The Ecotone

Spring 2008 The Journal of Environmental Studies University of Oregon

URBAN ecology

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The Journal of Environmental Studies

The Ecotone is published by the Environmental Studies Program at the University of Oregon. If you have questions or comments, or if you would like to be placed on the mailing list, please contact:

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Inside This Issue

Editor's Note
Selected Syllabi: An Interdisciplinary Approach

The theme of the 2008 Ecotone is Urban Ecology. The editorial team chose this topic to reflect current trends in environmental studies and ecological thought. Amidst the insecurities surrounding global climate collapse, it has become increasingly inappropriate to assume either a conquer and pillage mentality or to worship 'pristine wilderness.' The dialogue has thus shifted from 'saving the whales' to articulating a cogent and non-destructive human-nature relationship. Including the city in ecological conversations is to invite politics, cultural difference, legal issues, aesthetic interests, and, of course, concrete. Urban Ecology does not have a single clear definition or its own discipline. Rather, it is using an ecological lens to understand human institutions and using a human lens to understand ecology. This issue of *The Ecotone* is meant to explore the different manifestations of the term: urban ecology.

To begin the conversation, we have included a few shortened syllabi from classes taught at the University of Oregon that touch upon the topic at hand. The first is from the English Department and highlights the simultaneous development of self and landscape. The second, from an Environmental Studies graduate student, focuses on politics of difference and the correlations with the local ecology of waste. Finally, a syllabus from a course taught in Planning, Public Policy, and Management foreshadows an article later in the journal about the West Eugene Wetlands and hints at the politics of urban ecology and complexities of land use policies. These syllabi offer a sense of the diversity with which this topic is approached and its importance to the further maturation of ecological ideas.

This edition of *The Ecotone* hosts a wide array of work from students, faculty, and staff at the University of Oregon who are involved with the Environmental Studies Program. Poetry, short stories, opinion pieces, and art works reflect the diversity of the Program. The "Our Community" section includes information on specific student work and projects led by students and faculty.

~ Shannon Tyman

* *Urban/Social Ecologies in Contemporary Literature (English)*

PROFESSOR ELIZABETH WHEELER, ENGLISH

Course Description:

While ecocriticism often focuses on wilderness, this course focuses on cities and on the relationships among nature, culture, and the built environment. Drawing on ethnic studies, postcolonial theory, and disability studies, the course asks: what kind of landscape description assumes what kinds of bodies in the landscape?

Readings: Neely, Barbara. *Blanche Cleans Up*; Lethem, Jonathon. *Motherless Brooklyn*; Chamoiseau, Patrick. *Texaco*; Cao, Lan. *Monkey Bridge*.

Additional Articles:

Michael Bennett, "From Wide Open Spaces to Metropolitan Places" & "Manufacturing the Ghetto"
Lawrence Buell, "Flaneur's Progress: Reinhabiting the City"
Mike Davis, "The Case for Letting Malibu Burn"
Andrew Light, "Boyz in the Woods: Urban Wilderness"
Giovanna Di Chiro, "Sustaining the 'Urban Forest'"
George B. Handley, "A Postcolonial Sense of Place"

Conservation Planning (Planning, Public Policy and Management)

NEIL BJORKLAND, CITY OF EUGENE ENVIRONMENTAL PLANNER

Course Description:

The primary goal of this class is to identify, understand, and critique the key element of planning for habitat conservation in the real world context of charged politics, constricting procedural requirements, limited funding, and rapid growth development. This course emphasizes critical thinking, evaluation, and analysis skills that can be applied in any habitat conservation planning context, at various scales. Case studies and in-the-trenches experiences will serve as a jumping off point for group inquiry into understanding strategies, processes, goals, and outcomes. The case studies will be reviewed against various planning frameworks to help us understand the role and importance of key planning steps and processes. We will focus on ways to think about conservation planning as we explore this discipline from the viewpoint of the planning project manager, including political, social, economic, ecological, and fiscal elements.

Readings:

Dramstad, Wenche; Forman, Richard; and Olson, James. *Landscape Ecology Principles in Landscape Architecture and Land Use Planning*.
Environmental Law Institute. *Lasting Landscapes: Reflections on the Role of Conservation Science in Land Use Planning*.
Groves, Craig. *Drafting a Conservation Blueprint*.
Lane Council of Governments. *West Eugene Wetlands Case Study & Wetland Executive Team, Partnership Agreement*
The Nature Conservancy. *Conservation Action Planning: Developing Strategies, Taking Action, and Measuring Success at Any Scale (Overview of Basic Practices)*.

Environmental Justice (Environmental Studies)

JANET FISKIO, PHD CANDIDATE
ENVIRONMENTAL STUDIES, FOCAL DEPARTMENT ENGLISH

Course Description:

The environmental justice (EJ) movement is a coalition of grassroots civil rights, environmental, and labor organizations, community activists, and academics. Growing out of civil rights activism and analysis, EJ critiques the institutionalized oppression that places disproportionate risks on people of color and other vulnerable populations through exposure to toxic living and work environments. In contrast to mainstream environmentalism's focus on wilderness, the EJ movement defines the environment as the place where individuals and communities live, work, play, learn, and worship.

This course will provide an introduction to the history, literature, and contemporary work of the EJ movement, with a particular focus on the local knowledge that people gain from living in situations of environmental injustice, how this knowledge is learned, and how it is articulated.

Readings: Bullard, Robert. *Dumping in Dixie*; Castillo, Ana. *So Far From God*; Giardina, Denise. *Storming Heaven.*

Additional Articles:

First National People of Color Environmental Leadership Summit, "Principles of Environmental Justice"
Wenz, "Just Garbage"
LaDuke, "Nuclear Waste: Dumping on Indians"
Film: *Blue Vinyl*

The West Eugene Wetlands
Federal Regulations, Local Implementation

MATT PETERSON

Traveling west out of downtown Eugene on West 11th Avenue, a keen observer will notice an unusual landscape for Oregon. Instead of closely packed development driven by the limitations of the state-mandated urban growth boundary that is typical of most Oregon cities, an observer will notice development interspersed with open fields, meadows and riparian areas surrounding Amazon Creek. Crossing Bailey Hill Road, this observer will notice a few fast food restaurants on the north side of the road, yet open space to the south. In a few more blocks, the observer will notice the opposite: development to the south and an even larger open space to the north; in this open space, one may even see a group of students peering into the grasslands at something more interesting than the traffic flowing by. Continuing west, an observer will notice the Super Wal-Mart to the south and Target to the north competing for your money with cheap, plastic stuff from China, yet behind Target as far as she can see are open fields—not used for agriculture but filled with water and hundreds of waterfowl in the winter.

At a basic level, our observer is admiring the West Eugene Wetlands and the results of the West Eugene Wetlands Plan for development and wetlands preservation in the area. But at a deeper level, our observer is also seeing the interplay between federal and state wetlands laws and the local conditions and ethics that drove Eugene's reaction to the "discovery" of these wetlands in 1987. It was the citizen's expectation of public involvement and their environmental ethic that propelled city officials to implement the wetlands regulations in an original and creative way.

Before discussing the laws and regulations that have played a role in the preservation of the West Eugene Wetlands, it is important to understand the ecosystem as it was before European arrival. The southern Willamette Valley was the year round home to the Kalapuya Indians, who relied on hunting and gathering for their resources. To assist with hunting and gathering, the Kalapuya burned the prairies of the Willamette Valley every year. While little is known about Kalapuya burning strategies, it is postulated that the burning helped with hunting deer, gathering tarweed, collecting grasshoppers, nut gathering (acorn and hazel), and supporting the growth of camas, berries and other successional plants.[1] The yearly burning tended to occur in late summer and early fall, and there are excerpts from the journals of early European explorers of the Willamette Valley saying the burning was so extensive it was often difficult to find forage for their horses: "Pasture is rarely found in the course of this day none has been seen, altho' we traveled good twenty miles …the fire destroyed all the grass." [2]

The West Eugene Wetlands

The yearly burning had likely been in practice for over 6,000 years and had created a fire-dependent landscape,[3] including the lands of the West Eugene Wetlands; instead of a forested, scrub-shrub wetland, the fires maintained wet prairie grasslands.[4] However, the burning did not affect the hydrological conditions of the southern Willamette Valley, which included extensive wetlands and streams. There was constant flooding in the late winter and early spring, and Amazon Creek was so braided it was described as having a thousand fingers.[5]

Direct contact with Europeans began in 1812, although it was intermittent until the 1840s when immigrants started settling in the valley in larger numbers.[6] Before the arrival of Europeans, it is estimated that over 14,750 Kalapuya lived in the valley, yet by 1841, only 600 survived.[7] It is interesting to note that it was actually malaria, intro-

The West Eugene Wetlands Plan successfully synthesized local concerns, ethics and practices with federal and state law.

duced by Europeans, that decimated the Kalapuya, and the mosquitoes that spread the disease were concentrated in wetland areas.[8] Yearly burning continued until the 1840s but stopped as the Kalapuya population declined so drastically and at the insistence of immigrant settlers. With this cessation of fire, the ecosystem began to change with the increase in tree growth in former prairie lands. The European settlers also started changing the landscape by logging and converting the grasslands to agriculture, including, where possible, draining wetlands.[9]

The cessation of burning and the converting of lands to agriculture are representative of the ethic of land utilization prevalent in the mid-19th century. The Homestead Act of 1862 gave settlers 160 acres of land for a small price but with the requirement that they put some of the land to use within five years. Cronon[10] contrasts the Native American view of land with the European settlers' view of land, pointing out that because the Native American's did not "improve" the land, they had no right to it. Even though he is discussing the northeast part of the United States, the importance of "improving" the land still held with the settlers of the Willamette Valley. The city of Eugene was incorporated in 1862 and settlement continued to grow throughout the end of the 19th century and beginning of the 20th—by 1940 the population of Eugene was 20,838.[11] As seen in the aerial photo from 1936, the lands surrounding the West Eugene Wetlands already show the influence of European settlement: agriculture, roads and homesteads are all visible. However, development was still limited because of the regular flooding of Amazon Creek and the Willamette and McKenzie Rivers.

Over the next 30 years, the West Eugene Wetlands were changed drastically as a result of American society's faith and use of technology to solve both natural and self-inflicted problems. The common belief at the time was that "nature is an element separate from culture that exists to be manipulated and molded for benefits of humans."[12] The Flood Control Act of 1938 led to the building of Fern Ridge Reservoir and eight dams on the upper Willamette and McKenzie Rivers during the 1950s and 1960s. The dams were built to control flooding, which had the consequence of altering the hydrology of the West Eugene Wetlands.[13] Amazon Creek was channelized, including redirecting most of its flow into Fern Ridge Reservoir, turning the thousand fingers of Amazon Creek into one. These changes enabled Eugene to start expanding to the west and it opened more land for agriculture. These effects are noticeable in the aerial photograph from 1968—the channelization of Amazon Creek is obvious and there is significantly more development than there was in the photo from 1936.

However, what is not obvious in the photograph from 1968 are the changes that had started to occur in Eugenian and American society as a whole regarding environmental ethics and ecosystem processes. Americans were becoming less enthusiastic about "smokestack prosperity" and more aware and educated about the interconnectedness of ecology.[14] Locally, in 1966, the newly formed planning department for the city of Eugene hosted a "Community Goals Conference" to receive feedback from citizens. The top two concerns were air pollution and urban sprawl and the community goal was "to protect and enhance the quality of our environment so that Eugene will retain its appeal as a good place to live."[15] Using the feedback from this conference as a guide, the Central Lane Planning Council prepared a new metropolitan plan in 1972 (the 1990 Plan) that "rejected the growth accommodation objectives of a regional plan previously adopted in 1959."[16] This plan also developed the concept of an "urban service area," which was the prototype for the urban growth boundary. The urban growth boundary came out of the Oregon Land Use Planning Act of 1973, and established limits on where urban areas could expand. In the initial urban growth boundary for Eugene and Springfield, most of the West Eugene Wetlands was included within the boundary.

Another key element to the Oregon Land Use Planning Act was the establishment of 19 planning goals that urban areas must incorporate into their comprehensive land use plans. Of the 19 goals, the fifth goal is the most pertinent to wetlands and is titled "Open Spaces, Scenic and Historic Areas, and Natural Resources,"[17] which includes wetlands. "Goal 5 requires local govern-

ment to inventory the quality, quantity and location of specific resources, including wetlands. Identified wetlands must be preserved in their original state unless conflicting uses are identified."[18] To meet the requirements of Goal 5, a natural resource inventory was conducted in 1977-78, including a search for wetlands. This also corresponded with the effort by the US Fish and Wildlife Service (USFWS) to map wetlands nationally. However, because wetland delineation was a new science and also because of the methods utilized, they only mapped a quarter of the actual wetlands in the Eugene area and only included Bertelsen Slough and Willow Creek in the West Eugene area.[19] These areas were protected under the land use plan.

Because the West Eugene Wetlands area was within the urban growth boundary and the wetland inventories of the late seventies missed most of the wetlands in west Eugene, the area was zoned primarily for industrial development because of their proximity to highways 99 and 126 and to the Coos Bay rail line.[20] However, little development occurred, mainly because of the recession that hit Oregon and Eugene in the 1980s. To help kickstart the local economy and attract development and jobs, the city of Eugene spent $12-20 million on infrastructure improvements in the area, including roads, water and sewer lines.[21] But in 1987, a new natural resources survey of Eugene was performed and discovered over 700 acres right in the heart of the west Eugene area that had been zoned for development. In 1989, the wetland acreage increased to over 1,300. This discovery immediately brought state and federal regulations involving wetlands to bear on these lands.

1936 Aerial Photo of the intersection of Bailey Hill Road and Highway 126 (West 11th). Amazon Creek is flowing east to west in the lower part of the photograph.

Eugene, 1987

Eugene had invested millions of dollars in infrastructure in the west Eugene area to promote development in response to the recession of the 1980s, when wetlands were discovered in 1987. The discovery "placed a cloud of uncertainty over future development opportunities,"[22] because of the federal and state wetland regulations that were suddenly applicable to the area. This "cloud of uncertainty" became evident almost immediately when Spectra-Physics, an electronics firm and large employer located in the heart of the wetlands, wanted to expand their operations. The Facilities Manager of the plant said, "The problem with [the presence of wetlands] was that if they were indeed there, you didn't know what it really meant, and it sounded like it was going to slow down or impede our ability to develop phase three," and the hassles and unknowns of wetland permitting even caused the company to consider leaving Eugene.[23] The company decided to remain in Eugene and expand their operations, but it cost them over $600,000 just for the mitigation of the filled wetlands.[24]

> The plan called for the establishment of the first wetland mitigation bank in Oregon.

Instead of just allowing the wetlands permitting process to deter individual companies from developing in Eugene, the Eugene City Council decided to work toward a comprehensive plan that would benefit the economic and development interests of the city as well as the community.[25] It is important to note that the plan was not to simply make development in the wetlands area easier, but also to ensure larger community benefits beyond the economic impact of the development. The environmental ethic that began in the late 1960s and early 1970s continued to flourish in Eugene, giving it a reputation of being a city where "Birkenstocks and granola bars are standard issue."[26] Since the Community Goals Conference in 1966, Eugene continued to be concerned with the environmental and livability effects of urban sprawl throughout the 1970s and 1980s.[27] The citizen involvement reflected in the Community Goals Conference also continued to have an important influence in Eugene as the city adopted a Citizen Involvement Program in 1975.[28] Because of the citizen initiative process and a statewide planning law that mandated public input,[29] Oregonians have an expectation of being involved in community-wide decisions. These societal currents, along with the economic pressures of the recession, pushed the Eugene City Council to seek alternative means of dealing with state

and federal wetland regulations at a local level. In 1989, the city partnered with Lane County, the Lane Council of Governments (LCOG), the Eugene office of the Bureau of Land Management (BLM), and the Nature Conservancy to prepare a "West Eugene Wetlands Special Area Study" (WEWSAS). The four major objectives of the WEWSAS were:

1. To use the best information to help the community understand the choices available;
2. To find a balance between environmental protection and sound urban development which meets state and federal laws and regulations;
3. To provide opportunities for involvement of all interested segments of the community in plan development; and
4. To turn a perceived "wetlands problem" into a "wetlands opportunity" for the community.[30]

Over the course of the next three years, the partnership worked on developing the West Eugene Wetlands Plan, a wetlands conservation plan allowed under the 1989 amendments to the Oregon Removal and Fill Laws. The work on the plan incorporated an extensive public involvement process, which included seven public workshops, wetland tours and field trips, presentations to public and private organizations, public surveys, and newsletters and other communication to a mailing list of all interested parties, environmental and civic organizations, and all land owners potentially affected by the wetlands in west Eugene.[31]

In 1992, the West Eugene Wetlands Plan was introduced to the public and adopted by the City of Eugene and Lane County. In 1994, it was adopted by the Army Corps of Engineers, the EPA, and the Oregon Division of State Lands as Oregon's first wetlands conservation plan. Some of the plan highlights, as titled in the plan, include: protection of natural diversity; development opportunities and certainty; wetland protection measures; mitigation and the regional mitigation bank concept; stormwater management; and recreation, education and research.[32] Some of these highlights, as well as their status in 2005, are outlined below:

Protection of Natural Diversity

The plan called for the protection and restoration of approximately 1,000 acres of the wetlands in west Eugene and since they primarily were located on private land, the plan called for the BLM to use federal Land and Water Conservation Funds to purchase the land from willing sellers. As of 2005, most of the 1,000 acres of wetlands designated for protection, plus 2,000 surrounding and upland acres, have been purchased, over half by the BLM. Over $18 million of federal, state and local monies have been used to fund these purchases,[33] $13 million of which have been Land and Water Conservation Funds through the BLM.

