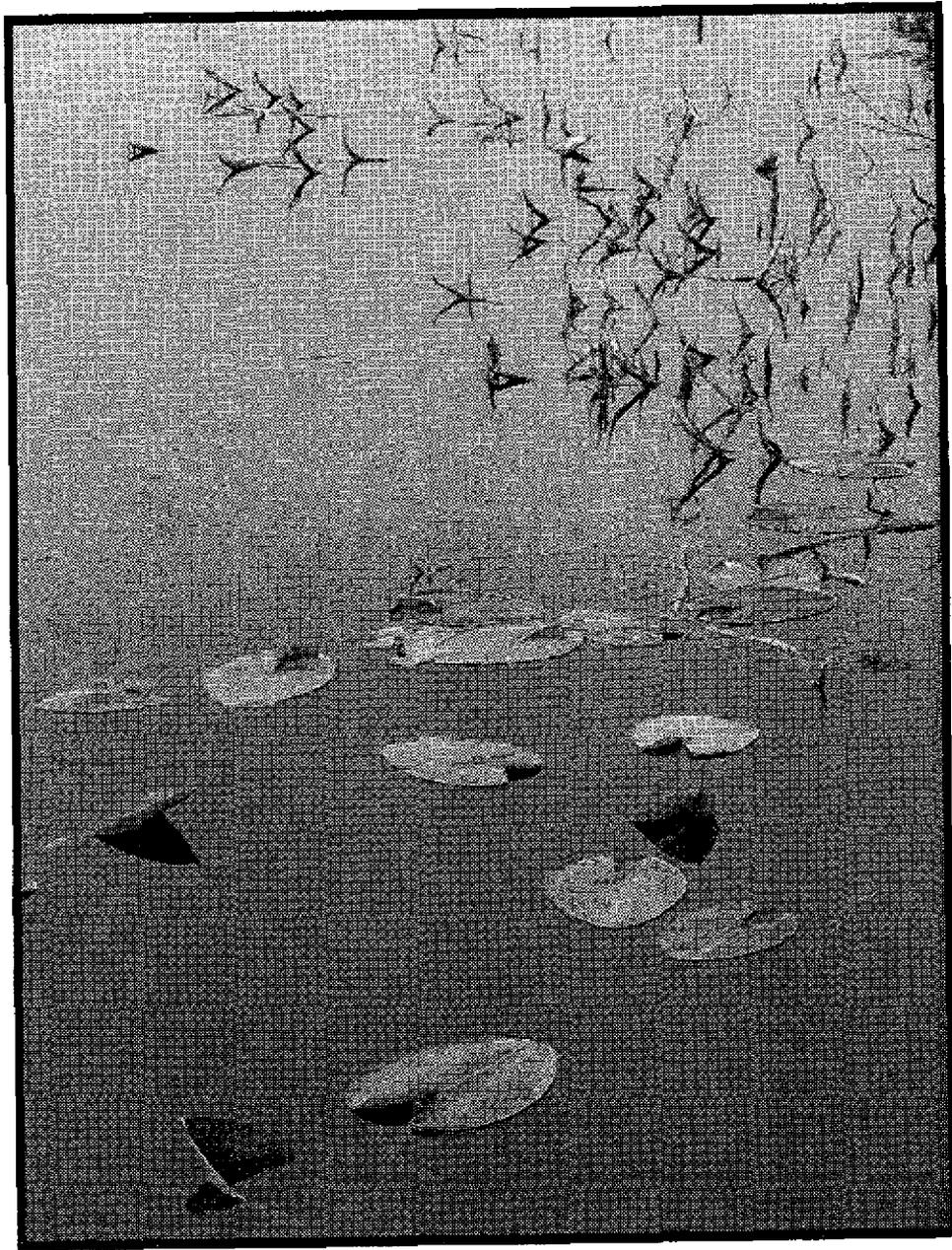


THE ECOTONE

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Environmental Change

EDITORS' NOTE

The theme of the Spring 2006 edition of *The Ecotone* is "environmental change." We conceive of this theme in broad terms, with the assumption that what we consider "the environment" and what counts as "change" are not fixed, but rather are open to debate. We asked faculty to engage in an online discussion about environmental change, which we published here so that readers can see how two affiliated members of the Environmental Studies Program understand this theme. We caught up with an alumnus of the program whose dissertation and career focus on issues of environmental change. We report on the oral histories compiled by the Environmental History Project to understand change and sense of place here in the Willamette Valley. And, demonstrating the variety of approaches to understanding this theme, we have also included graduate and undergraduate essays that broaden the definition of the theme beyond the global environmental crisis the theme initially denotes. These essays suggest that how we think and talk about change is as important as identifying whether change is happening, measuring its impacts, and forecasting its future. Finally, in this edition we catch up with the people and events of the program, welcome two new staff members, and celebrate the birth of three new babies!

The Ecotone

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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.

Sanguine

Delicacy of ferns growing through pavement,
their strength so disguised as to be invisible.
Cocky and sublime, they ease their way into the
world of the living, purposeful and mighty.

Circle of firs, battered by adversity we cannot know
with our puny concerns untempered by reality.
Solid and hopeful, they reach for the blueness
of beyond in a catechism of heroism and triumph.

This feral cat, homeless for eons, skulking away
from the flaying hands and arrogant yells
of entities he cannot trust to be kind, at last
nudging his head against mine in communal bliss.

And so the adder's tongue, yellow bloom bending narrow stem
in homage to the soil of centuries beneath its roots.
Oblivious to our scream and spin, noble and fine it stands,
unweighted by civilized demands.

Gayla WardWell

It's the End of the World as We Know It—Are You Feeling Fine?

METACRISIS AND ENVIRONMENTAL CHANGE

Jason Schreiner

Prognostications of “collapse” abound these days, and the possibility that Chicken Little might actually be right this time seems to preoccupy the social imagination. Consider, for instance, the popularity of Jared Diamond’s massive volume, *Collapse: How Societies Choose to Fail or Succeed* (Viking, 2005), which examines historical instances of social collapse due to environmental change. Let us not forget Y2K, which only a few years ago dominated headlines with details of government and business contingency plans, as well as stories of individuals and families stockpiling resources in anticipation of the worst. Although the immediate threats associated with Y2K proved illusory, the collective sense that global trends are out of control continues to prevail.

To what extent are people’s fears justified? Consider the following factors:

- The report card on key environmental indicators continues to show alarming scores for average global temperature, availability of fresh water, soil fertility, fish stocks, flora and fauna biodiversity, among dozens of other examples.¹ As the National Academy of Sciences reported in 2002, the world economy overshoot Earth’s regenerative capacity in 1980 and exceeded it by 20 percent in 1999.²
- It appears likely that we are very close to, or maybe even past, the point when planetary production of oil surpasses proven reserves and thereby forever declines.³ The problem with “peak oil” is not that oil will suddenly run out—half of the planet’s supply of oil will have yet to be used—but that supply will begin to decline while demand continues to grow, especially as countries such as China and India accelerate economic development. Moreover, what oil remains will be increasingly more difficult and expensive to extract and put online since the easiest sources have already been tapped, and most of these are in a state of decline. This can only spell disaster for a global market economy that is, as President George W. Bush put it with regard to the U.S., “addicted” to cheap oil for its lifeblood. Significantly, we are already bearing witness to a growing energy crisis, mounting geopolitical tensions, and intensifying resource wars,

as major players scramble to secure control of the major resources that remain.⁴

- The economy is becoming increasingly fragile as powerful commercial interests continue to pursue a neoliberal agenda of “flexible accumulation,” which involves ever larger oligopolies, slashing worker benefits, import substitutions that undermine local production and resource development for local consumption, and job “outsourcing” to regions where labor is cheap and environmental, health, and safety laws are lax. This process has generated unprecedented levels of material wealth, but primarily benefits already affluent populations, as evidenced by record corporate profits, lavish CEO salaries, and a massive income gap between rich and poor. For most people purchasing power is in decline, debt is on the rise, and dependence on the whims of a casino economy is growing. Even more egregiously, the process is undermining workers’ health, families’ financial security, environmental quality and integrity, as well as the viability of traditional livelihoods, particularly in the Global South, where entire communities are displaced by land enclosures, or time-honored practices such as seed saving and collectivized agriculture are made illegal under WTO “free trade” restrictions.⁵
- As wealth increasingly concentrates among private interests, less money is available for public investment in social safety nets and basic goods such as public education and health care. As a consequence, social infrastructures are in advanced states of deterioration or, in cases in which services have become privatized, are no longer affordable for growing numbers of people.⁶

Numerous other examples could be cited, including election irregularities in the U.S. and other countries, cultural fragmentation and the rise of religious and political fundamentalisms, steady erosion of civil liberties, gross violations of basic human rights, and systematic campaigns of genocide in places like the Congo or the Darfur region of

Sudan. The basic point, though, should be clear: multiple crises are converging to produce a global metacrisis of epic proportions.

