world. 