Development Opportunities and Certainty

The 300 acres of wetlands not protected were instead designated for development. These 300 acres were either small, isolated wetlands or wetlands of lower value and as of 2005, about 30% of these wetlands have been developed The plan also recommended the city work with the ACOE and DSL to create a one-stop permitting process for wetland development. The city was not successful with this aspect of the plan, yet the plan has created certainty for businesses seeking permits because of the designated acreage for development and the extensive wetland delineation that has occurred, thereby avoiding any surprise wetlands when planning development.

Mitigation and the Regional Mitigation Bank Concept

Of course, any development on the 300 acres would still require mitigation, so the plan called for the establishment of the first mitigation bank in Oregon, even though they had been allowed in Oregon since the legislature passed a Wetlands Mitigation Bank Act in 1987. Instead of a developer creating or restoring compensatory wetlands themselves, a mitigation bank allows developers to pay a designated fee for any permitted wetland destruction. The money paid to the West Eugene Wetlands mitiga-

1968 aerial photo of the intersection of Bailey Hill Road and Highway 126 (West 11th). Notice the increase in development enabled by the channelization of Amazon Creek and the building of dams upstream on the Willamette and McKenzie Rivers.

tion bank would support the restoration and enhancement of the 1,000 acres of protected wetlands. The mitigation bank makes it significantly easier for developers dealing with wetlands mitigation, and it has the environmental benefits of concentrated wetlands restoration and mitigation in a larger project, rather than many smaller projects.[34]

The city was successful in establishing a mitigation bank, and it continues to operate and provide funds for ongoing restoration and enhancement. As of 2003, it had sold almost 68 credits,[35] raising over $2 million.

Recreation, Education and Research

New trails, bikeways, wildlife observation points, and interpretive signs are all part of the West Eugene Wetlands Plan. A nature center is still a future possibility, with the hope that the wetlands would be used as an educational resource by schools. The plan also noted the possibility of extended research on the wetland sites by the University of Oregon, Oregon State University, Lane Community College and more.

A bike path has been built following Amazon Creek all the way to Greenhill Road, with many observation points and interpretive signs along the way. Between 2002-2005, almost 6,800 students have participated in a WREN (Willamette Resources and Education Network) environmental education program at the West Eugene Wetlands.[36] There is a major research project headed by a University of Oregon biology professor, along with many on-going monitoring projects of species considered threatened or endangered.

By most accounts, the West Eugene Wetlands Plan has been successful. Development continues along West 11th Avenue, most of the wetlands are now publicly owned, and restoration of the wetlands continues. The success of the plan is also demonstrated beyond the effects on the land. Three examples of this success: the West Eugene Partnership continues to garner significant grant money because of its past success creating partnerships and obtaining and enhancing wetlands; Steven Gordon, the planner that led the development of the plan, received the EPA/Environmental Law Institute's "1992 National Wetlands Protection Award" (local government category); and Eugene was one of only twenty municipalities in the nation to be profiled in Nature Friendly Communities[37] with a chapter entitled, "Eugene, Oregon: Shining Star of Wetlands Preservation." The plan's success is also evident with the citizens of Eugene, with almost 1,000 citizens and 3,000 students participating in education programs in 2004, over 2,000 volunteer hours donated for service projects, and the many cyclists, joggers and walkers that use the new paths.[38] In response to the recent brouhaha over the West Eugene Parkway, which would be built right through some of the wetlands, many letters to the editor of the Eugene *Register-Guard* pointed to the wetlands with pride and as a reason to keep the parkway from being constructed (personal observation).

The West Eugene Wetlands Plan successfully synthesized local concerns, ethics and practices with federal and state law. It is an excellent example of how federal laws work at spatial scales other than purely at the federal level, and the importance in considering the local geographical context when examining the law-space nexus.[39] The Eugene City Council pushed for the creation of a plan that would fit with the economic needs of the city, while also fitting with the culture of participation and environmentalism of its citizens, but still fulfilling the requirements of federal and state law. As our keen observer from the introduction noticed, this interplay between federal rules and local character has had a visible and significant effect on the West Eugene Wetlands and surrounding areas.

Matt Peterson is a master's student in both the Environmental Studies Program and the Department of Planning, Public Policy and Management.

1. Boyd, Robert. "Strategies of Indian Burning in the Willamette Valley." Indians, Fire and the Land in the Pacific Northwest. Robert Boyd, editor. Corvallis, Oregon: Oregon State University Press (1999).
2. Ibid, p.101.
3. Ibid, p.98.
4. City of Eugene website. "Historical Vegetation in West Eugene." http://www.eugene-or.gov/portal/server.pt?space=CommunityPage&cached=true&parentname=CommunityPage&parentid=0&in_hi_userid=2&control=SetCommunity&CommunityID=217&PageID=1358#.
5. Ibid.
6. Boyd 1999, p.99.
7. Ibid.
8. Ibid.
9. City of Eugene website.
10. Cronon, William. "Bounding the Land" in Changes in the Land: Indians, Colonists, and the Ecology of New England. New York: Hill and Wang (1983).
11. Gordon, Steven C. West Eugene Comprehensive Wetlands Plan: A Case Study. Lane Council of Governments. September 1990, p.4.
12. Alvorson Ed. "The Changing Natural Environment." Eugene 1945-2000: Decisions that made a community. Kathleen Holt and Cheri Brooks, eds. (2000), p.38.
13. City of Eugene website.
14. Madden, Carl H. "Land as a National Re-

source." C.L. Harriss, ed. The Good Earth of America: Planning Our Land Use. New Jersey: Prentice-Hall, Englewood Cliffs, (1974).
15. As quoted by Seidel, Karen. "Coping With Growth." In Eugene 1945-2000: Decisions that made a community. Kathleen Holt and Cheri Brooks, eds. 2000.
16. Duerksen, Christopher and Cara Snyder. Nature Friendly Communities: Habitat protection and land use planning. Washington: Island Press (2005), p.200.
17. OAR 660-015-0000(5).
18. Corday, Jacquelyn. "Freshwater Wetlands Law: Two Different Local Government Approaches in Oregon." 6 J. Envtl. L. & Litig (1991), p.113.
19. Gordon 1990 & Corday 1991.
20. City of Eugene website.
21. West Eugene Wetlands: Recreation, Access and Environmental Education Plan. Bureau of Land Management, Eugene District Office. April 2001, p.1. & Gordon, Steven C. A Case Study in Multiple Objective Water Resources Management Planning. Lane Council of Governments. June 1993, p.2.
22. West Eugene Wetlands Plan (WEWP): A Product of the West Eugene Wetlands Special Area Study. December 1992. Lane Council of Governments.
23. Missar Chuck. Transcript of interview on Rice University's West Eugene Wetlands Project website: http://www.rice.edu/wetlands/Interviews/int5.html. (1995).
24. Gordon 1990, p.5.
25. WEWP 1992.
26. Maben , Scott. "Green Eugene." Planning. American Planning Association. October 2004. Pp.10-15.
27. Seidel 2000.
28. Brown, Tracy et al. Involving Citizens from Beginning to End with the West Eugene Wetlands Plan. Lane Council of Governments. September 1993.
29. Goal 1, Citizen Involvement.
30. WEWP 1992.
31. Brown et al 1993 & Corday 1991.
32. WEWP 1992.
33. Maben 2004.
34. Just the Facts #6. About Compensatory Mitigation for Wetland Impacts. Oregon Division of State Lands. April 1999.
35. West Eugene Wetlands Mitigation Bank Annual Report 2003. City of Eugene. August 2004.
36. WREN Website. http://www.wewetlands.org/center.htm.
37. Duerksen and Snyder 2005.
38. WEW Annual Report 2005.
39. Blomley, Nicholas K. "Text and context: rethinking the law-space nexus." Progress in Human Geography. 13(4):1989, pp.512-534.

PHOTO BY REBECCA BRIGGS

The Sound of Hope

SARAH JAQUETTE

On the phone,
my brother
(who lives on a sailboat
in the Berkeley marina)
tells me of the oil spill last week
(remember that one?)
and the sea tar sloshing against the
hull next to his head at night.

I'm trying to imagine living on a
boat
in the Berkeley marina.

An oil spill is personal
when your neighbors are turning
up upside
down sealed silent.

Floating diving birds
Waylaid by diesel.
Their triumphant explosions from
deep
punctuated by black bobbing blobs
(abbreviating life, remem-
ber?)

Chris moved to the boat
in the Berkeley marina
to get off the grid.
(Out of the pan into the fire,
right?)

While I post "No Spray" signs at my
curb
(do you mind?)
And commute to get schooled on
"the environment"

I'll let him listen to it
(the ocean deafened by my
denial)
through his pillow.

That was last week.
On the phone,
I hear a seagull squawking
drowning me out.

Government's Atmospheric Trust Responsibility

MARY CHRISTINA WOOD

I. The Precipice

In June 2007, leading climate scientists issued a report concluding that the Earth is in "imminent peril." They warn that runaway climate heating will impose catastrophic conditions on generations to come. It threatens to destroy major planetary fixtures, including the polar ice sheets, Greenland, the coral reefs, and the Amazon forest. It will bring floods, hurricanes, heat waves, fires, disease, crop losses, food shortages, droughts, and trigger a kind of mass extinction that hasn't occurred on Earth for 55 million years. It will force massive human refugee migrations and pose a threat to world security. In the words of leading scientists, our continued carbon pollution will cause a "transformed planet."

We face a problem that is unprecedented in terms of its consequences; a problem that is caused by virtually everyone on Earth; a problem that so far has been ignored by most governmental officials in this country; a problem that, to solve, requires us to overhaul our sectors and lifestyles; and, as if that were not enough, a problem that requires us to act before Nature passes a critical tipping point looming right in front of us.

And yet, we have the human imagination, the resources, the legal tools, and the bureaucracy to tackle this challenge head-on. We can change this disastrous course, and we can do so without inflicting pain or misery on our citizens. In fact, the changes we make can vastly improve the American condition. Individuals have the power to reduce their carbon footprint. However, sweeping carbon reductions are largely in the hands of the government. Individual reductions are very important, but at the same time, they are quickly nullified by the carbon emissions of others.

This is exactly why we have government – to address threats to society and organize a response commensurate with the scale of the problem. All of our regulatory authority and public funds are locked up in government. These resources must immediately be used to curb greenhouse gas emissions. Yet our government is actually promoting excessive greenhouse gas emissions. County commissioners are approving trophy home subdivisions and destination resorts. The Forest Service is approving timber sales. The U.S. Environmental Protection Agency just approved another coal-fired plant and issued rules to expand mountaintop coal mining. Life in America is beginning to have the feel of a lemming colony. Some of our governmental officials say that the science is still out on global warming. These leaders of the lemmings would call for studies on the scientific uncertainty of cliffs.

The heart of the problem is this: Americans have lost their sense of government obligation. Without this sense of obligation, there is no way to impel government to act in the short window of time remaining. Four principles are essential to creating a framework of government obligation and accountability in this crisis.

II. The Scientific Imperative: Carbon Math

The first is that the laws of Nature, not politics, must guide government action. One binding reality is the "tipping point" – a phenomenon whereby a certain amount of carbon in the atmosphere triggers feedback loops in Nature capable of unraveling the planet's climate system, despite any subsequent carbon reductions achieved by Humanity. Six months ago it was thought that we might have 8-10 years before the tipping point, but more recent extrapolation of the data shows we are on its doorstep now. The insidious thing about a tipping point is that we may pass it without even realizing it, but it locks in future climate heating that is out of our control.

Scientists have used climate modeling to present us with a path that they believe can stave off the worst climate change. The models have changed recently due to data showing accelerated melting in the arctic and elsewhere. The most recent science suggests that we have to prevent global temperatures from rising to more than 0.5 degrees Celsius above the pre-Industrial average.[1] Exceeding this climate threshold would make it warmer on Earth than it has been for half a million years, and, in the words of NASA's leading climate scientist, Jim Hansen, "many things could become unstoppable." We can think of this as Nature setting a "climate imperative"- to not go beyond a 0.5 degree Celsius rise. To do that, we have to keep the atmosphere concentration of carbon dioxide at above 320 parts per million.[2]

Various states have proposed or enacted measures to reduce carbon. These measures are crucial, but we must keep at the forefront of our minds the fact that states' efforts will be futile if they do not complete the required carbon math within the required time. Thus, the first principle for climate crisis is that political solutions must

be measured against Nature's climate imperative, which is the supreme law of this land – and furthermore, of this planet. Ignoring this law subjects Humanity to climate punishment for untold generations to come.

III. Government's Trust Obligation

The second principle is that government is the trustee of our natural assets, including the waters, wildlife, and air. A trust is a fundamental type of ownership whereby one manages property for the benefit of another. We are the beneficiaries of our natural endowment. Everyone holds a common property interest in Nature's Trust, and we need that trust in order to sustain human survival and promote human welfare. Our imperiled atmosphere is one of the most crucial assets in our trust.

With every trust, there is a core duty of protection. The trustee must defend the trust against injury. Our government trustees do not have discretion to allow irrevocable damage to the atmospheric trust. As our Supreme Court said in 1892: "The state can no more abdicate its trust over property in which the whole people are interested…than it can abdicate its police powers in the administration of government."[3]

However, we Americans have lost our focus on government's obligation, as trustee, to protect crucial resources. Ironically, this is largely a failure of environmental law. Our statutes allow government to give out permits to destroy our resources. Because of such permit systems, society has lapsed into assuming that government has unbridled discretion to allow destruction of our natural assets.

The federal government uses this discretion to justify complete inaction in the face of climate crisis. The danger is this: we have relegated the climate to the political playing field. There is no umpire on this field. There's just discretion. Citizens have to lobby government for their own survival! But when we portray Nature as a trust rather than an ill-defined commons, we vest citizens with expectations of enduring property rights to a defined, bounded asset. We start thinking, "Hey, that's my air, even if I share it with others." Pollution of that air becomes an infringement on American property rights. Therefore, the second principle of this framework is that government is obligated to defend our atmospheric trust. The failure to mount a national climate defense is as absurd a proposition as the idea of government sitting idle during an attack on American soil. By looking at government's obligation in this way, we can hope to engage all levels of government in climate defense as the supreme national priority.

IV. The Climate Prescription

The third principle builds on the second. Trustees have specific fiduciary obligations that serve as measures of performance. You cannot vest trustees with priceless assets and no accountability. A trustee has to measure up to a fiduciary standard of care.

Recently, leading climate scientists issued a path breaking report that sets forth a course of emissions reduction designed to achieve climate equilibrium. The report, called Targets for U.S. Emissions,[4] sets carbon reduction goals for the industrialized world based on reasonable assumptions about the developing world. The Targets for U.S. Emissions sets forth three sequential steps to reducing carbon. First, the United States must arrest the growth of greenhouse gas emissions in the very short term—by 2010. Second, we must reduce our greenhouse gas emissions by 4% each year thereafter. Third, over the longer term, we must reduce emissions 80% below 1990 levels by 2050. While the timeframe set by the targets stops at year 2050, recent scientific reports strongly suggest the need to achieve zero carbon emissions over the long term.

By clarifying what we must do as a matter of science, this report paves the way for actually doing it. The scientists' climate stabilization pathway becomes the fiduciary standard of care for protecting the atmosphere, though it may become more stringent as arctic melting data comes to light. This is a clear, quantitative prescription for action to get our planet back on the path to climate equilibrium.

Citizens, the beneficiaries of this atmospheric trust, can now evaluate their government's climate policy in real terms. Carbon accountants can do the carbon math and calculate compliance with these targets on each jurisdictional level. Moreover, it is not beyond the imagination to think of citizens enforcing this fiduciary duty in the courts through atmospheric trust litigation. Courts should be engaged to ensure that government does not bankrupt the trust and impair the productivity of the atmosphere so that it can no longer sustain human civilization. There ought to be a remedy to ensure against such extraordinary dereliction of fiduciary duty.

V. The Inexcusability of Orphan Shares

The fourth principle is that the sovereign nations of Earth share the atmosphere as their common property. They are sovereign co-tenant trustees of the atmosphere, all bound by the same duties regarding the trust. Property law has always im-

When we portray Nature as a trust rather than an ill-defined commons, we vest citizens with expectations of enduring property rights to a defined, bounded asset. We start thinking, "Hey, that's my air, even if I share it with others."

posed a responsibility on co-tenants to not degrade, or waste, the common asset.