Is collapse inevitable? In *The Collapse of Complex Societies* (Cambridge University Press, 1988), Joseph Tainter identifies sociopolitical complexity as the underlying factor that influences collapse. As Tainter notes, human societies are living systems that require a continuous flow of energy for their maintenance. Accordingly, as societies become more complex, they require more energy,

and this in turn requires more investment in maintaining sociopolitical institutions that organize and manage energy flow. At a certain point, higher levels of investment in economic growth and social maintenance begin to yield smaller increments of return, particularly as resources become scarcer due to over-exploitation. Declining resources coupled with marginal returns on investment weaken the economy and result in less capacity to provide goods and services to sustain the population, which in turn fuels unrest and a need by elites to use ever dwindling resources to maintain order and secure ruling legitimacy. At this point, societies must draw upon reserves of resources, if any exist, or seek resources elsewhere through conquest, albeit conquest only delays the problem since newly acquired resources will inevitably decline. To the extent that conquest increases complexity due to increasing costs of occupation and administration, however, the stakes are only raised higher. If no new “energy subsidy” is to be had, the society either disintegrates into localized factions or becomes an easy target for an outside power to step in and take over. In the case of a power vacuum, in which no outside power can step in, the former scenario—that is, collapse—will ensue. Tainter argues, in fact, that the extent to which “collapse is due to declining marginal returns on investment in complexity, it is an economizing process.”⁷ In other words, “collapse” means a return to that level of social complexity which can be sustained by available resources. Obviously, for those whose livelihood is dependent on specialization within the bureaucratic hierarchy of the society, collapse will be a major problem; whereas for those with opportunity and/or ability to



produce for themselves, particularly primary food resources, collapse may very well be a welcome option since it can sever the tie that binds local groups with a larger, colonizing entity and thereby remove the strictures associated with social hierarchy and complexity.

Tainter's explanation of collapse pertains to our current world situation, particularly the decisive factor of a power vacuum since the U.S. remains as the lone world “superpower.” In sum, there exists no ready “energy subsidy” to replace oil,⁸ no apparent outside political power to step in and administer a planetary system, no ecosystems to sustain current population levels in the absence of oil-based agriculture, and no opportunity and ability for the bulk of the population in industrial societies to produce basic necessities for themselves. Even more problematic is the fact that many ecosystems have been severely compromised in terms of their life-sustaining capacity. Given that we are planet-bound and don't have the energy for developing, let alone powering space travel—assuming another hospitable planet existed nearby—there is no place else to go.

What, then, is to be done? First, we must acknowledge that business-as-usual is antithetical to the directions required for establishing sustainable, vital systems, and will remain so as long as its dominant logic is one that “makes an accumulation of misery a necessary condition, corresponding to the accumulation of wealth,” as Marx warned us over a century ago.⁹

Second, we must recognize that, for the human social majorities and for most ecosystems of the planet, the possibility of collapse is not something to be pondered but is already a reality—and one which business-as-usual is incapable of solving precisely because of its logic of accumulation *qua* exploitation. Only for privileged sectors of the human population, in other words, does the notion of social collapse as something requiring “prevention” make any sense.

Third, we must admit that we've already lost in terms of “stemming the tide” of the dominant powers. Where movement by governments or business in the direction of

sustainability is occurring, it is woefully inadequate given the global scale of metacrisis. And, especially, let us not fool ourselves concerning the adopted strategy of our elites: excessive military expenditures,¹⁰ preemptive strikes, and the prospect of permanent warfare that will “not end in our lifetime,” as Dick Cheney puts it.

Fourth, we must not fear the consequences as Chicken Little finally comes home to roost in the privileged corners of the world—fear only extends the logic of accumulation and justifies domination and terror. Besides, what do we have to fear: the end of a system built upon exploitation and suffering? To be certain, detoxification from addiction to oil and the more insidious dependency on capital-intensive exploitation of people and the environment will not be easy—recovery from excess is often quite painful, at least initially. However, if we are to choose life over permanent warfare and the horrific implications that entails, we have no choice but to embrace metacrisis as an opportunity for radical social transformation.

Fifth, we must embody logics of sharing and an ethos of care. This means learning again the arts of living cooperatively and working collectively to manage our necessary flows of energy at scales appropriate for sustainable and vitalizing interaction with each other and with other living beings who share this planet with us. This will require redefinition of values and ethics, adoption of more inclusive, democratic, and diverse systems of science and governance, and institution of new relations of property, work, and play.

Finally, we must allow ourselves to experience peace by realizing “that oppositions are never final, that producing the possibility of enjoying new contrasts where oppositions once ruled is the adventure of hope and reason.”¹¹ Not everyone will agree with the prospect of peace, but most will choose peace if we make it a genuine option. Indeed, in our highly disturbed world, the perfect society is illusory, although the potential for an alliance of good communities is within our reach if we translate passion into compassion, wield love and joy in the face of fear and hate, and risk our lives for the possibility of a world of beauty. Those majorities who have been weathering collapse for some time have never given up the quest for life, and neither should we. In the transition through metacrisis, we can feel just fine if we choose to act appropriately and wisely.

Notes

¹ Donella Meadows, et. al, *Limits to Growth: The 30-Year Update* (Chelsea Green, 2004).

² Matthijs Wackernagel, et. al, “Tracking the Ecological Overshoot of the Human Economy,” *Proceedings of the National Academy of Sciences*, 99:14, July 9, 2002: 9266-9271 (<www.pnas.org/cgi/content/full/99/14/9266>); cf. William Catton, *Overshoot: The Ecological Basis of Revolutionary Change* (University of Illinois, 1980).

³ Ken Deffeyes, *Hubbert's Peak: The Impending World Oil Shortage* (Princeton University Press, 2001); Richard Heinberg, *The Party's Over: Oil, War, and the Fate of Industrial Societies* (New Society, 2003); and Paul Roberts, *The End of Oil: On the Edge of a Perilous New World* (Houghton Mifflin, 2004). It should be noted that new discoveries of oil peaked worldwide in 1962, so the idea of “finding more” is nothing but wishful thinking.

⁴ Michael T. Klare, *Resource Wars: The New Landscape of Global Conflict* (Metropolitan Books, 2001); Michael T. Klare, *Blood and Oil: The Dangers and Consequences of America's Growing Dependency on Imported Petroleum* (Metropolitan Books, 2004).

⁵ David Harvey, *The Condition of Postmodernity: An Enquiry into the Origins of Cultural Change* (Blackwell, 1990); Holly Sklar, *Chaos or Community? Seeking Solutions, Not Scapegoats for Bad Economics*, (South End Press, 1995); Samir Amin, *The Liberal Virus: Permanent War and the Americanization of the World* (Monthly Review Press, 2004); Vandana Shiva, “The Indian Seed Act and Patent Act: Sowing the Seeds of Dictatorship,” *ZNet*, February 14, 2005, at <www.zmag.org/content/showarticle.cfm?ItemID=7249>.

⁶ Between 1996 and 2000, an estimated 61 percent of U.S. corporations paid no federal taxes (*Harper's*, July 2004, <www.harper.org/Taxes.html>). In 1998, multinational corporations legally avoided paying over \$10 billion in U.S. taxes by using foreign accounts (*Harper's*, October 1998, <www.harper.org/Taxes.html>). Moreover, many commercial interests receive lavish public subsidies from all levels of government (<www.corporations.org/welfare>).

⁷ Tainter, op cit., p. 198.

⁸ Natural gas is also peaking, and no infrastructure of comparable size or function exists for any other energy source, whether hydrogen, nuclear, solar, etc. Developing such an infrastructure would require trillions of dollars of investment and massive inputs of energy that would have to come from, well, oil. As is obvious, governments and commercial interests are not redirecting sufficient funds or materials in this direction and, to the extent that they are, certainly not at a scale necessary to facilitate a transition from oil and still maintain current levels of economic activity. Except for countries such as Sweden, which is preparing to become virtually oil-free by 2020, and Cuba, which has been forced to become relatively oil-free after being cut-off from its former benefactor, the Soviet Union, the onus for transition beyond oil has fallen to communities and individuals, the majority of whom are already stretched thin economically and highly fragmented politically, socially, and culturally.