You can apply this mandate to every nation of the world and create a framework for carbon responsibility. If each industrialized nation carries out its fiduciary obligation to meet the carbon prescription set by scientists – that is, each nation caps emissions by 2010, reduces 4% a year after that, and gets to 80% below 2000 levels by 2050 - then the planet as a whole will comply. (That is assuming developing nations uphold their duty to not waste the asset). One can imagine the industrialized world's planetary carbon load as one big pie. Even though industrialized nations come in different sizes, if each proportionately reduces carbon by the same amount, the carbon pie as a whole will reduce by that amount. However, the contrary is also true: if even one major industrialized nation does not accept its share of carbon reduction, then the carbon pie will not shrink by the required amount.

Let's put this principle into a familiar environmental context. In hazardous waste cleanups, we talk about orphan shares. If 20 different companies contribute waste to a toxic dump, all 20 are liable for the cleanup costs. If one company has gone bankrupt, it leaves an orphan share that the others must pick up to clean up the site.

The U.S. is responsible for 30% of the greenhouse gas emissions on the planet.[5] We are producing a huge orphan share. In the hazardous waste context, orphan shares are not so much of a problem, because the solvent companies can pick them up simply by paying out more money than their share for the cleanup. But this does not work with carbon. No other industrialized nation on earth is positioned, much less obligated, to adopt an orphan share left by a deadbeat sovereign – especially a share as large as ours, 30%. By refusing our planetary share of responsibility, we are consigning ourselves and all other nations on Earth to disaster. This fourth principle means that, as co-tenant trustees of the atmosphere, all nations must carry out their share of carbon reduction as set forth in the prescription provided by scientists. Scaling down to another level, this also means that all states, and all cities and counties within such states, must carry their own burden. If San Diego, for example, leaves an orphan share, that will leave California with a partial orphan share. Orphan shares must be inexcusable.

PHOTO BY REBECCA BRIGGS

VI. The Cap on Emissions: Getting There in Two Years

Rarely does action come before vision. We must visualize what it is going to take to achieve the first part of the prescription: a cap on emissions in two years. That is a very short time frame indeed, given that our emissions are rising at a rate of 2% a year. However, success stories are emerging. For example, Mayor Greg Nickels has led Seattle to cap and reduce its emissions and initiated the U.S. Mayors Climate Protection Agreement. The agreement, which commits cities to reducing greenhouse gas emissions, now has over 800 signatories.

We have legal tools available to arrest the growth of emissions. A carbon tax, for example, is a swift, effective way to achieve dramatic emissions reductions. Government can also use rolling moratoriums to halt new sources of greenhouse gases. A moratorium is a versatile legal measure, and it buys time. One could envision moratoria against new coal-fired plants, certain air permits, commercial logging, airport expansions, farmland development, and other activities. Nearly all of these types of moratoria have been used. Government also has the ability to switch subsidies from fossil fuels and coal to renewable energy, invest in mass transit, use tax incentives to encourage green initiatives, develop cap and trade programs, and undertake a nearly infinite number of other policies. But all of those measures take time to design and implement. We no longer have the luxury of time. Moratoria and carbon taxes are tools government can use right now to stabilize a situation that otherwise will spiral out of our control.

Some elected officials oppose such climate initiatives out of fear that their constituents will resent measures that cut into their lifestyle or make that lifestyle more expensive to maintain. This is exactly backwards. We have to take action now to preserve the security that we now take for granted. Government has to choose between disaster prevention and disaster relief. I think most rational people would choose prevention. This is a chance for politicians to become true leaders, to explain clearly the nature of the threat, and to install in Americans' minds the need for short-term investment and regulation in order to avoid long-term calamity.

We must make the point to Americans that

today's life of convenience will lock us into a future where there is little or no convenience. Where is the convenience in a family huddled on their rooftop praying that a helicopter will lift them from the floodwaters of Hurricane Katrina? Where is the convenience in half a million Californians evacuating to escape mega-fires racing toward their homes? Do we find convenience in the emergency cooling centers of Missouri and Tennessee, where masses congregated last summer to take respite from searing temperatures? As for cost, where is the business sense of letting this problem get so bad that we will be spending much more money responding to disasters and crop failures than we will spend in taking preventative action now? The British Government's Stern Review estimates that climate disaster will cost up to 20% of our GNP, yet actions to reduce greenhouse gas emissions would cost only 1% of our GNP.[6] Leaders need to start speaking truth to the circumstances we face. True leaders know how to do that.

Those leaders are coming forth. For example, the Kansas Department of Health and Environment recently denied an air permit for a proposed coal fired plant on the basis of greenhouse gas emissions. The head of that agency said, "It would be irresponsible to ignore . . . the contribution of . . . greenhouse gases to climate change and the potential harm to our environment and health if we do nothing."[7]

VII. The Crisis of Distraction

To close, the question should not be whether we can transform society to thwart global catastrophe. The question is how we can immediately convince our government to do so – how can we bring forth courageous leaders, because there have been pitifully few so far.

Our greatest enemy is distraction. Every day of carbon pollution brings increased probability of harm, but the attention of the vast majority of leaders and agency officials is still focused on other issues. Thus far in climate crisis, Americans have relied on what I would call "paper democracy," that is, sending emails and letters to officials, and writing a letter to the editor now and then. The problem is that paper democracy is very labor intensive, does not create momentum or a critical mass in short order, diffuses anger and emotion, and does not present the pain of climate damage directly to the lawmakers. There is another approach, "street democracy." This is where citizens exercise their Constitutional right of assembly in protest at public places, including the steps of the legislature. What governmental official wants to turn on the television and see masses of citizens in angry protest holding up signs that say, "government is asleep at the wheel," or "there's nothing worse for business than the end of civilization"? Demonstrations can be the lighter fluid for smoldering legislative coals. The major movements of our time have gained unstoppable momentum when citizens exercised their right of street democracy. Think of the women's suffrage movement, the Vietnam War movement, the civil rights movement, and the environmental movement.

The climate movement will be next, and it has already begun. One thing is clear: Americans will stand together during this crisis. The choice is whether to stand together in the streets today holding up signs with political messages or to stand together tomorrow- on rooftops holding up signs for help. The moral high ground is here, and it is now.

VIII. The Dawn of Planetary Patriotism

When the leaders of this country are jolted out of denial and wake up to climate emergency, they will suddenly realize that they face a higher calling than any other generation of leaders in our history. For they hold office during a planetary emergency. Their decisions will reverberate through all of Humanity on Earth from this time on. As soon as we Americans define our government's basic obligation to protect the atmosphere that our children need for their survival, security, and prosperity, we may soon find every other nation in the world engaged with us, not against us, in a massive, urgent defense effort to secure the systems of life on Earth for all generations to come. That shall be the dawn of planetary patriotism.

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**This article was originally published in the UO Journal of Environmental Law and Litigation.*

1. See David Spratt & Philip Sutton, Climate Code Red: The Case for a Sustainability Emergency 39 (Friends of the Earth 2008) (summarizing science), available at http://www.climatecodered.net/ (hereinafter Climate Code Red).

2. Id. ("The long-run maximum level of CO2e must not exceed 320 ppm."); James Hansen, Makiko Sato, Pushker Kharecha, David Beerling, Valerie Masson-Delmotte, Mark Pagani, Maureen Raymo, Dana Royer, James C. Zachos, Target Atmospheric CO2: Where Should Humanity Aim? (draft) March 31, 2008, available at http://www.columbia.edu/~jeh1/2008/TargetCO2_20080331.pdf. (noting 350 ppm as initial target subject to reassessment "as the effect on ice sheet mass balance is observed.").

3. Ill. Cent. R. R. Co. v. Illinois, 146 U.S. 387, 453 (1892).

4. Luers, M. D. Mastrandrea, K. Hayhoe, & P. C. Frumhoff, How to Avoid Dangerous Climate Change: A Target for U.S. Emissions Reductions 5 (Union of Concerned Scientists 2007) (hereinafter Target for U.S. Emissions Reductions), available at http://www.ucsusa.org/assets/documents/global_warming/emissions-target-report.pdf.

5. Al Gore, An Inconvenient Truth: The Planetary Emergency of Global Warming and What We Can Do About It. 250-251 (2006) (featuring a map depicting contributions across the globe).

6. Nicholas Stern, The Economics of Climate Change: The Stern Review vi(2006), available athttp://www.hm-treasury.gov.uk/media/3/2/Summary_of_Conclusions.pdf.

7. Steve Mufson, Power Plant Rejected Over Carbon Dioxide for the First Time, Wash. Post, Oct. 19, 2007, at A1.

Renewing Relationships to the Land
On Two Wheels

ROB HOSHAW
FIRST-YEAR MASTER'S STUDENT

The sun warmed me from behind, flittering through the branches of Douglas fir and hardwoods canopying the trail. Beads of perspiration dampened my undershirt as it clung to my skin. The air was cool,though, and it had a bite which made even this Midwestern boy wish I had something to cover my ears. The cool afternoon breeze nipped playfully at my nostrils and tickled the back of my throat dry. I could hardly complain though. The weather was gorgeous, and honestly, I had underdressed in a spontaneous decision to defy January by embarking in only a green hooded sweatshirt. Yet the longer I rode the more comfortable I became—it felt delightfully rebellious.

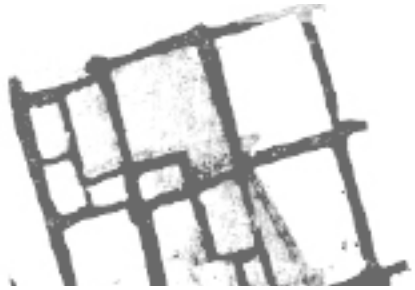
Tender ears and a runny nose were quickly forgotten, and soon I feathered the breaks and paused to watch several species of ducks dabbling in the flooded riparian woods of the brimming Willamette. For a moment, I was back home, and it was April in north-central Minnesota. The north winds had lessened their brutality, bringing only the chill of the disappearing lake ice. The waterfowl were returning to breed in the streams and ponds, and I could tell it was spring most of all because I could smell it—smell the thaw of water-logged mud as the leaves of last November began once again to decay and smell the freshness of moist breezes replacing the dry arctic air. If I closed my eyes, I had to remind myself that this was not Minnesota in April; this was January in Eugene. I threw my right leg over the seat of my bike and smiled at the wading birds, once again oblivious to my presence. Waiting at my apartment were articles to be read and assignments to be completed ... Looking up at the dome of unbroken blue, I shifted down and inhaled the sweetness of the crisp afternoon and rode on anyway.

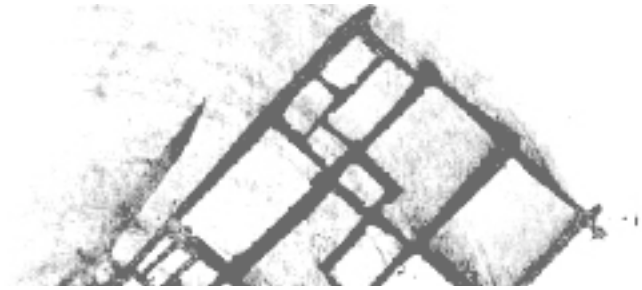
"The weather is the same thing there every day. You wake up and you know exactly what it's going to do—rain."

This was the cynical response of a former coworker from Fargo, North Dakota to my inquiry about Oregon's weather; he had lived in Portland for several years. His blunt comment disheartened me somewhat in anticipation of my move to Eugene, and once I arrived in the Northwest, it was a message further enforced by Eugeneans themselves. The bluebird skies of August, they warned, would before long give way to persistent gray and endless rain. As I continued to bike past the Delta Ponds, I had to chuckle lightly to myself. Even if this was a fluke, things weren't so bad here. Eugene's weather is supposed to be frustratingly static for months. In reality, I think nothing could be further from the truth. Oh, it does rain—and often. Yet the rains themselves are wonderfully dynamic. While day-long soaks are likely, and blinding downpours happen occasionally, the most common rains are gentler than the softest mists at the produce aisle, and even other winter days flirt with the possibility of just a kiss of snow. I have enjoyed the weather, no less, due to my choice to embrace a lifestyle that is so easy to adopt in Eugene—biking.

By commuting on bike, no matter the weather, I have been able to experience a plethora of sights, scents, and sounds. On bike, there is a viscerally invigorating perspective which is lost to a driver of an automobile. From behind a windshield, life is

PHOTO BY WEN LEE





lackluster; it dulls the senses and the view is incredibly restrictive. Observing the world from your car is akin to turning on the television at home to see what the weather had been like outside your front porch.

What my coworker in Fargo hadn't told me was that the sun peeks out from behind the clouds almost every day, sometimes bashful and brief, or sometimes long enough to dry the dampness from the pavement. I hadn't been told about the glorious image of the sun's beams beckoning through a gap in the evening clouds and warming the chill from my face. It's a splendor even Bob Ross, if he were alive, would have trouble duplicating in one of his paintings. Nor was I told when you ride south on Willamette or Pearl streets during foggy mornings, the Douglas firs atop Spencer Butte are ghostly spires that appear for an instant before they're shrouded once more behind color-shifting mist. Even the clouds themselves are far from monotonous, as there is often a whole spectrum of gray—from goose down and gull grey to steel and charcoaled ash. I'm astonished at the majesty of the sky, and the freedom of the bike allows me to drink it all in.

The benefits to riding are well documented both health-wise and environmentally. In a society where obesity is an increasing epidemic, biking is a great way to keep in shape, and it is no secret that bicycles don't discharge greenhouse gases. Implications of health and sustainability aside, there is another, greater incentive to get on a bike and experience the Northwest—personal fulfillment. Your body, your senses, and not least of all your spirit, will thank you.

Eugene, and in fact much of the Pacific Northwest, is conducive to a lifestyle of alternative transportation--especially biking. The Northwest lacks the bitter cold of the Upper Midwest, and strong storms and winds are infrequent enough. Yet the fact that so many are riding bikes also reflects the way cities like Eugene are designed to accommodate cyclists, and it is not only a climate of mild weather, but a climate of hospitality which makes cyclists feel comfortable commuting in an urban environment. Motorists and cyclists alike share the road, and the gap between the number of people on bicycles and in automobiles seems much narrower than many other places of the country. Nearly 90 miles of designated street routes and bicycle lanes provide cyclists with the same privileges and responsibilities as automobiles. While the car would likely appear to reign, there is a deference given to cyclists by motorists, who will often wave the cyclist on at an intersection or yield the right of way with a smile instead of an impatient scowl.

In past experiences in the upper Midwest, I've had obscene gestures and angry comments directed at me while riding on the road, not to mention fear I might be struck down at any moment. A cyclist should not feel "in the way" on the road. Vehicles powered by human muscle have every bit as much right to travel on the road as those powered by gasoline. This is not to say that every driver in Eugene respects cyclists, nor does it suggest that drivers in the Midwest are out bowling for cyclists and pedestrians. What I am suggesting is that there is a palpable culture in Eugene which has embraced biking. We belong on the roads. And it's a culture that isn't just present in Eugene. The largest Northwest cities, Portland and Seattle, also boast well over 100 miles of bike trails and lanes themselves.

Within the Eugene area there are also approximately 30 miles of bike paths, many of them following the winding shores of the Willamette. These riparian paths were the location of my early January expedition to the Delta Ponds. On my return trip, significantly warmed from the quickening of the blood through my veins, I stopped once more to observe the ducks dabbling near the shore amongst the inundated trees, sequestered from the waves which rolled with the current, churning the Willamette into a white lather.

There was a welcome stiffness in my thighs, an awakening of muscles. I set my bike down and attempted to identify the waterfowl. There were at least two. There were the larger mallards and the scaup—their steel-blue bills, dark heads and whitish backs, and smaller frame made them easily distinguishable from the common mallards. And was that a ring-necked duck just beyond the others? I cursed myself for not bringing binoculars and a bird guide, necessities for any cyclist serious about birding. Instead, I resorted to straining my eyes in search of the telltale white swoosh-shaped patch on the side of the bird. The waves broke up the pattern on the duck's feathers, however, and the identity of the bird was left in question. The beauty of bird watching was also the challenge of identification in the field.

Back on the bike and on the trail towards campus and downtown, black-capped chickadees chattered to each other in the limbs

overhanging the river and the bike path. My feet gripped the pedals as they gyrated round the axis, and the wheels whirred softly across the pavement, a constant drone deadened only when the tires passed over a carpet of fallen fir needles. It was a cozily intimate setting amongst the birds and steady stream of people. Other Eugeneans took full advantage of the clear skies and warm weather as well. I passed couples young and old holding hands, groups of friends, parents and their children, an abundance of dogs—tongues lolling contentedly, and most of all, other cyclists.

The last of the ponds on my way home provided me with the most joy. Out of the corner of my eye I spotted a double-crested cormorant, obsidian black and nearly invisible save for its yellow-ivory bill. Seconds later, a great blue heron's spear-like silhouette materialized from the rushes on the shore, tall and statuesque. They reminded me of home—of Minnesota—and it was as though they had followed me here, but the birds weren't truly what brightened my day. Two young boys were by the very same pond, balancing bikes between their legs. One had a pair of binoculars, proving more industrious than I had been. They pointed at it excitedly.