⁹ Karl Marx, *Capital*, Vol. I (Penguin Classics, 1990), p. 799.

¹⁰ The U.S. military budget for 2006 is estimated to equal “that of the entire rest of the world combined” (*Harper's*, April 2006, pp. 13, 45).

¹¹ Isabelle Stengers, “Beyond Conversation: The Risks of Peace,” in Catherine Keller and Anne Daniell, eds., *Process and Difference: Between Cosmological and Poststructuralist Postmodernisms*. (SUNY Press, 2002), p. 236.

Photograph: “Weathered” by Rebecca Briggs

The Truth and Uncertainty of Climate Change

TWO ENVS FACULTY MEMBERS DISCUSS THE ROLE AND INFLUENCE OF SCIENTIFIC INQUIRY

*The following email exchange took place during the past winter and has been edited in places for content. The participants are **Ronald Mitchell** (Professor, Political Science) and **Gregory Bothun** (Professor, Physics), both of whom serve as core faculty members of the Environmental Studies Program and are members of the ENVS Executive Committee. The full version of the exchange is available upon request.*

Questions: Despite scientific consensus as to the existence of current and future global climate change, the public is still slow to acknowledge its presence in our lives. What role has the divide between scientific plausibility and scientific provability played in this state of affairs both nationally and abroad? How has the difference between plausibility and provability been used and why? What is the responsibility of the scientific community in communicating with the public around climate change in general and/or this issue of plausibility versus provability? Have they done or are they doing the right thing?

Mitchell: Scientific inquiry is almost always characterized by some degree of uncertainty — once uncertainty becomes (or is assumed to have become) insignificant, scientific interest in a problem declines dramatically. Science and scientists are, among other things, driven by the desire to answer questions that are not yet answered. Uncertainty enters the picture because of epistemological obstacles that get between whatever “scientific truth” may be out there in the world and our ability as humans to know what that truth is.

Research into climate change involves several fundamental types of uncertainty. The first relates to the *degree* of change in climatic conditions that has occurred over the past decades, centuries, and millennia. Consider, for example, the sources of uncertainty about how much the earth has warmed over the past, say, 5,000 years. One element of this “how much climate change has occurred” uncertainty involves what should constitute a “global average temperature.” Another element involves the fact that we cannot directly measure global average temperature (indeed, what would a global average temperature thermometer measure?), but must estimate global average temperature by combining measurements of atmospheric concentrations of various elements with models and equations that tell us what the global average temperature was, given a particular mix of atmospheric concentrations of various elements. Despite these problems, most scientists doing this work

believe we have significantly reduced our uncertainty on this aspect of the problem. That is, we are rather confident we know what global average temperatures have been historically, not least because various methods of estimating that global average temperature (ice cores, coral dating, tree-ring dating, etc.) have produced relatively consistent results.

The second fundamental type of uncertainty concerns the *causes* of change in climatic conditions. If we know how much average global temperature has changed, we still face significant epistemological hurdles in knowing what has caused those changes. A difficult obstacle is the fact that the climate system exhibits large natural variation in average global temperature. Records (estimates, actually) of past global average temperatures clarify that, long before humans were a significant influence on the Earth’s environmental system, large variation occurred in average global temperature. These may involve natural cycles, including ocean current oscillation changes, etc. as well as exogenous events such as meteor strikes and increased solar activity. On top of uncertainty about how the climate system varied before humans arrived, there is further uncertainty in attempting to determine whether — and, if so, how much — humans have influenced the natural climate system variation.

Resolving such uncertainties involves essentially two distinct but related types of evidence and arguments. The first involve arguments in which evidence suggests a) that we can distinguish different *types* of changes that can occur in the climate system (most notably in how rapidly it changes) and b) that new types of changes in the system correlate in time with a period in which humans might conceivably have begun to influence the global climate system, that period usually considered to have begun with the industrial revolution in the mid to late 1800s. Arguments based on such correlations suggest that humans are causing some change in the system, although they do not clarify the mechanism by which humans are doing so.

The second type of evidence and argument is causal rather than correlational. The first elements of these are hypotheses

about the ways in which human activity may have influenced the global environment; the most widely cited of which is through human contributions to atmospheric CO₂ concentrations. Causal arguments look for empirical evidence that supports claims that hypothesized mechanisms could and actually have caused the observed changes we see in the historical record. For example, claims that increasing levels of CO₂ generated by human use of fossil fuels and forest resources have caused increases in global average temperatures imply several observable implications about the world: that atmospheric CO₂ levels and various other indicators of CO₂ levels (and not just temperatures), as well as the human activities that generate CO₂ should have increased over the same period of time as global average temperatures. Much scientific effort has gone into looking for evidence of these “post-dictions,” i.e., predictions about what we should see in the historical record. Such evidence that is found, however, rarely perfectly and uniquely shows one hypothesis as true and other hypotheses as false. Rather, evidence that lends some support to a particular hypothesis simply increases our confidence in the hypothesis (since it has not yet been refuted) but without demonstrating that something is true, because a variety of other plausible explanations may still be in play.

A third and quite important type of uncertainty involves using such evidence as we have at any point in time about past climatic change and its causes to predict future climatic changes and their impacts. Thus, imagine we had perfect information about how the climate system had changed in the past and even perfect information about what had caused those changes. We would still have a difficult time predicting the future trajectory of climate change because we simply do not know what the factors that have caused climate change in the past will be doing. Thus, knowing there is some degree of decadal variation in ocean currents does not allow us to predict, at least in any given year, what those currents will be doing in the future. More importantly, our uncertainty about the causes of climate change and how all those myriad causes of such change interact in a complex natural system makes it particularly hard to predict precisely future levels of average global temperatures. As in predicting the stock market’s trajectory (where we have no uncertainty about the past historical changes that have occurred), our uncertainty about causes of changes inhibit our ability to predict its exact future trajectory.

All these factors mean that when addressing complex and dynamic environmental systems, such as the climate system, there are aspects of our knowledge that are inherently uncertain. Having, I hope, provided some insight

into why that is true, how should scientists communicate their findings to a public that lacks the expertise to evaluate these claims on their own?

To say there is uncertainty about the climate system and human impacts on it, is not to say that we know nothing about that system and the causes of change in it, nor is it to say we cannot make any predictions whatsoever about the future state of the climate system. Over the past three, and more, decades, scientists have accumulated considerable evidence that the climate is changing and that humans are a major contributing cause of such change. No single piece of that large collection of evidence from scientists of all disciplines, nationalities, and political leanings, would be convincing by itself, but just as dozens of pieces of circumstantial evidence that point to the same suspect make us more confident that that suspect did the crime, so too with climate change. Thus, there are solid reasons to have considerable confidence that the climate is changing and that humans are contributing to that change. Given the inherent uncertainties described above, these conclusions may be wrong but the process of scientific inquiry and professional skepticism make that increasingly unlikely.

This raises a conflict that for many scientists is quite real: the conflict between a scientific and professional commitment to communicating the truth as one sees it (which for most scientists includes being clear about how uncertain they are in their findings) and a social commitment that recognizes that non-scientists (whether politicians or the public) often use scientific uncertainties about the future benefits of changing current behavior as the rationale for refusing to incur the current costs of changing the behaviors that scientists are quite certain contribute to climate change.

Although there are shining examples of scientists who are doing a superb job of communicating science to the public, many scientists could do, I believe, a better job by being clearer about the degree, type, and areas of uncertainty about climate change. The stock market again provides a useful analog. We have considerable uncertainty about what the stock market averages will do tomorrow, less about what they will do next week, and yet less about what they will do next year. But most economists and most investors have considerable confidence not only that the stock market will be higher a decade from now than it is today and most will even predict that it will, on average, grow about seven to eight percent over the next decade. Similarly, with the climate system, our uncertainty about where it will be next week, next year, and even next decade is high. Even our uncertainty about where it will be in a century is high. However, scientists are collectively quite

certain that in a century the global average temperature will be higher. They may be uncertain about the exact amount of uptake of CO₂ by the oceans or the exact sea level rise for a given change in temperature, but they are quite certain that the ocean is not taking up all the CO₂ emitted by humans and that sea level will rise significantly as average global temperature rises. Various programs exist to help train scientists to be able to engage in exactly this form of communication which tries to “square the circle” of accurately reporting the scientific truth as known in a way that also communicates the shape of our uncertainty about the world.