"That's a great blue heron!" the one with the binoculars shouted.

The bird had made their day, yet they had made mine. In a world where the future of our environment at times seems quite uncertain and precarious, and when we face a litany of issues that threaten to drain every ounce of hope, there is a shred of optimism for the future. It's a presence which can be found in something as simple as two boys identifying birds along the paths of the Willamette, children who are still excited about discovering their own relationship with nature, even if they don't look at it in that context. It's a relationship they're unwittingly introducing themselves to through biking. There's also hope present in all the Eugeneans who commute to work and school—those for whom the decision to ride instead of drive is seen as a pleasure and a privilege, not a responsibility or commitment.

I felt fortunate to experience seeing the birds and feeling the freshness of the balmy January air. Even within the city, there's so much more one will notice on bike than in a car. Far less noisy and intimidating, bicyclists are more likely to spot the family of raccoons living near the University of Oregon or a bald eagle perched on the limb of a tree by the Willamette River. The urban landscape is not devoid of wildlife or natural beauty; one merely has to know where to look. Just as many will relinquish their cars for bikes to experience the Oregon wilderness, others of us have already recognized that the best way to experience the city is on two wheels.

PHOTO BY JILL JAKIMETZ

STUDENT VOICES
from the Environmental Studies Program

Predator Conservation
Depends on Human Collaboration

STACY VYNNE
SECOND-YEAR MASTER'S STUDENT

Are urban residents making decisions that impact rural communities? In many cases, yes, especially pertaining to politics. In Oregon and Washington, voters outside of major cities tend to vote more conservatively, whereas the majority of city dwellers veer more toward the liberal end of the spectrum. In rural Arizona and New Mexico, ranching communities claim that these often urban "vegetarian environmentalists" are behind the reintroduction of endangered species. However, the reintroduction of the Mexican gray wolf, a subspecies of the better known "Yellowstone" gray wolf, isn't a conspiracy against the rural ranching community—it's the law.

The Endangered Species Act (ESA) of 1973 requires federal and state governments to do whatever possible to protect and recover species identified as endangered or threatened. Despite the clear guidance given by the ESA, it took almost 20 years from the time the Mexican gray wolf recovery plan was written until the time the wolves set foot back in the forests of the Southwest. (And even then, they were classified as a "nonessential experimental" population allowing for great flexibility in their management, such as removing wolves that left the restricted reintroduction boundary.) There are major criticisms of how the Fish and Wildlife Service handled the recovery of the wolf, but there's no point dwelling on the past. Serious changes must be made to management if the wolves have any hope at a future. The wolves are on the ground, and they face huge hurdles in winning over the hearts and minds of the ranching community. The idea of wolves and ranchers embracing is a little overly optimistic, but how can they learn to at least live alongside each other?

A 2005 survey conducted by an independent consulting firm (hired by Fish and Wildlife) identified that a wide majority of citizens in Arizona and New Mexico supported wolf recovery. However, a survey conducted this winter that targeted ranchers living in the communities where wolves are allowed to roam showed an overwhelming lack of support for the wolves. So if the wolves are staying in the Southwest (thanks to the Endangered Species Act), but their closest neighbors would rather have them killed, what can be done? Instead of seeking input from the city dwellers, it is essential that conservationists work with the communities that are directly affected by species recovery. Many conservation organizations in the Southwest have taken this approach by working with livestock owners to develop programs that reduce the economic impact that might come from losing animals to endangered predators, but today the war continues between the wolf advocates and the livestock associations. Lawsuits, publicity stunts, and rumors of wolf bounties and wolf baiting (leaving dead livestock out as attractants) continue to make headlines and inspire heated debates across both states. Something needs to change.

For a researcher who was raised in the suburbs and has spent her life dedicated to wildlife conservation, it can be hard to get into the minds of men and women whose families have lived for generations in rural communities, working the land and caring for their animals. But reading their stories – about finding partially eaten calves, sheep with missing limbs, and how their fathers and grandfathers were celebrated as heroes for killing off the wolves—provides some insight into this world. Within less than sixty years, wolves went from being vermin that must be removed forever to an endangered species that should be celebrated and reintroduced to the land. Even the recent city transplants that have moved to 'ranchettes' are quickly linked in with their new community and join forces to fight against wolf recovery on behalf of their neighbors.

No amount of conservation dollars will build tolerance in these communities—at least not during our lifetime. There is such intense hatred for these animals that efforts should instead focus on ways that eliminate any justification that people have for killing off the wolves. Continuing to work directly with

communities that are affected by conservation efforts can help to identify innovative initiatives that are proactive and preventative against wildlife conflicts. These types of initiatives will only take place when there is collaboration between urban and rural residents. The decision-makers need to empower the communities that are most affected by conservation (typically rural areas) or the Endangered Species Act and the animals it protects will continue to be threatened by the courts, poachers and negative publicity.

It is hard to say whether wolf recovery in the Southwest has been a success. After a long history that almost ended in extinction, the wolves are on the ground. However, ten years since the first wolf release, only 50 individuals exist in the wild and approximately 44 have been removed (either killed or placed back in captivity). Needless to say, the wolves have faced a long uphill battle. Even though they are protected by the Endangered Species Act, until human communities learn to work together, their future, at least in the Southwest, looks bleak.

A grant from T&E Inc provided funding to conduct the survey of ranchers and supported travel to the Southwest to conduct interviews and visit areas where wolf-livestock conflicts occur. In addition, a Barker Grant (through the Environmental studies Program) allowed for travel to Chico, Montana to present research on "Assessing Ranchers' Attitudes Towards Livestock Compensation in the Southwest" at the North American Wolf Conference in April 2008. The annual Wolf Conference brings together leaders in wolf research and management from federal, state and tribal governments, as well as conservation organizations, researchers, and ranchers.

Anticipating Hardship
A Carefully Calculated Balance

WEN LEE
FIRST-YEAR MASTER'S STUDENT

Increasingly, we see pieces written by those calling for the Next Industrial Revolution,* a revolution in which the current linear system of extraction and production is scratched for something completely different: natural capitalism, closed-loop production systems, the complete eradication of hazardous materials, and so on. They argue that this shift is not only necessary, but also imminent. While the likes of William McDonough proclaim their grand visions with zeal, I find that a terribly important component of this discussion remains unacknowledged.

THERE WILL BE A LOT OF SUFFERING.

Not the tsunami or famine type, but intense pain will be afflicted upon the economy and environment. This suffering will be temporary, but that doesn't mean it won't matter.

The complex and intricate infrastructure currently in place for our globalized, hyper-consumerist, extraction-intense system of industry will have to be torn down. Think of how many people work within this network. They will lose their jobs. Think of how many cities and communities rely solely on a specific leg of this network. Local economies will collapse.

A new system will have to be put in place. This new system will not be simple. It will require complexity and carefully calculated balance. How to produce items without cross-contamination of organic and non-biodegradable ingredients? How to set up a system where consumers will actually return all appliances to manufacturers, and manufacturers will actually sort and recycle the appliance materials? How to phase out all toxic chemical use? Mass industry has never tried such ideas. It will not emerge overnight. People will try things. People will make mistakes. It will require many cycles of trial-and-error before a successful model will emerge. In the meantime, caught in the crossfire of transition will be people who need jobs and an environment that will have to sustain more extraction.

Let's not kid ourselves. A new system of industry will inflict damage to the environment. It is ironic, since the whole point of this new system is to stop inflicting damage to the environment. But where do you think the photovoltaic cells will come from? Where do you think the natural substitutes for chemical inputs will come from? Where do you think improved mass transit lines will come from? Will urban sprawls magically transform into green cities? Of course not. Setting up new infrastructure requires resource extraction… and a huge system overhaul like this will require a lot of extraction. Not just material extraction (I suppose some could be offset by recycling) but energy extraction as well. How much energy will be needed to build new fac-

tories, new machines, and new landscapes? How much work will be required to reorient city, building, and transportation plans? How much will we ask of nature to supply us with materials for new technology? How much waste will be produced from the demolition of old structures? I shudder to think of it.

Yes, the construction of a new system will offer a plethora of new jobs. Yes, the completion of a new system will open up a myriad of new careers. But changing careers is not a painless process. Just ask someone who has been laid-off from a job of 20 years and now needs to enter another field without any training or experience. The lay-off itself was already a blow to morale and security. Job-searching takes time and training takes time, and in the meantime this person's family still needs to eat. Multiply this by millions, because this will happen on a large scale across developed countries.

Let's consider for a moment the impact of this paradigm shift on poor, developing countries. Many of them are already mired in political, social, and/or environmental instability. Inexorably connected to developed countries via globalization (a huge portion of goods are manufactured in developing countries), they will then also have to bear the burden of all that comes with the Next Industrial Revolution. The rocky, fault-ridden transition to green industry will only add chaos and complexity to their already turbulent world. Sure, an entire mining town in the U.S. may be thrown into unemployment. But consider the impact of an entire textile-manufacturing village in Latin America thrown into unemployment… On top of the poverty, there is government corruption and a lack of education with which they were already struggling to live. This is not a pretty picture.

I am not arguing against the Next Industrial Revolution. On the contrary, I believe that as a matter of our survival, it is not a possibility but a necessity.

What I am arguing against are those who paint a rosy, beautiful picture of the future that we could have. As though with a sweep of the hand, we will be free of the evils of industry and the reckless plundering of Mother Nature—that we'll enter a utopia of security, harmony, and prosperity. They fly on the wings of idealism without considering realistic implications. They are wrong.

Change causes hardship. We cannot alter this fact. The only thing we can do is try to mollify the hardship by easing into the change slowly. If we slowly and carefully transition from our current extraction-intensive system to an environmentally sustainable system, we will decrease the intensity of suffering. We could implement policies and safety nets to support people and the environment throughout the change. Instead of thousands of people losing their jobs at one time, maybe only hundreds will. Instead of an industry completely switching over all its manufacturing processes at once, maybe it will only have to focus on one specific process at a time. Instead of a complete system overhaul, maybe it will be a gradual piece-by-piece adaptation. With more time, there will be less shock, less suffering, and fewer mistakes.

Of course, you see the problem with that.

It is uncertain whether we have the time. How many projections have you heard about the million ways the world will collapse? Greenland is melting, hurricanes are coming, polar bears are going to die, England is going to freeze over, we're going to run out of clean water… in 50 years? In 100? By 2050? By 2100? We are operating in a state of urgency right now. Adapt or die. Change needs to happen now, immediately, fast. We don't have time to implement safety nets to ensure that the transition is as painless as possible.

Which takes me back to my opening statement. The result will be a transition with a great deal of suffering. Of course, in the end, it is very possible that we will triumph with a new, clean, and thought-through industrial system. The revolution will allow us to successfully live on the earth in a sustainable and balanced manner, in which we enjoy the benefits of civilization while respecting ecological limits. This is a noble goal, and is one for which we must strive. However, the difficulty of the task at hand must be acknowledged. We must understand that it will get worse before it gets better. The choice to enter the Next Industrial Revolution/The Great Turning/whatever you want to call it – is not a choice to make lightly. It is a choice to walk deliberately down a path of guaranteed hardship and suffering. This is something we must accept and prepare.

Are we willing to make sacrifices for the good of the future?

This is not a hypothetical question. I'm talking real, material, and economic sacrifices. Can we consciously say yes to this question?

* This piece is a response to :

McDonough, William, and Michael Braungart. 1998. *The next industrial revolution*. The Atlantic Monthly. 282(4): 82-91.

Lovins, Amory B., L. Hunter Lovins, and Paul Hawken. 1999. *A road map for natural capitalism*. Harvard Business Review. 77(3): 145-158.

Hummingbirds
A Backyard Delight

ALI ABBORS
FIRST-YEAR MASTER'S STUDENT

One of the greatest delights of backyard bird watching, in my opinion, is observing hummingbird antics. How can a bird be at once so tiny, so beautiful, and so feisty? And how can such a little bird make it all the way through a Eugene winter?

I moved to Eugene in the fall of 2007 and immediately began to wonder how long the hummers stick around this part of the world once the days start turning shorter. As it turns out, by the time I put out my feeder in November, only Anna's Hummingbirds (*Calypte anna*) remained. As an amateur birder and a newbie to Eugene, I worried that my feeder would keep the hummingbirds here into the winter longer than they should safely stay. Concerned, I called the Audubon Society of Portland to get an idea of what to expect. The nice woman on the phone assured me that Annas Hummingbirds are non-migratory and that my feeder would have no bearing on their presence in Eugene. She encouraged me to keep my feeders up all winter and keep them clean.

The stalwart Anna's continued to visit my feeder throughout the winter, defending "their" backyard against, well, everything. When the tiny, brightly-colored Rufous Hummingbirds (*Selasphorus rufus*) began showing up in early March and more feeders popped up throughout my Whiteaker neighborhood, the hummingbirds ratcheted up their antics with territorial displays of surprising vigor. I've been feeding, observing, and enjoying hummingbirds either on my own or with my family for decades. Nonetheless, I learned only this year about a number of potentially deadly misconceptions I've held about hummingbird feeding safety. I imagine that a number of hummingbird-lovers are equally unaware. Whether you are a long-time hummingbird feeder or just getting started, these helpful hummingbird feeding instructions will help you ensure the well being of your tiniest backyard friends.

PHOTO BY ALI ABBORS

(For information on creating a hummingbird-healthy habitat in your yard, visit: *http://www.audubon.org/bird/at_home/bird_feeding/hum_habitats.html.)*

Choosing and locating your feeder:

Hummingbird feeders are available at most garden shops, drugstores, and feed stores. Above all, choose a feeder that is easy to disinfect. A red feeder will attract the birds, but they'll find your feeder just fine regardless of its color. Feeders with ant moats and bee guards are available to prevent uninvited diners from going for a swim in the syrupy hummer food and potentially latching onto an unsuspecting birdie tongue. Feeders with perches allow the birds to dine in comfort, but feeders without perches are also fine, as some birds will hover either way.

Many people place their feeders outside a window where they are easy to observe. The birds don't seem to mind this too much. Just make sure the feeder is high enough to be out of reach of cats and that you discourage window collisions by using dark-colored decals. Hanging feeders in the shade may help slow spoilage (although feeders should be cleaned regularly, regardless).

One feeder may be more than enough in the winter, but you may want to increase the number during warmer months. Anna's and Rufous Hummingbirds are very territorial, so several smaller feeders can be better than one large one. Keep an eye on the birds' behavior to determine when to put out additional feeders.

Preparing hummingbird food:

Hummingbirds have evolved to digest the sucrose found in flower nectar. Many of us may be tempted to use raw sugar, honey, or other types of syrup to feed hummingbirds, but these can introduce impurities that may cause illness or death. Commercial nectar

mixtures are costly and often include unnecessary additives. Refined white sugar is actually the most "natural" option for hummingbirds; this is the ONLY thing you should use to feed them. Fortunately, organic refined white sugar is widely available, so you can "feed two birds with one seed", so to speak.

• Prepare a sugar and water mixture of 1:4 (e.g. ¼ cup sugar and one cup of water). Some hummers prefer a sweeter syrup, and others will tolerate a lower concentration; 1:4 is generally seen as the happiest medium. Make sure the sugar dissolves completely.

• Boil the solution for a couple minutes in order to help eliminate bacteria, but don't allow the sugar to caramelize

• Allow the liquid to cool before adding to a clean feeder; lukewarm (but NOT hot) liquid is just fine for hummingbirds.

• Prepare only as much as needed for up to 5 days in cold weather and no more than 2 days in warmer weather.

• Do NOT add red food coloring—it's not necessary.

"When in doubt, clean." Feeder hygiene:

The importance of a clean feeder cannot be emphasized enough. A dirty feeder is more than just unsightly—it's deadly. Bacteria, mold and fungi can cause major problems in hummers' tiny digestive systems; you can prevent these issues by following this simple cleaning protocol:

• Change the liquid in your feeder every five days in cold weather and every one to two days in warm weather, rinsing with hot water.

• If the liquid is at all cloudy, change it; with regular cleaning, you should be changing it before it reaches that point.

• Disinfect your feeder once a week using a mixture of one part white vinegar to four parts hot water. Be sure to rinse thoroughly.

• For hard to reach spaces, the National Audubon Society recommends adding dry white rice to the vinegar solution and shaking vigorously. Make sure to rinse at least three times after scouring with rice. You may also consider designating a bottlebrush specifically to feeder-cleaning duty.

• Make sure your cleaning includes all parts of the feeder, such as the beak entry holes and the perches. Some parts of the feeder may need to be submerged in a vinegar solution and scrubbed separately.

"Shaved ice, anyone?" What to do with your feeders in the winter:

Anna's Hummingbirds will continue coming to Eugene feeders year-round, even as temperatures drop below freezing. Dan Gleason, Field Ornithology Instructor at the University of Oregon, cautions: "If the bird seems to disappear for a few days, don't remove your feeder. Hummingbirds often change their daily routes and you may find [them] still feeding at different times or returning a few days later." It surprised me to learn that insects are an important part of the Anna's year-round diet. As Gleason points out, "Your feeder will account for only 10-15% of their diet, even during the winter."

When feeding hummingbirds in the winter, the issue of freezing is especially problematic in the early morning hours when the hummingbirds are most in need of an energy boost. People have come up with a variety of solutions to this predicament, including rigging tiny heating systems for the feeders. The simplest way to keep your backyard hummingbirds fed throughout the winter is to keep an eye on the forecast and bring your feeders in at night if it's likely to freeze. Make sure to wait to bring feeders in until well past nightfall; hummingbirds depend on the energy from their last few sips of the day to get them through the cold winter nights. Put the feeders back out at first light. Keep an extra batch of nectar in the refrigerator in case your feeder unexpectedly freezes; you can minimize delays for hungry winter hummers by thawing the frozen nectar in a bowl and refilling your feeder immediately with your stand-by batch.

"Hey, who invited you?" Dealing with uninvited diners:

Ants, wasps and other insects will find your feeders, especially in the warmer months. A feeder with an ant moat filled with water (NOT oil or any kind of insecticide) can prevent ants from overtaking the hummingbird food reservoir. Crafty folks might try securing a half soda can or small yogurt container to the wire that attaches the feeder to the eaves; if properly sealed and filled with water, ants won't be able to get past it. Vaseline can also be applied as a barrier around the beam that holds the feeder; just be careful not to apply it where it can drip onto the feeder in warmer months.

Keeping flying insects away is mostly about choosing the right feeder. Feeders should have bee guards and the liquid level should be out of reach of insects but still high enough for hummingbird tongues to reach. If bees and wasps are giving you trouble, try taking your feeder down for a few days. The insects will give up looking long before the hummingbirds.

Sources:

Personal correspondence with Dan Gleason, Vice President of the Board of the Lane County Audubon Society, University of Oregon Field Ornithology Instructor.

Personal conversations with representatives of the Audubon Society of Portland.

National Audubon Society website: http://www.audubon.org/bird/at_home/bird_feeding/hum_feeders.html.

Bathtub
in the Bushes

SHANNON TYMAN
SECOND-YEAR MASTER'S STUDENT

In 2004 a poll of 500 art 'experts' voted Marcel Duchamp's Fountain the most influential art work of all time.[i] A ready-made urinal signed by the artist and hung on a gallery wall thus forever changed the way the world looked at art.

Were it not for the ostentatious creativity of Duchamp and within the context of a conference entitled "Waste and Abundance", I may have continued my aimless adventures through the streets of Belfast, Ireland last spring without a second glance. Circumstances being as they were, I was struck by the artful manner in which a tub lay wasted in the shrubbery. As Kevin Lych points out, "There is pornography of waste, just as there is a pornography of sex and death." [ii] Trainside, in the bushes of Belfast, a bathtub unabashedly exposed itself to me.

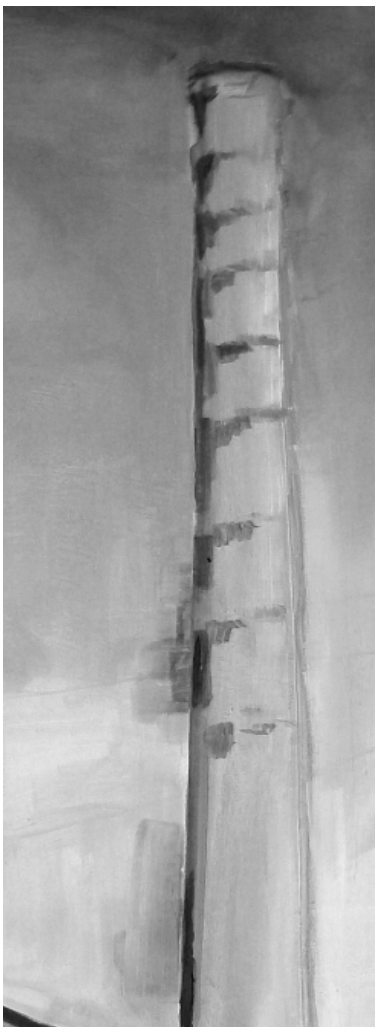
PHOTO BY SHANNON TYMAN

This discarded rubbish was the result of abundance: too many tubs, presumably the new and the old. Perhaps it leaked; wasted water is uneconomical. Before me lay the ruins of a great lavatory, the relic of bygone WC's. Through my experience of it, this haphazardly tossed bathing receptacle was aesthetically redeemed.

Less than two days later, having led a small tour from conference headquarters, it was discovered that the tub had found a new residence. One renovator's trash had become another's treasured new property. From object to waste, to art through abundance, both urinal and tub reveal the often hidden lifecycle of our latrines.

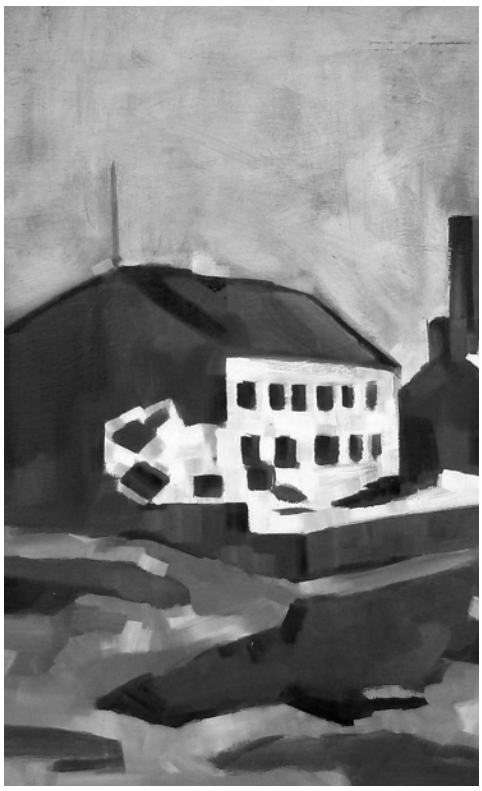
[i] BBC News, http://news.bbc.co.uk/, 2004/12/01.

[ii] Lynch, Kevin and Southworth, Michael (ed), *Wasting Away*. San Fransisco: Sierra Club Books, 1990, p. 1.



A Natural Disturbance

PAINTINGS BY CODY EVERS
FIRST -YEAR MASTER'S STUDENT



The Edible City

redefining human habit(at) in the urban agrarian landscape

JILL JAKIMETZ
FIRST-YEAR MASTER'S STUDENT

Urban agriculture is a radical tradition. People have been growing food in the city since there was such a thing as a city. Through economic instability and war it has secured human survival. In better times, urban food production has cultivated thriving individuals and robust communities. Urban agriculture provides opportunities for helping not only humans survive and thrive, but other creatures as well. As a form of planted, urban open space, agriculture in the city is a catalyst for land reclamation, toxic remediation, and microclimates. Urban cropland can be a node and connector of more-than-human habitat corridors. The spaces urban agriculture occupies are productive spaces: ecologically, socially and economically. These spaces also produce challenges in, and therefore opportunities for, redefining how we think of the form and function of urban infrastructure, food networks, and the meaning of productive landscapes.

As we draw our attention to the sustainability of our cities, urban agriculture has become a radical way of entering the conversation about what a city is, what it might become and how its inhabitants might live. In 2007, on the banks on the Maas River, The Netherlands Architecture Institute held an exhibition called De Eetbare Stad / The Edible City. It was a collection of projects from architects, artists, engineers, and designers that engaged with the question of eating from/in the city. The result was a cacophonous disruption of stiff public/private, work/leisure, stable/mobile, rural/urban dichotomies. The small selection of designs presented in this article question what cities and the lives of their inhabitants look like when the urban and agrarian meet.

Food Networks, Sustainable Systems and the Expectation of Landscape

"Food", says Carlos Petrini, "is far more than a simple product to be consumed: it is happiness, identity, culture, pleasure, conviviality, nutrition, local economy, survival…"[i] These qualities and components reach beyond their being inherent to food as an object. They are components of human experience and they are components of the landscapes in which food is produced, processed and consumed. If we examine these landscapes, we find also that food is habitat, soil, surface, sunward aspect, pollination, near water, shaded, clumped, all-in-a-row, and it is pastoral, industrial, picturesque, corporate, rural, and urban. These compositions of food are ecological, cultural, and aesthetic markers.

If, as Wendell Berry states, "Eating is an agricultural act," then food is a network.[ii] And this network is fundamental to the larger systems that support and shape human life. It becomes essential to think of food as "far more than a product", and also as system, network, and landscape. It is essential if we are to imagine the diverse and dynamic nature of what growing, distributing, cooking, and eating looks like, where these processes take place, what form they take, how they are accomplished and experienced, and the ecological and cultural implications. Everyone at every scale must do this work; it is an inherently trans-disciplinary task.

If you pick up a bag of frozen berries from Woodstock Farms (not that you would do that in this part of the country), you will hold in your now cold hands a parcel of food that embodies not only the energy put into creating the plants and harvesting the berries and shipping and trucking and keeping the load cold, but at least as much energy put into obfuscation. A picturesque American red barn, nestled in the rolling hills of a dairy, beams beneath the label "Woodstock Farms" harkening back to a golden, agrarian New England or Ohio. These are "organic" berries, but both the berries and Woodstock Farms are from China.

But could you say you are surprised? Largely, we expect food to be available in the frozen section- well, any section- of the supermarket. We expect food to be sold with the charm of agrarian naturalism, and we have become accustomed to being ignorant or oblivious to the actual places, people, and landscapes from which this pound of fruit has come. It is

this tendency toward oblivious expectation that is challenged by urban agriculture. This is not to say that urban agriculture is purely radical, seeking only to challenge contemporary ideas of where food is and where it is not.

As with tilth and climate, space has always been a constraint and an opportunity. These three are boundaries to be challenged and have been since the very first transition from hunting and gathering to agrarian cultivation. If we consider this ancient experiment, we witness the beginnings of the nature/culture dialectic. What we also notice is the symbiosis of settlement and agriculture of planning to sustain cities from beyond and within the city walls. Shanghai, China and Havana, Cuba are contemporary examples of defining the city as both urban and agrarian. In Shanghai, as the city developed and grew, many enveloped agrarian spaces remained agriculturally productive. In Havana, following the collapse of the Soviet Union, Mother Necessity placed food production atop an urban fabric and reestablished agrarian spaces within the city as integral to urban development.

The spatial arrangement of city and agriculture in the United States, for example, was the inheritance and evolution of a different model. The dominant American urban aesthetic became easily described, and often mutually exclusive of the rural agrarian. This aesthetic also informed the development of the American suburb, which sought the most leisurely balance of the urban and rural spheres, excluding the agrarian in all but symbolic ways. Within this context, urban agriculture provides an opportunity to reexamine the ways we imagine the urban and agrarian landscapes, and the landscape that encompasses them both.

The Role of Urban Agriculture

Locally, urban agriculture exists as city farms and market gardens (Food for Lane County Youth Farm, Springfield), as allotments (Alton Baker Park plots), backyard gardens (and front yard gardens, rooftops, and road medians), and community gardens (The Urban Farm here on campus, for example). These forms of agriculture address diverse needs--encompassing the realms of the social, ecological, and economic.

In many countries, urban agriculture is relied upon for survival--an economic and nutritional safety net (urban agriculture in Harare, Nairobi, Gaborone, Dar es Salaam, Havana are prominent examples). Other countries, mostly in Europe and North America, advocate for and participate in urban agriculture as a "response to long term environmental degradation or particular local conditions, often related to specific areas of social depravation".[iii] As a result, urban agriculture is largely regarded as a grassroots, environmental justice endeavor. In these cases, design is a function of utility: space, money, and labor are scarce, and need is immediate. Aesthetics, too, are a function of utility, but also of individual or small-scale community intervention by myriad participants, often with diverse cultural backgrounds.

In landscape terms, urban agriculture sites play several roles. As the architects Bohn and Viljoen articulate in their book on urban food production, these sites often occupy edges and interstitial spaces; they highlight 'waste' spaces and articulate connections between separate places.[iv] The site and plantings serve as "climate and seasonal registers", reinforcing experience of space as a function of place and time. Urban agriculture also gives measure to landscape. "The way in which ground for planting is often terraced, faceted and shaped to accommodate [undulations]… articulates and makes visible the underlying topography. The actual dimension of crops, and of beds, provides another gauge for measuring landscape and allowing individuals to locate and position themselves within a particular territory. This ability to read a landscape and locate oneself becomes critical as contemporary globalization makes environments more uniform".[v]

This uniformity without orientation, the placelessness of contemporary globalization articulated by the architects Katrin Bohn and André Viljoen, is echoed by Petrini. It is the nearness to food that begins to create place, meaning, and health in the human sphere. Collapsing this physical distance requires loosening the polarization between the urban and agrarian[vi] and any other dichotomous extremities.

De Eetbare Stad ::: The Edible City ::: Netherlands Architecture Institute

The Edible City exhibit was created by Guus Beumer, Debra Solomon, Anneke Moors, and Hans Ibelings. It was a collection of art, design, and documentation of urban agriculture, "presenting a diverse range of proposals and strategies to produce food in or near the city and that offer the opportunity to experience the city in a different way".[vii]

There seem to be two major approaches to contemporary urban agriculture design. One inserts food production into the existing urban fabric through small scale, individual project interventions. The second incorporates the first approach into a radical restructuring of the urban landscape. The majority of designs of last year's Edible City exhibit at the Netherlands Architecture Institute tend toward the former. Some of the selected designs following are extreme visions of such interventions. CPULs, or Continuous Productive Urban Landscapes, articulate an exciting form of the latter. Both branches redefine work/leisure, public/private, rural/urban, stable/mobile in ways that produce variable visions of the urban agrarian landscape. Images of these projects can be found through Solomon's website.

City Food Shop ::: Filiale

The sign in front of the Filiale art studio reads, "Here, locally grown food, for free!" This is an investigation into the "natural resources" of Basel, Switzerland. The shop explored the free growing, edible foods readily gathered in the city and the perceptions of this edible network by consumers/audience. Some inadvertent shoppers were extremely knowledgeable about the plant properties, others took offense at a bad joke, some expected botanical education services, others still reminisced about cooks scurrying out the back door to quickly gather fresh 'weeds.' Some got their wallet ready, only to realize they could have grown or gathered the puny plants themselves. Within this project we can observe a distinction between an urban agriculture in the sense of a cultivated plot, and an existing productive landscape, which contributes to the food production of the city. Here also we see an ambiguity about the role of consumer, urban-dweller, producer, and distributor. Some of the most knowledgeable patrons were immigrants, complicating the question of native food and native knowledge. In the urban environment are crops non-native plants? Is urban agriculture an economic invasive? An aesthetic invasive?

Pig City ::: MVRDV

"In 2000, pork was the most consumed form of meat. Animal diseases such as Swine Fever and Foot and Mouth disease were then raising questions about pork production and consumption. If we don't want to become instant vegetarians, MVRDV suggests that we change the production methods and adopt biological farming. But do we have enough space for biological pig farming? The Netherlands is chief exporter of pork within the European Union. As organic farming involves feeding pigs with 100% grain, 130% more field surface would be needed. This would mean that 75 % of the country would be dedicated to pigs. Pig City's proposal is to concentrate the meat production in one area. Pigs would be kept in stacked comfortable 'apartments', which would make them happy (and thus would mean a better taste for the meat) and save space". [viii]

By transplanting the intensity of pig farming from the rural, horizontal landscape to the urban, vertical landscape, Pig City challenges our sense of what constitutes an outrageous and unsustainable food system. While the rural/urban and axial orientation has shifted, what remains constant are scale, intensity, and technology. The human scale is minimal, human presence is minimal or non-existent. Though the landscape form may have changed, our relationship to the pigs in terms of animal husbandry, meat processing, eating, and wasting does not. Pig City is based on the premise that consumption is constant. This certainly isn't biological farming. It is not an improvement on pig farming as it exists now. It then follows to ask whether vertical intensification for other systems may be equally inappropriate. At least one thing we learn is that in designing for sustainable systems and sustainable cities, merely tweaking the landscape in terms of rural/urban or horizontal/vertical without critically managing scale and intensity is effective only in framing the conversation.

AVL Ville ::: Atelier van Lieshout

AVL Ville is the art, architecture, and design company Atelier van Lieshout's answer to the question, what is a sustainable urban community? "The village can be seen as an urban survival kit complete with a hospital, an art academy, a canteen, a working alcohol distillery, a sausage factory, a mobile farm for personal food production, its own money, but also containers for making weapons and bombs."[ix] The struggle of AVL Ville to become and remain a sovereign state within Rotterdam articulates the necessity of interdependence and the desire for independence. Materials and money flow from outside the town's boundaries. Food is produced within a hoop house designed off site, and the family car is put to use as a generator and chicken coop. The gardens are cultivated to sustain the community, but end up being served to tourists to generate income. Everything is created to sustain the village. Citizens work to be self-sufficient, but everything, including the village itself, is a work of art. The idea becomes more interesting when the village sets up franchises in rural areas, bringing homemade, recycled, prefab sets to aid the urban agrarian pioneer to be self-suffi-

cient in a new landscape. The mobile farmer with a stable home seeks freedom in nature only to impose an order conceived in the city.