Bothun: Ron has suggested that a portion of the disconnect that exists between global climate change and public policy lies in the inability of the scientific community to sensibly articulate its position to the lay public or public policy makers. While I fully agree that scientists are clumsy in their interactions with the real world and are widely believed to lack sufficient emotional depth so as to be perceived as caring humans, there is likely a deeper problem at work involving the public’s ability or willingness to even listen to scientific dialogue, argument and position.

A long time ago, when the world was apparently much simpler, and when we were all made in the image of our creator, the world was black and white. Natural phenomena could be explained as the will/whim of God or the Gods. Indeed, such explanations could be considered as “complete explanations.” Truth was absolute —the role of uncertainty and complexity in the real world was disallowed both in terms of dialogue and thought; therefore these concepts do not exist in the real world or problem solving. While we may collectively believe that the Age of Enlightenment has actually occurred, such a belief would be a false mirror of how we really act and think, behind closed doors, as humans. That is, the lay public, which scientists are so ill-equipped to inform properly, is still caught in the dilemma of requiring complete explanations and the Truth. Therefore, the public expects that the role of scientists is to provide them with this Truth in the form of correct answers and certain solutions to extant (environmental) problems. They don’t want to hear about complexity, ambiguity and uncertainty. After all, scientists are paid to produce the right answer, aren’t they? In the wake of such a disconnect between the public



perception of science and the actual process of science, it is quite clear that the public simply will not accept scientific plausibility as the basis for a rational public policy plan dealing with climate change. Science, of course, is incapable of providing such clarity and certainty. Little has changed for 10,000 years in this regard. The vast majority of the lay public is imprisoned by the fear of the unknown. In view of that unspoken reality, how is it even possible to expect science to impact public policy?

Indeed, the biggest shift in the scientific community with respect to the controversial issue of global warming was the rapidly growing consensus that global climate change is upon us. This followed the release of an important paper detailing northern hemisphere climate over the last 1000 years that was published on March 1, 1999, in the *Journal of Geophysical Research*. Following that, the National Academy of Sciences (in their year 2000 report) asserted that the signal of global climate change had risen out of the intrinsic noise of the system and thus scientific consensus had emerged from this vague web of complexity and uncertainty. But, scientific consensus does not constitute scientific provability, so what good is it? We are informed by truth, not by consensus. Moreover, Joe Public takes global warming literally. The next summer should be hotter than the previous one, as evidenced in his own backyard. Should that next hotter summer fail to materialize (precisely because the climate system is noisy and uncertain), Joe Public will simply mutter to himself, “Man those darn scientists never really know what they are talking about.” Scientific consensus, therefore, is not an effective communication tool to the public or to public policy-makers. Only when science can chisel its findings in stone will that public or its elected leadership pay any attention.

Mitchell: I remain more hopeful than Greg that science and scientists can wield influence on the issue of climate change and the many other environmental problems facing the world. I also think that they can wield influence even before findings are absolutely certain. The recent development of processes of conducting science that include stakeholder participation at appropriate points hold promise for surmounting the real problems that Greg notes. The Intergovernmental Panel on Climate Change (IPCC) has included an increasingly diverse set of scientists in their

efforts to assess our knowledge of climate change as they have progressed from the first assessment in 1990 to the fourth assessment that is currently underway. Policy-makers in Brazil, India, and Indonesia are more likely to understand — and take seriously — the findings of the IPCC if the IPCC has an inclusive process in which Brazilian, Indian, and Indonesian scientists have played a role. This reflects, in part, the political fact that “inclusiveness” increases the legitimacy of scientific processes. But it also reflects the fact that including a broad array of scientists ensures that the science which is conducted and considered in these global environmental assessments reflects both the concerns of Southern, developing countries (which often differ from those of Northern, developed countries) and the different sets of knowledge and data that these scientists have.

At the local level, we see this in the adaptive management strategies that have been an increasingly common approach to addressing environmental problems. Including scientists, forest managers, loggers, and environmental advocates in the process of determining good forest management practices in the Northwest has improved forest management (even if not solving all our forest management problems). Adaptive management and similar participatory science processes recognize that science and policy are not, should not, and cannot be conducted as completely separate, non-interacting realms. When scientists interact with stakeholders and policy-makers, two things happen. Scientists often realize that small changes in what they study and how they conduct their research can lead to large increases in how willing stakeholders and policy-makers are to accept their conclusions. But stakeholders and policy-makers also become more “literate” about science and the scientific enterprise, and become better at understanding what uncertainty is, the implications of different types of uncertainty for policy decisions, and areas of scientific knowledge certain enough to justify preventive or precautionary action. Processes in which stakeholders, policy-makers, and scientists “co-produce” knowledge — as opposed to those in which scientists conduct research and publish their results in hopes that they will influence policy — can avoid the parallel frustrations of scientists who feel their science has no impact and stakeholders and policy-makers who feel that scientists are doing research that has little practical importance. In our efforts to address global environmental problems, co-production of knowledge allows all sides to work together to ensure that scientists are answering the questions that stakeholders and policy-makers are asking, and that stakeholders and policy-makers

understand the importance and policy-relevance of the answers that scientists are giving.

Bothun: I do not see this as an issue of being hopeful or being pessimistic; I merely use history as a guide. Can anyone point to any period in history and note where scientists or scientific knowledge have ever actually influenced, let alone determined, public policy? Even today, NASA/Goddard’s chief scientist on climate change, James Hansen, has his reports directly edited by White House staff before they become official White House releases on climate change. No one paid attention to M. King Hubberts’ 1956 prediction of “Peak Oil” in the U.S. even though it was founded on solid science and turned out to be deadly accurate. The IPCC can do everything it can to characterize and disseminate the problem, but is that going to change the driving habits of Americans? Is that going to cause India and China to slow down the emergence of their fossil fuel-based energy economy? Is that going to influence Russia in ceasing development of LNG infrastructure to export to the world at arbitrary prices by the year 2020? Science offers a big picture view of the world in which everything is connected and in which humans and nature must maintain a delicate partnership for balance and sustainability. The man on the street doesn’t give a rat’s ass about that scientific world view, and governments embrace economic prosperity long before they even think about proper planetary resource management.

I reiterate what was said previously: scientific consensus has emerged on global climate change and now the main scientific difference of opinion is its overall severity and rate of change. But does the fact that scientists agree now suddenly make the scientific process legitimate? What, when scientists disagreed, the process was not legit? Unfortunately, the answer to that rhetorical question is yes. Public distrust of science exists primarily because scientists actually disagree with one another. How shocking! Finally, scientists certainly can be informed by “stakeholders” of the kinds of questions they should be pursuing—it’s just that the stakeholders and policy-makers generally are not receptive to the answers to those questions that science produces. There is a rather large gap between the co-production of knowledge and the application of that knowledge. The latter is wisdom which, collectively, we abundantly lack.

Photograph: “Water Flow” by Rebecca Briggs

Fires in Eden

“HEALTHY FORESTS” IN THE WILDLAND/URBAN INTERFACE?

Anne Blumenthal

Editors' Note: Anne Blumenthal is an undergraduate who wrote the original of this essay for doctoral student Sarah Jaquette's Writing 123 class on natural disasters in Fall 2005. The essay has been edited for publication.

Little boxes on the hillside, little boxes made of tickytacky
Little boxes on the hillside, little boxes all the same
There's a green one and a pink one
And a blue one and a yellow one
And they're all made out of ticky tacky
And they all look just the same.¹

In May of 2003 President Bush confidently stated that, “The Healthy Forest Initiative that I announced last summer is making American woodlands more safe, acre by acre” (CommonDreams 2003). To the Bush Administration, this statement is uncontroversial. The White House claims forests are plagued by wildfires that are extremely dangerous to humans and their property. The Bush plan is to selectively log these national forests and start controlled burns in these areas to lessen the fuel growing in these wildlands. Curiously, the policy is not concerned with the increased development surrounding these critical habitats, and focuses its attention on the forests as the problem, not humans. This oversight is not unintentional, but rather a deliberate historical event. It is this human-centered view of our nation's wildlands that has resulted in the mismanagement of our forests, and conversely the wildfires that have followed.

What the White House is missing in its policy is an understanding of the effects of suburban development on wildlands. The policy fails to ask questions about development and fire suppression, and how they affect each other. Why are the problems of suburban development being ignored in the wildland/urban interface discourse?