De Vuurkeizer (The Fire Emperor) ::: Nio Architecten

A market design for Het Steiger in Rotterdam (Het Steiger is the city's big church), De Vuurkeizer is a dark and public urban digester. Speaking to concepts of metabolism and energy, creation and digestion, the diversity of the marketplaces global and local, the design packs food production, preparation, consumption, and waste into "one big, inimitable, devouring machine, a hedonic tangle of spaces inspired by intestines," a "voracious building that day and night devours anything that comes near: innocent tourists and experienced gluttons, pale potatoes and fresh coriander, tame pigeons and live quid, raunchy market stalls and exclusive restaurants, worn-out musicians and erotic services, the rotten smell of durians and the faded perfumes of waitresses. Everything is being digested, pushed along and shoveled out again, but not before it has been substantially reshaped under high pressure."[x] With the Fire Emperor's aesthetic metabolism comes an acceptance and melding of stylistic and conceptual incongruities. While firmly in the form of urban market, one feels upon entering any distinction between work and leisure (eating and serving), urban and rural (market and barn), public and private (intimate spaces and overwhelming halls), stable and mobile (market location and inputs and outputs), are always in flux. De Vuurkeizer's blasphemous location questions the relationship between our spiritual lives, rituals, our sacred spaces and the mundane physical lives, rituals, and spaces allocated to food production, distribution, and consumption. We might ask whether this is a culinary Las Vegas, an impossible trick of imagination lent reality by ignoring the sanctity of space and the reality of increasingly scarce resources. Or is there more transparency in this chimera of the edible landscape--not concealing, but revealing the reality of the food metabolism of economic, cultural, aesthetic, and spiritual systems.

Small Truck and City Farming Modules ::: N55

A small truck (it looks like an ambitious Lego construction) peddles through Copenhagen traffic. Stopping, the truck driver unloads, or rather unfolds the truck into a market stand, or a kitchen, or a dwelling. Using the city farming modules (sausage-like sections of row cover-wrapped soil linked with drip tape) this mobile farmer/cook/distributor challenges our most fundamental preconceptions of the place of agriculture. What would it mean to say, let me just unload my garden from my truck and leave it on the top of this wall. I'll make another garden and drop it off for you tomorrow? While CPULs, for example, advocate for less compaction of the urban environment for the sake of inserting urban agriculture into the physical structure of the city, N55 courts compaction and the industry and mobility inherent in prefab modules to produce an entirely different vision of an agrarian landscape.

Kitchen of Terrestrial Mechanics ::: John Arndt

Wash the dishes; hang them to drip down onto thirsty herbs and greens. Kitchen waste is refined by worms, compost for the plants a few feet above. "For the kitchen to work for you, you must use it. This may be the only kitchen you will ever meet that actually depends upon you to feed it, water it, let it grow, harvest it, eat it, get it really dirty, create some garbage in it and wash it for it to function optimally."[xi] This design of integrated components resonates with the overarching goal of urban agriculture: to create sustainable systems. Issues of flow and scale, productive reciprocity, work, action, utility, and eco-kitchen-system services. Rather than a piece of technology providing a service only when desired and at the expense of third party energy, this relatively closed system speaks to a different relationship between human and technology. Here, relationships of work are encouraged, distilled, looped, and amplified.

Continuous Productive Urban Landscapes ::: Bohn and Viljoen Architects

Bohn and Viljoen Architects have layered the concept of productive urban landscapes and continuous landscapes, envisioning open spaces that run

> "continuously through the built urban environment, connecting all kinds of existing inner-city open spaces…and the surrounding rural area…They will be well connected walking landscapes…for pedestrians, bicycles, engine-less and emergency vehicles…reading as parks or urban forests, green lungs or wilderness, axes of movement and journey, or places for reflection, cultural gathering and social play…but most uniquely they will be productive by

> providing open space for urban agriculture, for the inner-urban and peri-urban growing of food…"[xii]

The introduction of continuous productive urban landscapes would "provide a coherence and structure to otherwise isolated urban agriculture sites and create a framework for articulating the spatial and urban qualities inherent in urban agriculture and fully utilizing their benefits as routes for circulation, occupation and Ecological Intensification".[xiii]

Just as we consider roads to be integral to the urban environment, so should we think of urban agriculture (many CPUL designs in fact transform roads into growing spaces). The several types of urban agriculture that already exist--urban farms, backyard kitchen gardens, allotments, and community gardens would form nodes along a physical network "with the advantage of open islands now being connected to a widely accessible regional landscape, making them urbanistically more meaningful".[xiv] This planned, structural coherence is echoed by the evolution of the CPUL: "As the ground- the earth- the air and vegetation become vitally important for the productive success of CPULs, the effort to maintain their well-being ensures that natural conditions will be the most significant features within the new urban landscape. Other characteristics of CPULs will evolve in accordance with the landscape's ecological aims."[xv] This planned undermining of the built environment's directive shifts our understanding of what is rural and what is urban as it begins to shift the appearance and function of the urban landscape. It also highlights the question of how we assess the health of urban environments.

With CPULs we see the immediate perforation of rural/peri-urban/urban boundaries as they carry the common element of agriculture and physical connectivity among them. Agriculture and the agrarian, once relegated to the rural landscape, is applied to other organizations of the built environment, creating an immense opportunity for innovation and further mingling of dichotomies. Susannah Hagan describes this as part of "a very different way of conceiving of city and non-city. It requires thinking about the unbuilt as potentially an event of equal intensity to the built, where the built is indicative of cultural intensity, and the unbuilt of ecological intensity".[xvi] While it may be problematic to assert that prior to agriculture the unbuilt is of lesser intensity than the built (think of the cultural intensity of parkland, wilderness spaces) I'd like to add that in the case of urban agriculture, the built provides opportunity for new spaces of ecological intensity in terms of surface design, while the unbuilt carries much cultural intensity in the forms of new traffic/use patterns and particularly agrarian practice.

Work in the urban agrarian landscape

The integration of agricultural spaces as continuous urban open space introduces an unprecedented concept of an urban profession. At the scale Bohn and Viljoen propose, "open urban space achieves an [unprecedented] occupational quality when including working activity, whereby 'working' means working with the actual space, i.e. earning a living by using elements inherent to the space: ground, vegetation, buildings".[xix] When considering the habit and habitat of urban humans, what will be the role and meaning of agrarian work? What is the character and organization of a labor culture that takes as precedent a combination of ancient forms and methods of urban food cultivation, a legacy of rural agrarianism, and a modern infrastructure and culture of urban work?

In sustainable design and urban ecology, the ideas of 'wild' nature and ecosystem services have changed the way we consider the natural in the city. So may urban agriculture alter the way we view the place, use, and aesthetics of natureculture in the human landscape. The Edible City exhibited radical design experiments that challenge the idea of food in the city. Walking around Eugene and Springfield we can see how urban agriculture already transforms space and activity, strengthens and brings near the network of good food.

Changing our relationship to food in the city may bring spatial qualities of the rural into the urban, incorporate existing urban agriculture interventions into the public realm, or apply urban forms and concepts to agrarian work. Understanding the complexity of urban agriculture and translating the most appropriate and critical forms of it into a thriving urban agrarian landscape will change the concept and function of the city and all who dwell there. This task is required if we are to facilitate a network of good, clean, fair food, and ecological, social, and economic systems that are healthy, reciprocal, and resilient.

~ ~ ~

***ALL PHOTOS BY JILL JAKIMETZ:**

SEATTLE, MAASTRICHT, S'HERTODENBOSH, AMSTERDAM

[i] Petrini, Carlo. Slow Food Nation: Why Our Food Should Be Good, Clean, and Fair. Trans. Clara Furlan and Jonathan Hunt. New York: Rizzoli Ex Libris, 2007. p. 166.
[ii] ibid.
[iii] Petts in Viljoen, p. 66.
[iv] Viljoen, André, ed. *Continuous Productive Urban Landscapes: Designing Agriculture for Sustainable Cities*. Oxford: Architectural Press, 2005. p. 12.
[v] ibid.
[vi] Petrini, p. 171.
[vii] Solomon, Debra. "The Edible City". *Culiblog: Food, Food Culture, Food as Culture and the Cultures that Grow Our Food*. www.culiblog.org.
[viii] ibid.
[ix] ibid.
[x] Nio Architecten. *De Vuurkeizer*. www.nio.nl/vuurkeizer.
[xi] ibid.
[xii] Viljoen, p. 11.
[xiii] Viljoen, p. 267.
[xiv] Viljoen, p. 12.
[xv] ibid.
[xvi] Hagan in Viljoen, p. 53.
[xvii] Viljoen, p. 114.
[xviii] ibid.

RELAPSE
Relapse

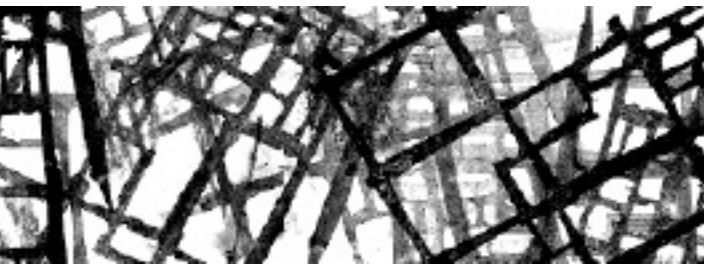
GAYLA WARDWELL

pavement is not so strong
as we think when we take down the trees,
bulldoze the weeds,
lay down cement and erect silver spaceships
in the place where nature used to be

it is the fern breaking a hole through the tar
in its inimitable quest for air and sun
that carries the strength of the universe within
its sappy fronds

we are no match for the inevitable.

PHOTO BY JILL JAKIMETZ



Our Community
The Environmental Studies Program

ENVS Capstone
University of Oregon Food Policy

STACY VYNNE
SECOND-YEAR MASTER'S STUDENT

As consumers, we are becoming increasingly aware of our impact on human and environmental health. When reducing our environmental footprint requires little effort or cost (such as choosing more efficient light bulbs or duplex printing), making a change is easy. However, when greening our lifestyle requires more effort in terms of time, financial commitment, or major changes in behavior, many people are hesitant to change.

Take, for instance, food. With the publication of numerous books such as *The Omnivore's Dilemma* and *Fast Food Nation*, as well as films such as *Supersize Me* and *Fast Food Nation*, people are becoming more aware of the impact of their consumptive behavior, at least when it comes to food. Magazines and newspapers across the nation have begun to publicize the carbon footprint of food and the benefits of eating food that is grown in close proximity to home and not laden with synthetic chemicals. Yet, many of us continue to eat the same old junk and patronize the same restaurants and grocery stores. To change our relationship with food is to not only change what we buy and cook, but *how* we buy and cook. This type of behavior shift can be incredibly challenging. Convincing one consumer about the importance of connecting with a local farmer and buying in-season organic strawberries provides a small reduction in the human footprint, but what if we could do this for over 3000 people at once?

The University of Oregon Dining Services prepares 9000 meals per day. This winter, four ambitious graduate students and their advisor embarked on a project to change the way these 9000 meals are prepared and how the University spends their $5 million food budget. The idea was to incorporate more sustainable food purchasing and, unbeknownst to them, change the way that over 3000 students were eating each day. As the graduate students met with Dining Service staff, farmers, food distributors, and local food coalitions, they began to pull apart the different components of a very tangled food web. In addition, a panel was hosted by the students at the Public Interest Environmental Law Conference in March to open up a dialogue on institutional acquisition of more sustainable food. (A recording of the panel will eventually be available at http://www.pielc.org/2008/index.html.) Ultimately it was realized just how complex food systems are, and that the University was already taking many progressive steps to reduce their carbon "foodprint". Below is a very brief summary of the findings- a complete report of the research and recommendations are available at http://sustainability.uoregon.edu/.

Before providing recommendations on how to develop a more sustainable food system for the University, it was essential to define what is meant by a "sustainable" food system. Defining a sustainable food system is a process that engages ethical, social, environmental, economic, and health concerns. Simply put, it is a food system that can be maintained indefinitely while nourishing the ecological well-being of individuals and ecosystems. This type of food system looks beyond what is grown to how it is grown and who is impacted by the process, considering food security, worker and animal health, distribution, waste, and the impact on the community.

University dining services across the country have made headway toward incorporating a more sustainable food system. The University of Oregon has already taken many steps that are not often recognized outside the confines of the kitchen. In addition to making a substantial number of items from scratch, the University sources many foods from regional vendors. For instance, yogurt, tofu and flour are all organically sourced and come from regional suppliers. In addition, pre-consumer vegetable scraps are composted locally and leftover food is sent to Food for Lane County, the local food bank.

The report also helps to decipher the complexities in defining a "foodshed", the debate over buying local or organic, and the potential economic drawbacks (as well as justifications) of purchasing more sustainable food. Recommendations are also

provided for the University in terms of sourcing, working with local distributors, establishing a food advisory committee, bulk purchasing and preserving, and continuing to develop seasonally-based menus.

The report prepared by the students is not an all-inclusive document, but is intended to highlight some of the actions being taken by the University and provide insight and recommendations on how and where improvements might be made. If anything, the research was eye opening for the students as they learned first-hand about the complexities of food distribution and purchasing, as well as the power the consumer holds to change the way our food is grown and prepared.

Because the University caters to their customers, the students, they need to hear what students want to eat. If students insist on cage-free eggs, organic tomatoes, and locally grown asparagus, they need to let Dining Services know by filling out surveys, talking to chefs, emailing the Director, and letting their interests be known to their housing advisors and the student-run food advisory committee. For students that don't frequent the campus dining halls, buying from the Eugene Farmer's Market, community supported agriculture (CSAs), local natural food stores, and investing in a community garden plot will help reduce your own foodprint. By connecting more with the food we eat, we are supporting not only our own health, but the health of the people who grow our food as well as the planet.

The White Stag Block
University of Oregon's New Green Home in Portland

DIANA FISCHETTI
CONTINUING MASTER'S STUDENT

No doubt many have heard of the White Stag Block, the University of Oregon's new home in Portland. In the past, it may have perhaps been best known for its illuminated roof-top sign that shines over the Willamette River and Governor Tom McCall Waterfront Park, depicting a white stag and the phrase 'Made in Oregon'. Or it may have been known for its riverfront location in Old Town Portland, adjacent to Chinatown. But now, the White Stag Block will be best known for its beautifully restored historic architecture, its green building features, and its new tenants.

The University of Oregon in Portland, along with Venerable Group, Inc., United Fund Advisors and others, has played a vital role in the green restoration of these historic buildings. The White Stag, Skidmore, and Bickel buildings, together known as the White Stag Block, have earned LEED Gold Certification. The United States Green Building Council's Leadership in Energy and Environmental Design (LEED) Green Building Rating SystemTM is a national benchmark of sustainable building techniques. This certification represents strong efforts to make the buildings' construction and operations more sustainable. The historic character of the buildings was balanced with the green building renovations so the buildings could retain their place in the National Historic Registry.

The importance of retaining existing buildings cannot be understated, as a building that is already standing requires far fewer resources than a building built from scratch. In this case, the buildings themselves were not only reused, but more than 98% of the materials taken out of the buildings were diverted from landfills, using a combination of salvage, reuse, and recycling. Many of these materials were reused within the White Stag Block itself. In addition, materials taken out of other buildings were used in the White Stag Block renovation. For instance, the gym flooring salvaged from the Gerlinger Annex on the University of Oregon campus in Eugene was reused to create the beautiful wood flooring in the University of Oregon in Portland's School of Architecture and Allied Arts space, as well as the flooring in the Portland Duck Store.

Significantly, the White Stag Block also has a rainwater catchment system that will capture 100% of the rain that falls on the roofs of the three buildings. Water is piped to an 11,000+ gallon holding tank, located in what was once an open-air, dirt-filled, basement-level lightwell. From the tank, the rainwater is filtered and piped to low-flow bathroom fixtures that help conserve water. The rainwater catchment system, combined with the low-flow fixtures, are expected to meet the White Stag Block's entire winter flushing demand.

As part of the White Stag Block's LEED Gold certification, a LEED Education Program was created to disseminate information about the buildings' history, renovation, and green building components. Although the renovation is completed and the buildings

are now occupied, the work of those involved with the Education Program continues. Led by Associate Professor of Architecture Nancy Cheng and graduate student of Environmental Studies and Geography Diana Fischetti, a group of graduate and undergraduate students began researching and developing educational materials in the winter of 2008.

Three graduate students have continued into the spring to complete the development and installation of these educational materials. Cody Evers, a graduate student in Environmental Studies, is producing a handsome website detailing the White Stag Block's history, green building components, connections to the surrounding community, and other interesting topics. Bethany Johnson, a graduate student in Historic Preservation is producing a series of high-quality educational signs to be placed throughout the building. Raymond Neff, a graduate student in Community and Regional Planning is producing an artistic installation depicting the real-time energy consumption of the buildings. Diana Fischetti will be producing a case study of the project for use by green building professionals.

These materials are designed not only to educate, but to promote more sustainable behaviors amongst the building users. The behaviors of those who use the White Stag Block are equally as important to the buildings' sustainable functioning as the materials and resources used in the renovation process, the buildings' water efficiency, and the buildings' energy performance. Check out the website, signs, installation, and case study; take a tour; and learn how you can help the White Stag Block be more sustainable!

PHOTO BY JILL JAKIMETZ

Graduating Student Theses & Projects

Diana Fischetti

CONCENTRATION AREAS: GEOGRAPHY; CAPITALISM AND DEVELOPMENT

My master's thesis research involves a case study of Ecovillage at Ithaca, an ecovillage using the cohousing model. Broadly, ecovillages are physical communities whose members strive to live in a socially and environmentally sustainable manner and to practice voluntary simplicity. The goal of Ecovillage at Ithaca, as understood by residents, is to create a model of sustainable living that is appealing to mainstream America, while reducing the ecological footprint of inhabitants and increasing meaningful relationships within the community. It is with this creation of new spaces in which people execute resistance through their everyday practices that I take interest. 'Autonomous geographies' specifically examine the importance of these 'everyday practices' in the lives of activists and the ways in which protest is not only part of everyday life, but also that everyday life is sculpted into an alternative process that has benefits for society. I will investigate 'geographies of resistance' (which include many spaces of resistance) and 'autonomous geographies' (which are concerned specifically with the everyday spaces of resistance in the lives of activists). I will explore the ways in which these theories can help illuminate the degree to which Ecovillage can be understood as a space of resistance and Ecovillage residents can be understood as activists. I will argue that although the individual residents do not necessarily consider themselves activists, the Ecovillage itself is an activist space and can be considered a space of resistance to consumer society.

Nicole Menard

CONCENTRATION AREAS: INTERNATIONAL STUDIES; COMMUNITY-BASED CONSERVATION

As one of the world's ecological "hotspots", Madagascar is the subject of interest and concern for many international conservation organizations. Amist donor influence and western conceptualizations of environmental issues, some non-governmental organizations (NGOs) pursue diverse strategies to protect remaining endemic flora and fauna. Evaluations of organization's conservation priorities, approaches, and program effectiveness aim to improve project results and the country's ecological sustainability. Yet these analyses do not include Malagasy perceptions of, or responses to, participation within international environmental agendas. This case study will examine the perspectives of Malagasy residents in southeast Madagascar where NGOs have active environmental programs. Surveys and interviews with both Malagasy residents and NGO staff will provide a robust analysis of how international conservation efforts are being conceptualized. These findings can contribute to a better understanding of the implications of current conservation efforts, and inform future endeavors.

Matt Peterson

CONCENTRATION AREAS: CONSERVATION BIOLOGY; CONSERVATION POLICY

For my exit project, I'm looking at Community Wildfire Protection Plans and why communities choose to use, or not use, regulation as a tool to protect property and homes from wildfire.

Will Truce

CONCENTRATION AREAS: ECOLOGY; GEOGRAPHY

For my master's thesis, I'm looking into the seasonal effects of altering nitrogen (N) and carbon-dioxide (CO_2) input on the community structure of ammonia oxidizing bacteria (AOB) in California grassland. Increased N deposition and atmospheric CO_2 are two primary consequences of anthropogenic environmental change, and have been found to have significant effects on vital ecological dynamics and climate processes at the global and local scale when elevated. Though AOB are understood to play a critical regulatory role in the cycling of N, little is known about the interactions of microbial communities and global environmental change. Studying the inter- and intra-annual effects of multi-factorial ecological alterations on AOB's functional role will greatly assist in modeling global ecosystem and climate dynamics.

Shannon Tyman

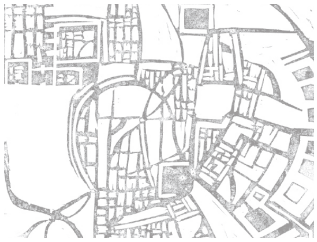
CONCENTRATION AREAS: ECOLOGICAL DESIGN THEORY;
ENVIRONMENTAL LITERATURE AND CRITICISM

Brownfields, abandoned or underused properties where "the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant" (Source: US EPA), are increasingly important to the fabric of both urban and rural landscapes. As the western world grapples with the challenges of these unused industrial sites, green sites simultaneously decrease and homogenous suburban developments prevail. The challenge, then, is to address the industrial legacy of contamination and dereliction with innovative projects that are able to simultaneously attend to heterogeneous interests. My thesis is a case study of just such a project. Gunpowder Park, located just outside of Greater London, is a former military munitions testing facility that is now a park for wildlife, science, and art. Using Felix Guattari's call to move beyond a scientific paradigm and instead embrace "culture, creation, development, the reinvention of the environment and the enrichment of modes of life and sensibility," I explore the artistic process as a methodology for post-industrial reinhabitation.

Stacy Vynne

CONCENTRATION AREAS: NONPROFIT MANAGEMENT;
INTERNATIONAL STUDIES

The Mexican gray wolf, now considered the rarest of all extant gray wolf subspecies, was historically found throughout a variety of habitats in the Southwestern United States. By the early 1950s, the wolf was considered almost completely extirpated from the region. However, decades of collaboration between state and federal agencies resulted in the 1998 reintroduction of eleven wolves to the Blue Range Wolf Recovery Area in eastern Arizona. Because of the high number of livestock grazing allotments overlapping the reintroduction area, a financial compensation program was established to pay ranchers for livestock lost to wolves. Despite the distribution of almost $100,000 to ranchers in the region, no assessment has been conducted to review whether compensation has impacted rancher tolerance towards wolves or if financial reimbursement has met ranchers' needs for compensation. For my research, ranchers living in areas where wolf reintroductions have occurred were surveyed and interviewed. Results of my study will assist in determining whether the existing compensation program is an efficient and effective use of conservation dollars or if an alternative program would be more suitable for reducing conflicts between livestock and wolves in the Southwest. My recommendations will address the fact that the continued survival of the rare and endangered Mexican gray wolf depends on coexistence with ranchers and implementation of more efficient management strategies.



The Environmental Leadership Program
Innovative, Hands-On Learning

KATHRYN A. LYNCH

The Environmental Leadership Program (ELP) provides innovative, hands-on learning opportunities to undergraduates at the University of Oregon (UO). Housed in Environmental Studies, the ELP is a service-learning program that moves students from the classroom into the community to address real-world environmental issues.

2007-2008 was an exciting year for us. We welcomed Kirsten Rudestam to the staff, as Steve Mital transitioned to full-time Director for Sustainability for the UO campus. We initiated a new international educational project with the generous support of the T & J Meyer Family Foundation. Thanks to the generous support provided by the Williams Council, we launched a new mapping and monitoring course to provide students with hands-on training. In addition, we have a new solar mapping project in collaboration with Springfield Utility Board. In total, we offered seven projects in two main focal areas: Environmental Education and Mapping and Monitoring. Below you will find summaries of all of the ELP projects.

Environmental Education Initiative

In 2006-2007 we launched an ambitious Environmental Education Initiative. The rationale was simple. We have a large number of students who want to become environmental educators, and local nonprofits and governmental agencies have environmental education (EE) programs that are in need of support. Although Eugene is located near spectacular natural areas, many local children have never visited the wetlands on the edge of town or explored the magnificent old-growth forests or the tidepools just a short drive away. This initiative is designed to help our community partners give more children an opportunity to explore these areas first-hand. We begin by training a cadre of enthusiastic educators in environmental education, then connect them with community partners who have a need for assistance.

To participate, ELP students must first complete at least one upper-division science course pertaining to the ecosystem where they will work. This provides a natural science foundation. They then take Environmental Education in Theory & Practice, where they learn about the history, learning theories, and techniques behind environmental education. In addition, they obtain Project Learning Tree, Project Wild and Project Wild Aquatic certification through a weekend workshop. Community partners facilitate field trips to their sites, participate in an orientation meeting, and provide mentoring throughout the project. From the beginning of winter term, the teams begin work on their group project. Since quality EE curricula are usually already available, the students focus on modifying existing curricula to fit the needs of their community partners. Each team develops an educational unit for their specific community partner and ecosystem. Their final projects must: 1) incorporate an interdisciplinary approach; 2) include multi-cultural perspectives; 3) use experiential, inquiry-based methods; 4) promote civic engagement; 5) articulate assessment strategies; and 6) result in a professional educational unit that teachers and environmental educators will find useful.

During spring term, the UO students develop their skills as educators by implementing their educational units and facilitating EE programs for their community partners. Each UO student completes a minimum of 120 hours of service. While each team is slightly different, this usually entails facilitating field trips, classroom visits, staffing educational booths, and developing supplemental educational materials (e.g. wikis, posters, websites). The overarching goal is to inspire a sense of wonder and provide local children with the knowledge, skills, and inspiration to work individually and collectively to protect the environment.

The Environmental

Forest Team

ELP Coordinator: Kathryn Lynch

Project Manager: Ali Abbors

Team Members: Sarah Cuddy, Lisha Curtner, Colin Curwen-McAdams, Brendan Galipeau, Tristan Jones, Melanie Marine (winter term only)

In partnership with the H.J. Andrews Experimental Forest, the Forest Team is focused on educating students and community members on the importance of forest ecosystem interactions in relation to global climate change. During the spring of 2008, the team will visit middle school and high school classrooms throughout the Eugene area in order to cultivate greater appreciation for our dynamic forest ecosystems. The Forest Team has developed a suite of lesson plans focused on carbon sequestration, fire, climate change, and the management techniques that affect these processes in our forests; the lessons incorporate H.J. Andrews researchers' most current understandings of the relationship between forests, fire, and carbon sequestration. The team's educational unit promotes awareness of the relationship between forests and climate change and encourages students to take action to protect our forest resources.

Macaw Team

ELP Coordinator: Kirsten Rudestam

Project Manager: Cody Evers

Team Members: Kate Cornwall, Renee Gabriel, Sydney Wight

In the spring of 2008, students from the temperate rainforest of the Pacific Northwest are connecting to conservation issues a world apart in the tropical rainforests of southeastern Peru. The ELP, the CREES foundation and the Manu Learning Center (MLC) have collaborated to produce a bilingual cross-cultural educational unit centered around the conservation of macaws. These large parrots represent the most endangered large-avian group in the world and are an important bellweather of tropical rainforest health. This innovative pilot program helps school-age children from different parts of the globe understand and share about this conservation issue of global concern, while exchanging insight and wonder of ecosystems very separate from their own. The cross-cultural sharing is facilitated through an online dialogue using video streaming technology (compiled with the help of each class of students). Such international collaboration in environmental education helps build a global community and understanding amongst concerned students.

Leadership Program

Marine Team

ELP Coordinator: Kathryn Lynch

Team Members: Jenna Kulluson, Dayna Lamb, Clare Gordon (winter term only)

The rocky shores of the Oregon coast are a place of extraordinary natural beauty and biological diversity. Many teachers bring their students to the tidepools in the spring, but limited staff at Cape Arago State Park means that teachers and students are often on their own when it comes to exploring this wondrous habitat. In order to provide greater support to teachers, two students attending classes at the Oregon Institute of Marine Biology (OIMB) this spring term are participating in the Marine Team, which will facilitate educational activities in the tidepools. In addition, the team will provide interpretation at Simpson's Reef - a popular tourist destination where it is easy to watch four marine mammal species. This year the team will also assist educators at the South Slough National Estuarine Research Reserve.

Wetland Team

ELP Coordinator: Kathryn Lynch

Project Manager: Kandi Bauman

Team Members: Nathan Brennan, Adam DeHeer, AJ Fisher, Krista Hansen, Kate Self, and Becca West

What do beavers, great blue herons, and six UO undergraduates have in common? Well, if you guessed that they are all exciting features during a visit to the West Eugene Wetlands you are correct. This spring, the Wetlands Team is working with the Willamette Resources and Education Network (WREN) in the West Eugene Wetlands to deliver education programs and events to students and community members. With the guidance of WREN, the team will help showcase the plethora of wildflowers, birds, amphibians, dragonflies, and mammals that make this Willamette wet prairie habitat so valuable and unique. The West Eugene Wetlands are located in Eugene, OR and are the largest open space, natural area within the city. Four miles from the heart of downtown Eugene and close to major regional roads, the wetlands are accessible via public transportation and bicycle (or car if you must drive). The Wetlands Team cordially invites you to check out and sign up for WREN events at www.wewetlands.org.

The Environmental

Solar Team

ELP Coordinator: Kirsten Rudestam

Project Manager: Stacy Vynne

Team Members: Mary Adams, Luke Annala-Kinne, Darton Devins, Eric Krause, Jason Owens

Using remote sensing and mobile GIS units, the Solar Team will map the solar energy capability for the residential districts of the city of Springfield. Using this information, they will generate numbers for the potential economic costs and savings, as well as estimate the greenhouse gas reductions. Their community partner is the Springfield Utility Board, which will use this information to inform and target residential outreach. The Solar Team will also generate a community outreach portion to their project, which will offer their findings to the greater public.

X-Stream Team

ELP Coordinator: Kathryn Lynch

Project Manager: Wen Lee

Team Members: Seth Baker, Matt Evensen, Yukumi Hosono, and Daniel Soulé.

The X-stream Team holds a secret tool in its teaching toolbox... the stream simulator! Designed and built by the U.S. Forest Service, this box has an electric pump and a water faucet. Throw in a couple buckets of sand, ten gallons of water, and a bunch of toy trees, buildings, and animals... and voila! our very own self-contained miniature stream (in the classroom!) Partnered with the U.S. Forest Service and Middle Fork Willamette Watershed Council, the X-stream Team travels with the stream box to local schools and uses it to teach stream ecology to K-12 students. The team has developed numerous lesson plans, covering topics such as water pollution, dams, and how climate change may affect stream systems. The stream simulator offers a unique opportunity to teach children about watershed and stream systems through fun, hands-on modeling activities. The team is thrilled to incorporate this exciting tool into environmental education for the classroom, and they are (most definitely) having an X-STREAM experience.

Leadership Program

Turtle Habitat Monitoring

ELP Coordinator: Kirsten Rudestam

Project Manager: Will Truce

Team Members: Adam Davis-Turak, Nicole Dwyer, Daniel Ohrn, Ashley Pheil, Matt Smith, Michele Stivers, Ben Scott Teton

The mission of the Turtle Habitat Monitoring Team is to further restoration efforts by creating baseline knowledge of potential habitat resources for the Western Pond Turtle on Bureau of Land Management (BLM) lands. The student volunteers provide invaluable help to the BLM in planning future restoration efforts for this critically sensitive species.

The Northwestern Pond Turtle is listed as a critical species in Oregon. As a critical species it is important that an effort be made to stop the decline of the population before it becomes threatened or endangered. The BLM has trained students to go into the field to collect baseline habitat data using sophisticated GPS units. With this data the BLM can use GIS (geographic information systems) to analyze and create maps of the areas that are in need of attention. Future restoration efforts will then be focused in the areas where suitable living and breeding habitat was documented.

We would like to thank all of our community partners, the T & J Meyer Family Foundation, the Robert and Catherine Miller Foundation, the Williams Council, and Steve Ellis for their generous support of the Environmental Leadership Program.

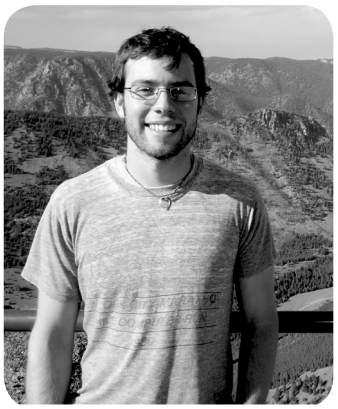
If you are interested in learning more about the Environmental Leadership Program, or participating as a student or community partner, please contact:

Dr. Kathryn Lynch, klynch@uoregon.edu, 541.3465.5070

Kirsten Rudestam, krudesta@uoregon.edu, 541.346.5945.