All over the world, but particularly in the United States, domestic and agricultural uses of fire have nearly disappeared. Of course, this was not always so. Since the discovery of fire creation and manipulation, fires were deliberately used by humans as tools. Fires helped clear areas needed for farming, cleansed the soil for new crops, and opened new routes for travel. Fire historian Stephen J. Pyne notes: “[Neolithic societies] used fire as a force multiplier in foraging and hunting, promoting those plants and animals they most desired, shaping habitats favorable to themselves” (2004, 22).

During the industrial revolution in America, a significant change took place regarding the use of fire. Fires were to be used in the nascent production industry, but not to be tolerated in nature. In the United States, this meant that as industrialization moved west, so did fire suppression. Suppression of natural fires has an enormous impact on forest ecology. Fire suppression increases biomass in unburned areas, which leads to massive amounts of fuel accumulation after the biomass dies, or dries in the summer. When lightning strikes or humans are careless with flame, catastrophic fires result. And although wildfires are part of a natural cycle, the catastrophic fires that we see all over the world are not natural. Rather, the intensity and severity of these fires are a direct result of centuries of fire suppression (Chuvieco 2003, xxi).

Pyne has found no necessary link between development and fire suppression.² He contests:

Why industrial societies would wish to suppress free-burning fires in sites outside their machines and beyond their cities is unclear; it is just a historical fact that they do. It may be that they simply emulate the example those nations that preceded them, which, being European, distrusted open flame. Regardless, this transformation, for fire history, is the meaning of the industrial revolution. (2004, 25)

As a result Americans came to view fire as irrational, dangerous, and generally uncivilized. These stereotypes persist.

For example, in a state with thousands of acres of grass fields, Oregonians are familiar with the controversy surrounding field burning. But what many Oregonians are not aware of is that field burning has been used for thousands of years by many different peoples as a natural herbicide and pesticide. Even though field burning is a controlled, and often mechanized use of fire, it still evokes “native fire,” which Americans have been taught to fear (Strohmaier 2001, xv). Furthermore, many people, even environmentalists, believe that field burning is more damaging to the environment than the chemicals that replace it. Those who know that field burning provides a natural sanitizer of cropland fear its usage due to the negative cultural connotation of open flames. And if farm-owners still believe in field burning, they must clear it with the state government, which has to approve how and when cropland is burned.

David J. Strohmaier, in his book *The Seasons of Fire*, offers further analysis of the psychology of fire suppression:

And with modernity's ability to manipulate fire technology and industry has come a corresponding desire to control and rein in native fire—motivated by fear, by revulsion toward that which destroys, and by indifference toward the prosaic roles that fire fills in nature. Nevertheless, as long as humanity holds an unreflective antagonism toward fire, we will fight fire in the wildlands with a vengeance. (2001, xvi)

This “unreflective antagonism toward fire” is rooted in a deep antagonism toward that which is wild and natural. Nowhere is this ethos more evident than in the history of development in the American West.

In order to accomplish the goals of Manifest Destiny, Americans needed to occupy the West in droves, and the government needed to make it attractive to do so. The government had to make the West seem less wild and more secure. So it tacitly promised developers protection of their investments. It promised railroad owners, whose livelihood was directly linked to that of timber companies, that their land would be protected from catastrophic wildfires (Hughes 2005). Pyne explains, “It seemed self-evident to right-thinking elites that fire was unnecessary, dangerous and destructive. One could batten down fire in wildlands as one could in cities and this would be a good thing” (2003, 2). This precedent, set in the early 1800s, historicizes how this kind of government assurance continues today. Following the logic of this precedent, it is easy to see that government complicity in fire suppression has supported increased development in the West, while also increasing the dangerous impacts of fire suppression.

The confrontation of wildfire and development occurs most controversially along the suburban/wildlands interface. James Kuntsler, author of the book *The Geography of Nowhere*, asserts that the suburb came about as a result of a uniquely American preference. Kuntsler states, “The suburban developments of today and the shopping smarm that clutters up so much of the landscape in between them arose from the idea, rather peculiar to America, that neither city nor the country was really a suitable place to live” (1993, 39). And, although the dream of the suburb began on the East Coast in the mid-1800s, the real materialization of the expansive suburb only came about eighty years ago.³ Before that the suburbs had been reserved only for those who could afford to live outside of the city core. The rich could afford to be far away from the pollution and congestion of the city. But once cars became cheaper, transportation lines opened, and more loans became available, living in the suburbs be-

came an achievable goal for the “working man” (Jackson 1985, 117). Living in the suburbs amongst the well-to-do was a symbol of true success. As a result, it is the stereotypical two-car garage suburban home that symbolizes “The American Dream.”

Kenneth T. Jackson, author of the widely-read book *Crabgrass Frontier*, expands on the motivation behind suburban development:

There are basically three reasons why America's older cities are now ringed by incorporated suburbs that emphasize their distinctiveness from, rather than their relationship with, the metropolis: (1) sharper racial, ethnic, and class distinctions, (2) new laws that made incorporation easy and annexation unworkable, and (3) improved suburban services. (1985, 150)

Racism played a key role in what some sociologists term “white flight” from the city core. This, and a more generalized socio-economic prejudice, created a desire among potential suburban dwellers to separate themselves from the city, which led to ever expanding suburban boundaries. But Jackson leaves out the powerful “quest for a new Eden, an idyllic paradise of garden cottages far removed from the smoke and din of the industrial city” (Gillham 2002, 27). These two desires are what fueled the social movement out of the city core and into the periphery between the 1920s and 1950s. These desires are what continue to drive movement outward from cities, a movement which gobbles up more land in search of new Edens.

The impulses to be successful, to be self-sufficient, and to be closer to nature have dramatic consequences. Oliver Gillham in his book *The Limitless City* (2002) notes that with increased suburbanization comes intense isolation. This isolation is not just physical. With automobiles as the chief mode of transportation, and increased driving time from place to place, people spend less time around other people and more time in their cars. Also, the houses are farther apart (and often fenced) compared to older housing developments, so contact with neighbors is limited. When contrasted with apartment living, single-family living is much less outwardly interactive. Isolation is felt by many suburbanites as a negative aspect of modern living. However, many suburban dwellers feel that isolation is a necessary requisite in the modern age.

It is ironic that this extreme sense of isolation exists in developments designed to be neighborhood oriented. Neighborhoods that are meant to emulate streets in small towns end up being ghostlike, without any community whatsoever. But it is the *representation* of community that suburbanites cling to, creating what postmodern theorist Jean Baudrillard terms a “hyperreality” of neighborly living. Because suburbs

constantly recreate their idealized image of what a community should feel like, the image becomes more real to them than the actual thing and takes on its own character. Eventually it becomes "hyperreal," creating the stereotypical suburban malaise that is so often represented in pop culture. Tim Burton's movie *Edward Scissorhands* and Edward Bogosian's *SubUrbia* poke fun at the low density, single-track, nuclear family, housing development phenomenon. These popular movies exemplify the common stereotypes of suburban malaise.

This malaise is crucial to understanding why suburban dwellers continue to build their homes along the wildland/urban interface. Suburban hyperreality distances suburbanites from the real dangers that are posed when their 'communities' border fire-prone wildlands. The suburb is a dream of a place, not just a place. And realizing the fragility of the physical suburb shatters the suburban dream. In suburban hyperreality, catastrophic fires have no place. People who develop in these areas are unwilling to accept the dangers of living so close to nature because they idealize their developments as *Edens*. Suburbs are attractive precisely because they are close enough to nature to create a pastoral ambience, but far enough from nature for safety and society's amenities. But the encroachment of development near historically wild and natural places is not safe at all. The suburban denial of the wildfire problem makes homeowners particularly vulnerable to wildfire disasters. A refusal to build at higher densities makes it impossible to create a buffer from wildlands prone to catastrophic fire. This blind ignorance of real risks is further exemplified in the refusal to firescape their properties.

The expansion of low-density suburban development into "open spaces" or wildlands, increases what forest ecologists term the wildland/urban interface (WUI). The expansion of the WUI, caused by simulated closeness to nature, harms the environment. Hansen explains:

Sprawling subdivisions and ranchettes are replacing natural habitats and agricultural lands. Besides affecting private lands, development near the boundaries of national parks and other protected parcels may have an impact on those areas as well. Effects on protected areas may include the loss of native species, changes in disturbance regimes (such as wildfire), and the spread of invasive organisms. (2002, 151)

The effects of suburban development and the effects of fire suppression collide in the WUI to form the perfect climate for catastrophe.

In Oregon, we see mini-catastrophes every summer. The B&B complex fire that burned through Camp Sherman, the suburbs of Sisters, and part of the vacation community of Black Butte was a wake-up call to Central Oregon residents. In a personal interview, former wildland firefighter James Hughes, who was stationed at Black Butte before, during, and after the fire, said, "People acted like it was some big surprise. When they should have at least been prepared for the dangers of living out in pine forests, they pretend like the danger didn't exist."⁴ Fires, Hughes went on to say, naturally blow through the pine forests every ten or fifteen years. Hundreds of years of fire suppression have created tons of unburned fuel. And yet, people continue to build houses further and further into the forests. Amazingly enough, said Hughes, many of the residents of fire-prone Central Oregon have not even firescaped their homes. Many people live surrounded by trees, with cedar shake roofs, flower beds covered with barkdust, and chopped wood under their wood decks.

When President Bush claims that we are making forests "more safe" through his Healthy Forest Initiative, we must not forget to ask, "more safe for whom?" Is continuing to suppress fires safer for the environment, for suburban development, or neither? The Healthy Forest Initiative protects human interests, and does not promote healthy forest ecology. The Administration's definition of fuel management includes salvage logging, which is deforestation with a new name (Franklin 2003, 23). Ecologists counter that controlled burns and fuel reduction (not salvage logging) are safe ways to protect healthy forests. But the Forest Service refuses to light controlled burns near suburban developments because of air quality issues. However, for the near future, the increased fuel accumulation near developed areas will continue, not in small part because of consumer demand for the hyperreal pastoral Eden suburbia offers, making forests more dangerous to life and property, and the forests themselves.

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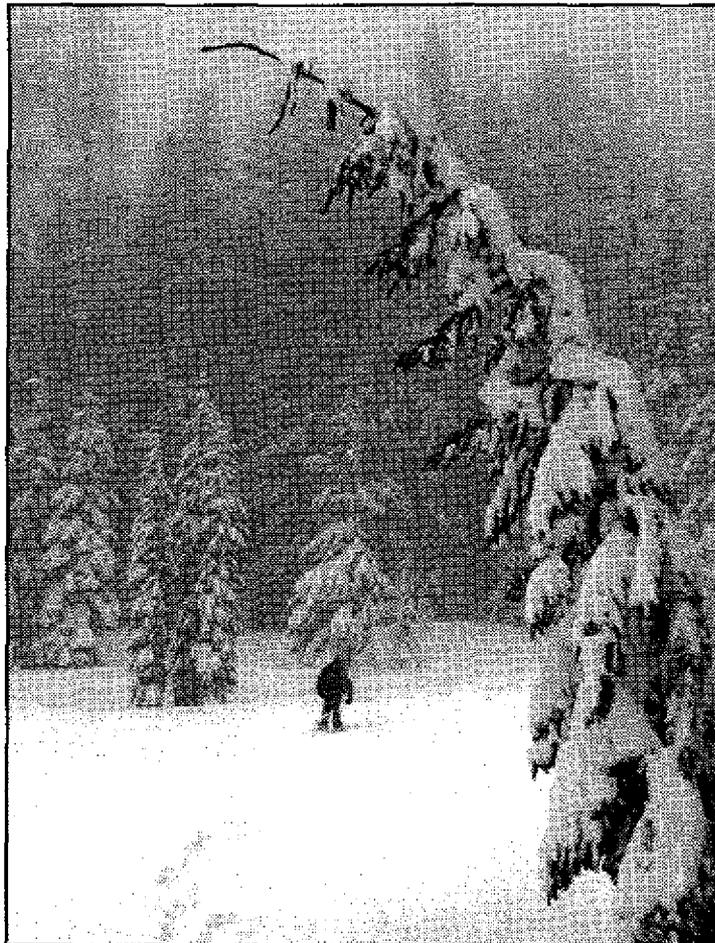
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² Pyne believes fires in the wildlands are natural and beneficial (though dangerous). And, although the fire suppression theory of fire management is losing out to theories of management proposed by scientists and advocates like Pyne and Strohmaier, the problems of wildland fire management are still growing.

³ In his new book, *Sprawl*, Robert Bruegmann tells us that the word 'suburbium' was what Roman citizens called what lay beyond their city's walls. Suburbs (or development that takes place between what is urban and what is rural) have been around for at least as long as the origin of the word. (2005, 23) Bruegmann claims that suburbia, even in the form it has taken in the United States, is not a new historical phenomenon. He makes a distinction between traditional suburban development (which he finds necessary) and newer exurban sprawl (which he finds problematic). I define the suburb to include both the traditional and newer forms. His distinction between the two is not important to this paper because both forms of development pose the same environmental problems. Also, the term 'exurbia' is new, although it is basically a specific type of suburban sprawl. Therefore I will take Bruegmann's comments on suburbia and exurbia as one and the same.

⁴ Personal interview, November 2005.



"Wilderness" by Rebecca Briggs

IMAGE OVER IDEALS

THE DOWNFALL OF NATURAL FOOD STORES

Rachel Pratter

Editors' Note: Rachel Pratter is a senior Sociology student. She wrote this opinion essay for doctoral student Sarah Jaquette's Writing 122 class in Spring 2005. Since then, the possibility that Whole Foods will enter the Eugene market has sparked local debate about potential "environmental changes," making this essay particularly timely.

Whole Foods Market is the largest natural food grocery chain in the United States, with over 169 stores in North America and the United Kingdom. It offers a variety of products from gourmet chocolate to dog food, and services ranging from cafés and smoothie bars to massage therapy. The company was founded in 1980 in Austin, Texas and since then the natural food market has exploded. In 1990, the industry produced sales of about \$1 billion, and today sales exceed \$10 billion per year (pccnaturalmarkets.com). Whole Foods is just one of the many major chain supermarkets to take advantage of the success of the organic and natural food movement. Undeniably, major natural food stores have had a positive effect on general public knowledge of organic alternatives. Yet at the same time, Whole Foods in particular commodifies "health" in ways that contradict its original spirit.

The natural food movement intended to accommodate three aims: 1) foods would be obtained through safe, environmentally sound farming methods; 2) local producers and distributors would be supported; and 3) workers' rights and fair company policies would be valued and protected. The ultimate goal of the organic/natural food movement was to promote and provide options for sustainable living; however, these chain stores are capitalizing on the trend and detracting from their original ideals.

There are two main categories of people who participate in the natural food movement, in my assessment. The first are "idealists," who believe in "organic" as a lifestyle. Often liberal students and leftover radicals from the 1960s, these progressive shoppers have been the moral leaders of the movement. The other consumer group supports the concept of living healthily, yet was most likely first attracted to these products because they have become stylish. Chain health food stores, such as Whole Foods, specifically target these shoppers.

To encourage consumers to buy into the "healthy" image, major natural food stores strategically design their facilities to seem natural and fresh. Color schemes are earthy, with

greens and mild browns, and appliances and architectural structures are sleek steel and furnished wood, unlike the linoleum and plaster of most mainstream supermarkets. Lighting is warm and soothing, rather than bright and florescent. This style portrays the look of "modern nature"—classy yet comfortable. Consumers feel they're getting a different, more modern experience, which is a successful marketing tool. Additionally, these stores are often located in upscale parts of downtown city districts or wealthy suburban centers. This geographic placement is designed to attract higher economic classes.

Many people feel better shopping at natural food stores because it seems they are supporting a good cause. Of course, creating health awareness and providing information about organic foods is important. However, Whole Foods is corporatizing the movement, and much is hidden from their patrons. Those who suffer most from the popularization of organic foods and major natural food stores are the utopian idealists who opened local shops and co-ops to make a difference in their communities. The fundamental principles of both big chain natural food stores and the small shops are similar: to provide a healthier and globally-conscious alternative to mainstream groceries. However, it is becoming a very profitable market. Carylene Reed, executive director of the National Natural Foods Association said, "The economic trend is that larger corporations are getting into the health food industry and they're beginning to see the dollar signs" (www.flagpole.com). It has become easy to ignore the 1960s idealism that sprouted this kind of establishment, and social and environmental improvements have become secondary goals to big business leaders. The health food chains are monopolizing the market and forcing small shops to compete against giants.

Chain health food stores have many benefits over smaller stores. A major benefit is cost. Organic foods cost on average about 30% more than non-organic foods (www.dailyrepublic.com). Major natural food stores circulate such a high volume of goods that they are able to purchase greater quantities of items at lower prices. More affordability offers more availability, and consequently more people are adopting an organic way of life. That the healthy food movement is thus spreading is certainly a benefit to the economic success of chain natural food stores. However, stores such as Whole Foods often wipe out local food shops by moving in, charging less for organic products and providing

more options. Furthermore, because corporate natural food stores demand such a high volume from growers, often small-scale and local farms are not able to produce enough. Eventually the stores must turn them down for the major farms, which are able to keep up with mass orders. Therefore, the emphasis on local resources is ignored.