New Graduate Students

in the Environmental Studies Program



Ezra Markowitz

Ali Abbors, Master's Candidate, ENVS I was born and raised in the San Francisco Bay Area and received my BA in anthropology from Occidental College in 2001. Since graduation, I have worked in fundraising for the Humane Society, as an AmeriCorps environmental educator on the Navajo Nation and at a Bay Area conservation corps, and as an educator for the National Audubon Society in New Mexico and as a writer/researcher for the National Association of Counties' environmental division in Washington, DC. My academic and professional interests include: community-based environmental movements, community gardening, environmental education, food security, and the intersection of social and environmental justice issues; my focal areas are food security as well as natural resource management and conservation. I am especially interested in expanding the idea of "environmentalists" and "environmentalism" to include members of traditionally underrepresented populations. My thesis work will explore community gardening and urban agriculture as a means of increasing food security and building community among the Eugene/Springfield area's low-income Latino residents. In my free time I like to make music, cook, ski, knit, bike, hike, travel, read, and grow my own food. ♛ **D. F. Armand, Doctoral Candidate, ESSP & Philosophy**. Broadly conceived, my interests encompass the ontological and socio-cultural dimensions of place and placelessness in post-Enlightenment to postmodern contexts. Protection of forests and other human and non-human animal habitats through both direct action and theoretical approaches also comprise an important area of interest. For my M.A. thesis (philosophy, Graduate Theological Union, 2006), I explored the ways in which Paul Celan's poetry enacts the Heideggerian concept of Be-ing as the co-located action of human and non-human beings as embodied in the world. I also completed a B.A. in English at U.C. Berkeley. Currently, I am writing a book about a community redwood forest in the north coast region of California. The park was initially created in the late nineteenth century by a land grant of an uncut logging claim on the outskirts of Eureka and today still boasts many ancient redwoods as well as second growth trees. The book will be in print by the end of 2007, so check back for more information. Better yet, visit the park! My burning questions: 1) Where and what is "place" in a world dominated by globalization? (i.e. What to do when there's no where there), and 2) How can the concept of legal standing be expanded to include the life forms and natural resources upon which all life depends? Forests = water = life. ♛ **Kandi Bauman, Master's Candidate, ENVS** I earned a BAS in environmental studies from The Evergreen State College in Olympia, Washington. During my undergraduate career, I completed internships in wildlife biology at UMass-Amherst and wetlands monitoring with the Washington State Department of Transportation. After completing my degree, I served as the AmeriCorps Stream Stewardship Coordinator for the City of Portland and also collaborated with a variety of Portland organizations to organize events like the Greener Future for Affordable Housing Workshop Series and the Urban League Summer Youth Camp. ♛ **Chu (Cassie) Chen, Master's Candidate ENVS** My name is Cassie, coming from Southeast of China. I studied Chinese Literature for my undergraduate degree and received a masters degree on ecological literature; my thesis was "The Study of Henry David Thoreau's Ecological Thoughts." Last fall I came to the University of Oregon to join in our environmental studies program, and I started another section of my life as well as a "new" thinking of environment. Now I am interested in environmental management, especially the complex relationships among the various actors in the process. My thesis will focus on waterway management, particularly water policy and its implementation, public participation and governmental structure. I am thinking about doing a comparison of waterway management cases between China and the U.S.A, and I hope the comparison will produce some better methods for waterway management. Though "Thoreau" and "waterway management" seem to be unrelated, both of them successfully invited me to think of the environment and revealed the relationship between the environment and humans. In Environmental Studies, I learn, enjoy, and have found a new significance to both my studies and my life. ♛ **Erica Elliott Doctoral Candidate, ESSP & English** I might be new to the environmental studies program, but I've been at the University of Oregon for a while now. After majoring in English and biology (with a concentration in environmental studies) at Kenyon College in Ohio, I began work towards a doctoral degree in English here at UO. My work in the English program has been interesting, but not as inspiring as working on the borders between disciplines. I look forward to continuing my work on literary and cultural representations of the environment, as well as doing work outside of the English department in the areas of biology and geography. I'm interested in fostering lines of communication between the sciences and humanities and thinking about what it means to engage in "interdisciplinary" and "multidisciplinary" studies. I'm also looking forward to putting my own interests in dialogue; I hope to work in areas as (seemingly) disparate as landscape ecology, environmental justice, the rhetoric of science, race and space,

Wen Lee

Cassie Chen

Dione Armand

Jill Jakimetz

Erica Elliot

Christine Zeller

Rob Hoshaw

Ali Abbors

Kandi Bauman

Cody Evers

resource management, and ecocriticism. Most of all, I'm excited by the prospect of learning from and with other scholars that are thinking about how to integrate various approaches in the service of environmental problem solving. ♛ **Cody Evers Master's Candidate, ENVS** I am originally from Park City, Utah, and as a result, I have been skiing for almost as many years as I am old and have an insatiable appetite for the outdoors. For the past eight years I have resided in Colorado; the first four were spent at Colorado College in Colorado Springs. I earned my degree in biology, emphasizing and writing, my thesis in molecular genetics, although I also did significant course work in ecology. I graduated with honors, received two undergraduate research grants and was awarded CC's Laboratory Biology award for 2003. However, college was also sprinkled with a significant dash of philosophy and art courses (more on this in a bit). Since college, I have been working in the environmental field, first in research, and then in education. Currently, I am a middle school science teacher. This year, I have written and established the entire middle school science curriculum (including environmental studies) at the McClelland School of Pueblo, CO. But alas, as the saying goes, I have had to support my hobby of teaching with a side job: I am an oil painter and run a personal business (Juniper Brushworks) to sell and market my artwork. I am certainly eager to add the more verdant hues of Oregon to my desert palette of browns and reds.I am interested in focusing on the areas and overlap of environmental education (emphasizing student-led service learning), environmental research and technology communication. I am looking to articulate and define how these areas can be put together to bridge the gap between research and community; to raise awareness and participation in environmental efforts; and to empower students in tangible ways to lead environmental change and monitoring. ♛ **Rob Hoshaw Master's Candidate, ENVS** I graduated in 2007 from North Dakota State University in Fargo, ND, where I received my degrees in English and zoology. Growing up in the Upper Midwest, I spent a great deal of time exploring the outdoors and constructing the foundation for my interest in conservation and environmental issues. My academic interests include wildlife management and conservation, ecology, ecocriticism, and nature writing. This diversity of interests has translated into a concentration in ecology and environmental writing at the University of Oregon. An equal passion for science and the humanities has directed my interest to the Andrews Experimental Forest and the Long-Term Ecological Reflections program, a creative writing endeavor inspired by the scientific Long-Term Ecological Research program. My thesis will explore the intersection of scientific and creative inquiry through an analysis of the Andrews writing reflections while paying particular attention to how these works are a means of facilitating a personal connection to the land as well as a deeper appreciation for ecological processes. In my spare time I like to bike, fish, and read. I also enjoy cooking, painting, and going on long walks in the evening. This summer I will be getting married and am looking forward to beginning my life anew. ♛ **Jill Jakimetz Master's Candidate, ENVS** I arrived in Eugene after two years of working with tractors, horses, pigs, sheep, people, and vegetables on farms in Maine. An undergraduate degree in environmental studies, working on the farm, and travelling about, have shaped my thinking of how ecological systems interact with material culture, memory, and the body; how perceptions of geography, the process of creative imagination, and the "natural" and "built" environments reveal our sense of place. Otherwise, I enjoy commuting to school on my bike, roasting the first asparagus, and defending my ping-pong champion title. ♛ **Wen Lee Master's Candidate, ENVS** I grew up in Southern California and spent my undergraduate career at Occidental College in Los Angeles studying biology, education, and music. Since then, I have tried my hand at many things, including researching cattle grazing in Wyoming, working at an organic farm in California, producing a television show in Boston, and teaching at both a residential outdoor school and a public high school. I am aspiring to make the earth a nicer place to live by a) offering assistance to developing countries, b) promoting sustainable industrial practices, c) convincing people to stop consuming so much junk, or d) all of the above. My concentration areas are sustainable development and nonprofit management. For my terminal project I am producing a one-hour television show about the chain of production behind coffee, starting with the coffee plantation in Costa Rica and ending with the steaming cup in your hand. I believe global awareness is a good thing. I also like elephants, the color orange, and anything with mushrooms in it. ♛ **Ezra Markowitz Doctoral Candidate, ESSP & Psychology** I am a first-year PhD student in the Environmental Sciences, Studies and Policy program at the University of Oregon (Eugene) with a focus in psychology. Broadly speaking I am interested in the relatively young field of Conservation Psychology, which seeks to explore questions and problems of environmental conservation primarily at the individual-actor level of analysis (i.e. I plan to study the way individuals, families, and communities interact with the natural environment as well as the ways in which that "human-nature" relationship can be improved upon through individual action). Recognizing the immense complexity of many environmental issues facing us today, I hope to integrate theories and methodologies from a variety of fields into my research and thinking in the hopes that becoming an interdisciplinary environmentalist will better equip me to address these problems in the future. My current research utilizes a mixed-methodology approach to explore the question of how individuals explain environmentally relevant behaviors that they see, hear, or think about others participate in. ♛ **Christine Zeller Master's Candidate, ENVS & Law** I graduated from the UO with a BS in physics and music and a certificate from the Clark Honors College. I worked for the past several years as a legal assistant on environmental cases. Through that work I decided I would like to do further study regarding quantitative analysis of environmental systems and how that analysis is used in the creation and revision of environmental policy and law. I was born and raised a Eugenean and continue to live here with my daughter.

Community Updates
Achievements, Awards, Announcements

ANNOUNCEMENTS:

"Thinking Through Nature: Philosophy for an Endangered World"

19 - 22 June, 2008

This summer, the Environmental Studies Program will collaborate with the International Association for Environmental Philosophy to host a four-day international summit gathering together the environmental humanities and design communities, including scholars from Anthropology, Art, Architecture, English, Geography, Landscape Architecture, Philosophy, Political Science, Religious Studies, and Sociology. Events of the summit will include an afternoon of hands-on workshops, fifty interdisciplinary panels of speakers, keynote addresses by five internationally acclaimed guests, an opening reception and Saturday evening banquet, the Oregon premiere of the feature environmental film *Hotspots*, a book exhibit, and a series of excursions to nearby sites of environmental interest.

Keynote Speakers include:

Donna Haraway, Professor of History of Consciousness, UC Santa Cruz

John Llewelyn, Emeritus Reader in Philosophy, University of Edinburgh

Gary Paul Nabhan, Distinguished Professor, Southwest Center and Department of Geography, University of Arizona

Alberto Pérez-Gómez, Saidye Rosner Bronfman Professor of the History of Architecture, McGill University

Karen Warren, Professor of Philosophy, Macalester College

For a program of events and additional information about "Thinking Through Nature," please visit the website:

http://www.uoregon.edu/~toadvine/TTN/

COMMUNITY AWARDS & ACHIEVEMENTS:

Rebecca Briggs (continuing environmental studies masters student) accepted a position in August 2007 as editor of Biodynamics, a quarterly journal published by the Biodynamic Farming and Gardening Association since 1941. This work fits well with her academic interests in agriculture, land use, and food production/supply issues.

First-year ENVS graduate student **Cody Evers** won a national award from the American Planning Association, the 2008 Information Technology Division of APA Awards, for best paper. Cody was invited to an award reception in late April in Las Vegas at the annual conference for the America Planning Association where he received a $500 cash prize. The paper, "Spotted Owls and Landscape-Guided Forest Management," began as an assignment in a Planning and GIS course taught by Marc Schlossberg this past Fall. Cody plans to continue to develop this work for his thesis.

In summer 2007 **Janet Fiskio** traveled to Desemboque, Mexico to interview Gary Paul Nabhan for her dissertation, where she also participated in the mesquite harvest of the Seri community. In September she organized the annual Composition Conference and has been serving as Assistant Director of Composition this year. She presented the paper "Becoming Non/Human: Toward an Ecohermeneutics" at the Nature Matters conference in Toronto in October. During fall and winter she served as the graduate representative on the search committee for a Literature and Environment candidate in English, and this year she has been on the local organizing committee for the conference "Thinking Through Nature." This year she has received

a Graduate Research Fellowship from the Oregon Humanities Center and a John and Naomi Luvaas Fellowship from UO. She published a book review this spring and has an essay forthcoming in the fall, "Gary Paul Nabhan's Dialogical Science," both in the journal Environmental Philosophy. This spring she is co-teaching ART 4/507: Ecotheory with Carla Bengtson and loving it.

The American Association of University Women awarded **Sarah Jaquette** an American Dissertation Fellowship for 2008-09. In addition, the Center for the Study of Women and Society awarded her a 2008-09 Research Grant. Sarah's manuscript, "Risking the Body in the Wild: The 'Corporeal Unconscious' of American Adventure Culture" won the Association of American Geographers' Disability Specialty Group Student Paper Competition in April 2008 and her manuscript, "Endangering the Desert: Ecology, Security, and Immigration in the Arizona Borderland," was accepted for publication in ISLE (Interdisciplinary Studies in Literature and the Environment). She presented "Endangering the Desert" at the Pacific Northwest American Studies Association annual conference in Walla Walla in April and will present "Negotiating Ecological Legitimacy" at the Thinking through Nature conference here at the University of Oregon in June.

This summer, **Wen Lee** will be an intern for the popular children's television show FETCH! with Ruff Ruffman for WGBH in Boston. The show combines live-action and animation to introduce children to concepts of science and problem-solving! The upcoming season's educational theme is "Green Science." Check out the website at http://pbskids.org/fetch.

ENVS master's degree candidate **Adam Novick** guest lectured at a graduate seminar on Aldo Leopold at OSU (FOR599) and in Rebecca Briggs's course on law and the environment (ENVS 411); contributed a paper to the Garry Oak Ecosystems Recovery Team's 2008 Research Colloquium ("Risk to Oregon white oak habitats from orthodoxy in the regulation of species"); received acceptance of proposals for presentations to the 2008 annual conference of the Society for Conservation for Biology ("Risk to biodiversity from orthodoxy in the regulation of species"), the UO conference Thinking Through Nature ("A war of musical chairs: What have we done to Leopold's land ethic? (And what else can we do?)"), and a brown-bag presentation to the US Fish and Wildlife Service ("Saving the streaked horned lark: Could maintenance-dependency increase agency discretion in regulating species?"); received acceptance (pending revisions) from Environmental Values for a paper on orthodoxy in interpretations of Leopold's land ethic; continued to participate through public comment in Benton County's development of a Habitat Conservation Plan for Willamette Valley prairie species; continued to serve on the steering committee of the Oregon Oak Communities Working Group; was offered a graduate fellowship from the Property and Environment Research Center; and with his illustrious peers, helped calculate fees to offset greenhouse gas emissions from the Thinking Through Nature conference (while advocating for decreasing emissions through virtual conferencing).

Matt Peterson and his wife Sofie had a baby boy, Milo, on March 16, 2008. According to Matt, fatherhood is great. In addition, Matt was offered a Presidential Management Fellowship with the federal government. He'll be working for the Inyo National Forest in Bishop, CA as a Recreation and Transit Planner/Partnership Coordinator.

Two books that **Ted Toadvine** co-edited have recently appeared: *Nature's Edge: Boundary Explorations in Ecological Theory and Practice*, edited with former colleague Charles Brown, was published by SUNY press; and *The Merleau-Ponty Reader*, edited with Len Lawlor, was published by Northwestern. The appearance of the latter volume was timely, since 2008 is the centennial of the birth of French philosopher Maurice Merleau-Ponty, and Professor Toadvine will participate in several conferences this year devoted to Merleau-Ponty's work: Basel in March, Paris in June, Morelia in September, and Lisbon in November. In the area of environmental philosophy, Professor Toadvine's essay "How not to be a Jellyfish: Human Exceptionalism and the Ontology of Reflection," was recently published in a collection entitled *Phenomenology and the Non-Human Animal* (Springer), and he was invited to join the advisory board for the journal *Environmental Ethics*. He is also lead organizer for the summit in environmental humanities that UO will host in June, "Thinking Through Nature: Philosophy for an Endangered World," which is described in more detail elsewhere in this issue.

Shannon Tyman will present a paper entitled, "Designing With(in) the Post-indus-

trial Landscape" in June at the Thinking Through Nature Conference at the University of Oregon. In addition, last summer she received Barker Funds to travel to her research site, Gunpowder Park, located just outside of Greater London. Her book review of *Babylon and Beyond: The Economics of Anti-Capitalist, Anti-Globalist, and Radical Green Movements* will be published in the June 2008 edition of *Capitalism, Nature, Socialism*. She also published a review of *The Revolution Will Not Be Microwaved* in the Spring 2008 edition of *Biodynamics* journal.

In January 2008, **Stacy Vynne** received a research grant from T&E, Inc., a foundation based in New Mexico. The grant provided funding to conduct a survey of ranchers in New Mexico and Arizona as well as travel to the Southwest for interviews and research. In April 2008, Stacy traveled to Chico, Montana to present her research "Assessing Ranchers' Attitudes Towards Livestock Compensation in the Southwest" at the North American Wolf Conference. The Conference included 180 participants from nonprofit organizations, foundations, government agencies, tribal representatives, ranching communities and the general public. Also in April 2008, Stacy was sponsored by the Mexican Wolf Fund to travel to Arizona and New Mexico and visit a ranch being assessed for wolf-proof fencing.

Shangrila Wynn presented a paper titled "Contested Notions of Fairness, Equity and Justice: Climate Change as an Arena for North South Environmental Politics" at the American Association of American Geographers' annual conference held in Boston during April 2008. She received a Graduate School Research Award and a Center for Asian and Pacific Studies (CAPS) Small Professional Grant, to support dissertation research work during Summer 2008.

Christine Zeller has been accepted to the UO Law School. Beginning in Fall 2008, she will pursue a joint degree in law and environmental studies.

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ECOTONE: A transition zone between two adjacent communities, such as a forest or grassland. It has some of the characteristics of each bordering community and often contains species not found in the overlapping communities. An ecotone may exist along a broad belt or in a small pocket, such as a forest clearing, where two local communities blend together. The influence of the two bordering communities is known as the edge effect. An ecotonal area often has a higher density of organisms and a greater number of species than are found in either flanking community.