Additionally, chain stores carry products that qualify as natural foods, yet may not be produced through entirely earth-friendly production methods. The National Grocers Association, a not-for-profit representing independent grocers, offers the following definition of "natural food" that highlights the tension between false labels and the natural foods movement:

A broad definition of natural foods ... is that they support a healthy lifestyle, offer high nutritional value, promote long-term good health, and are free of artificial ingredients and preservatives ... But production can cover a wide range of farming methods ... Organic crops, on the other hand, are grown without the use of any synthetic pesticides, herbicides, insecticides, fumigants, fungicides, fertilizers, or other synthetic materials ... The term "organic" is regulated by the USDA's organic rules ... The use of the term "natural" is not regulated. (www.nationalgrocers.org)

As a result, people often believe they are purchasing healthy or environmentally safe groceries because they get them at "health food stores," when really they're finding mainstream supermarket products with fancier labels in recycled containers. This does not support the natural food movement's aim; it merely capitalizes on the movement's popularity without helping it realize its ideals.

Moreover, many of the big labels in natural food are subdivisions of major corporations. This affords them greater power to lobby for altered organic standards to better serve their companies. In addition, many natural or even organic food companies focus only on regulatory policies for how the foods are produced, not what practices are used to obtain them. For example, some major national organic produce companies still mistreat employees (usually migrant laborers) with long hours, poor conditions and low pay.

The benefits of small co-ops and natural foods markets are significant and admirable. The most crucial benefit is that small co-ops can observe more environmentally and socially sound practices. Basic energy consumption is reduced because small stores require fewer products to be shipped from major distributors. In addition, small stores are more attentive to recycling and waste reduction. Although Whole Foods "maintains recycling programs in its stores and uses

non-toxic products for cleaning and maintenance," it has "no corporate-wide systems in place for measuring the success of these programs or for pushing for improvements" (www.portfolio21.com). There is no consistent system to maintain and regulate programs in the individual stores, which means that the stores aren't necessarily pressured to follow or fix them.

Despite the surge in big stores, independent and locally owned natural food shops and co-ops make up over half of the 11,000 natural food outlets in the U.S. (www.abcnews.com). They are surviving, but it is becoming more and more difficult. Small business owners can stay positive by reminding themselves, their customers and their skeptics that they offer a different kind of service, each having their own merits. In theory, there may be a trickle-down-effect by which the presence of "a big fancy store will increase awareness and newly aware consumers will seek out health food stores wherever it's convenient" (www.flagpole.com).

Ultimately, the national growth of knowledge and interest in organic food as a result of the trend in health food stores is a positive one. Big chain stores have influenced mainstream supermarkets and convenience stores to incorporate more natural items in their product line. However, influence and dominance are very different. The organic movement is about thinking and consuming with a global perspective, not a financial or personal interest. Consumers have to recognize this difference and push for the quality, commitment and idealism of the original health food store pioneers.

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Cultivating a Sense of Place: Voices of the Willamette Valley

THE ENVIRONMENTAL LEADERSHIP PROGRAM'S FIRST ENVIRONMENTAL HISTORIES PROJECT

Have you ever wondered what the Willamette River looked like to the Kalapuya people in the 1800s? To the first travelers on the Oregon Trail? Or even to your grandparents? Do you have a favorite memory centered on the Willamette River? It seems that most people do.

The river has always been a central element in the lives of Eugene's inhabitants. It remains an integral part of how the region has developed economically, socially, culturally, and politically. The Environmental Histories Project (EHP), conducted Winter 2006, consisted of a group of undergraduate students interested in what determines stewardship and awareness of landscape. The students' goal in this project was to unearth oral histories surrounding the Willamette River in order to build an educational tool that represents the people of the community.

The river and the surrounding valley have transformed over time, both in terms of ecology and as perceived by the valley's residents. The following EHP stories investigate people's diverse connections to their local environment. They have been made available to the public, and through this collaborative effort the EHP group hopes to highlight Eugene's unique environmental and cultural community.

Six students — Katie Morrison, Eleanor Gordon, Sara MacPhee, Andrew Neary, Darren Watkins, and Jessica Thompson — were involved in the Environmental Histories Project. Each student interviewed Eugene residents to discover their stories about the Willamette River's ecology and history. From these interviews they crafted audio pieces and a two-week installation, for which they placed flags with phone numbers at locations along the river. Participants could then dial the numbers to hear the audio pieces in the exact spots where the stories took place. Their website can be accessed at: <http://darkwing.uoregon.edu/~ecostudy/elp/ehistory/index.html>.

Kalapuya Story

Jessica Thompson

I looked at the Willamette River in a historical and cultural context, exploring perspectives of the Native American people who originated in the region – the Kalapuya. I met with a Kalapuya descendant, a woman who over the decades has participated in efforts to protect ancestral remains. Over the last century, these remains have been obtained and catalogued by various archeologists and institutes, and their removal from the Earth is felt deeply within the Kalapuya community. The presence of these ancestral remains continues to be a fundamental part of a connection to the Willamette River and surrounding valley. Additionally, the water from the Willamette River holds great bodily and spiritual importance. This project contributed essential ways of thinking about and viewing place as a distinct fluid entity; the Willamette River cannot be separated from its neighboring landscape, or even the people within that landscape.

Growing a Garden of Access, Opportunity and Healing: The Voices of Eugene's Community Gardens

Eleanor Gordon

I focused my research on three community gardens along the Willamette River. Through personal interviews and background research, I recorded the voices of various groups in the Eugene/Springfield area that are given access to land through the community garden projects, including political refugees from Central and South America, other members of the Hispanic/Latino population, at-risk youth, the elderly, and differently-abled individuals. I worked with community gardens and nonprofit groups such as Skinner City Farm, Whiteaker community garden, Alton Baker Park community garden, Huerto de la Familia, Siempre Amigos, and Healing Harvest.

I interviewed two recent immigrants, one from Guatemala and one from El Salvador, both of whom have been working at Skinner City Farm garden. I also interviewed leaders of the three garden projects. Skinner City Farm, for example, took shape as a combination of a community garden, youth education program, and a demonstration site for sustainable agriculture and historical agricultural practices. Unlike other community gardens in Eugene, the farm has organizational plots, meaning they are partnered with other nonprofits that

rent out the same space every year. Huerto de la Familia, for example, works a plot at Skinner City Farm.

The Skinner City Farm, Alton Baker Park, and Whiteaker sites have created places for people in the Eugene area who do not have agency or access in this community to come together in a positive way. These garden spaces represent a shift in our approach to the banks of the Willamette. By looking at what can be utilized for the soil health and aesthetic appeal, as well as social contact and the building of long-lasting friendships and partnerships, the values of conventional economics and development are pushed out of the equation. Community gardens go beyond the simple role of providing healthy food. They are in a very real sense “beyond the organic industry,” in which consumerism, wage labor, conglomeration, and problems of capitalism still tend to confine access to the healthiest food, water, and environments only to those with economic and institutional privilege. As a community, we can change this system by starting with the basics—learning to help each other to grow our own organic food.

Many of these interviewees referred to the garden programs as therapy. The idea that there is something healing about making something grow is not new, but it is often forgotten even by those who ascribe to sustainability. Using the garden program as therapy is a way to connect people firmly to this place and thereby spread care and growth outward to influence other positive endeavors in the community. The diverse stories and amazing projects reflect the power that a combination of social justice and environmental activism can have on a community. These testimonies showed me that there is an important overlap between the movements for sustainability, local food security, and providing access to resources for marginalized members of the community.

A Boat Ride

Katie Morrison

Many people who feel strongly connected to places, past and present, have lived, worked, and played with the people and landscapes of those places. Recreation on and around the Willamette River can help the community establish an awareness of the importance of the river to this area.

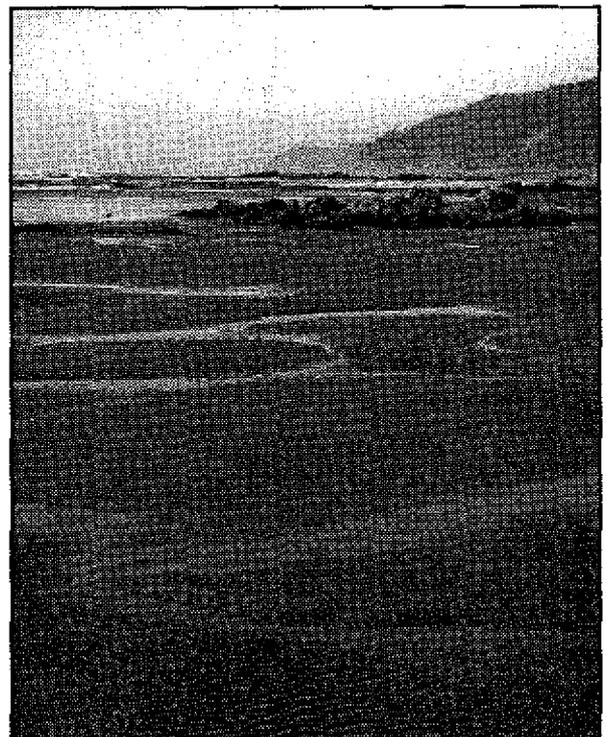
Fred Wilbur enjoys rivers and has lived near them and recreated on them since he was a kid. In the summer of 1959 he and a friend's two teen-age boys floated down the Willamette River in a motor boat Fred had built. The journey began at Corvallis and ended up at Champog Park, more than 60 miles

downstream. Fred recalled that pollution on was visibly present during the trip. Viewing human development and waste on the river turned Fred into advocate for efforts to clean up the river. Fred also experienced a sense of calm and peacefulness during his time on the river. Using the river as a means of transportation sets a slower pace and provides a unique perspective different from traditional everyday life.

A Bridge Story

Sara MacPhee

I met with a local cello player who shared his story about his strong connection to the Greenway Bridge that spans the Willamette River. Inspiration struck him when he chose this place for an impromptu concert on a sunny afternoon, not only due to its panoramic beauty, but also because the timelessness of the river and the intimacy of the narrow bridge managed to convey the spirit of Bach's Cello Suites as he felt them in his heart. This musician said that he carries this place with him always, and that he draws on this memory to give power to his performances when his surroundings are less idyllic. This revelation led me to a deeper understanding of the profound impact of place in cultivating identity, both cultural and individual. We've all heard the old adage: you are what you eat. Well this project taught me that we are where we've been.



“Coast Lines” by Rebecca Briggs

Recent Graduate Update

ANTHONY LEISEROWITZ



Tony Leiserowitz completed his Ph.D. in Environmental Studies at the University of Oregon in 2003. The first doctoral student to graduate from the program, he currently works as a research scientist at Decision Research, a non-profit research institute. He also continues to be affiliated with the university as a

courtesy professor of Environmental Studies.

Tony's research focuses on the role of socio-cultural, psychological, and geographic factors in environmental risk perception, decision-making, and behavior. His projects integrate multiple methodologies, including surveys, laboratory experiments, media content analyses, ethnographic interviews, and participatory group processes, ranging from the local to global scales.

For his dissertation, Tony conducted a national survey to investigate how Americans perceive and respond to global climate change. He found that although Americans were broadly concerned about climate change, they primarily associated it with impacts distant in time (e.g., a century from now) and space (e.g., the Arctic). Americans strongly supported national and international mitigation policies across political party lines, yet strongly opposed higher energy or gasoline taxes to reduce greenhouse gas emissions. His study also demonstrated that cognitive, emotional, and cultural factors strongly influence these responses. Tony's dissertation work has been turned into numerous articles and book chapters, and he has been invited to present his findings at universities and conferences all over the country.

Since graduating, Tony has continued to study public responses to and understandings of global climate change. Extending his previous findings that demonstrated the powerful influence of emotional and affective responses to risk perceptions, Tony implemented three national surveys to assess the public impact of the film *The Day After Tomorrow*—a disaster movie depicting an abrupt and catastrophic climate change—on American risk perceptions and behaviors. He found that moviegoers had significantly higher risk perceptions than non-watchers for a range of potential impacts, and were much more likely to engage in a variety of personal, political, and social actions to address climate change.

Tony's current climate change research focuses on how risk perceptions are influenced by the actual experience of climate change. Given that Americans generally perceive

climate change as a geographically and temporally distant problem, Tony has been investigating the risk perceptions and behaviors of citizens and communities in Alaska, where climate change is already having severe impacts (e.g., dramatic loss of sea ice, shifting ecosystems, permafrost melting, infrastructure damage, forest fires, and unprecedented increases in forest disturbances, including insect attacks). Tony spent this past summer conducting interviews across the state with key stakeholders who represent diverse perspectives.

Two additional components of this Alaska project are a statewide survey of the Alaskan public, which is currently underway, and the organization of a regional climate summit for the Northwest Arctic Borough, a primarily Inuit region above the Arctic Circle experiencing significant impacts. The summit will invite representatives of local, state, and federal governments, indigenous and environmental groups, and key industries to identify key concerns, values, and objectives and begin development of a local climate change adaptation plan.

In addition to his work on global climate change, Tony is also currently engaged in two other interdisciplinary projects. One focuses on the role of human values, attitudes, and behaviors in sustainable development. The other is the development of a new, empirically-grounded theoretical construct called "interpretive communities of risk."

For his future research, Tony plans to develop further the *aforementioned lines of inquiry*, as well as continue research on responses to global climate change at the local, state, and global levels. He recently submitted a grant proposal to National Science Foundation to conduct a study in Florida to investigate how the experience of gradual warming trends and extreme events such as hurricanes influence public perceptions of climate change. In addition, he is currently developing a proposal to conduct a representative, multinational survey of climate change risk perception, policy preferences, and behavior among major developed and developing countries.

Tony also enjoys teaching and working with university students. University of Oregon Environmental Studies graduate and undergraduate students have worked on and are currently assisting with several of his projects. He lives in Springfield with his wife and his three-year-old son, and when not distracted by the warming planet, is an avid photographer. You can check out his webpage, which includes his photo gallery, at <http://darkwing.uoregon.edu/~ecotone/>.

New Staff Member

KATHRYN LYNCH



Environmental Studies welcomes Dr. Kathryn (Katie) Lynch. Katie joined the faculty in fall 2005 as co-coordinator of the Environmental Leadership Program (ELP) (formerly Service Learning Program) and is also one of the Program's new undergraduate advisors. Katie's academic, community organizing, and teaching background makes her an

ideal fit for the Environmental Studies Program, which seeks to encourage academic research across disciplines and to promote academic-community exchange. Katie's research, teaching, and professional work have been built on the foundation that sound natural resource management requires an understanding of both cultural and ecological systems, and an ability to think holistically to discern how these systems interact. She has a strong commitment to participatory, collaborative, and interdisciplinary approaches in both her teaching and research.

Before joining the university, Katie was a research partner with the Institute for Culture and Ecology, a nonprofit research and education organization based in Portland. There she oversaw the development of the Participatory Learning Program and conducted numerous research studies, including a national study examining the relationships between forest policy and management, conservation of biodiversity, and non-timber forest products.

Prior to that, Katie earned her B.S. in Environmental Policy Analysis and Planning at the University of California-Davis. While studying tropical biology and ecology in Costa Rica, she fell in love with tropical cloud forests and became an ardent advocate for rainforest conservation. In graduate school, she earned an M.A. in Latin American Studies and a Ph.D. in Anthropology from the University of Florida. As a Fellow of the Tropical Conservation and Development Program, she researched the potential of medicinal plants to promote conservation and development. This study focused on the interconnections between gender, healing, and conservation in the northern Peruvian Amazon. She has also worked on conservation issues in Ecuador and Indonesia.

In addition to her research, she has developed and facilitated various workshops, seminars, and academic courses

in the United States and in Latin America. These include university courses on community-based natural resource management, gender analysis and participatory research methods, and ecological feminism.

Along with the opportunity to work closely with undergraduates through advising, Katie is excited about the collaborative opportunities with undergraduates, graduate teaching fellows, and the community associated with expanding the Environmental Leadership Program. She hit the ground running, facilitating her first ELP projects in the winter 2006 term. The first was the Environmental History Project, in which students researched a variety of histories related to the Willamette River. The project culminated in a public installation of signs along the river's bike paths, which signaled passersby to use their cell phones or ipods to hear the stories. The second project, called Non-Timber Forest Products, is a two-term project documenting how biodiversity is being tapped to promote both conservation and rural economic development in the Pacific Northwest. You can read more about these projects in this edition of *The Ecotone* and on the ELP website at <http://darkwing.uoregon.edu/~ecostudy/elp/>.

Katie is now focusing her energies on getting support for a new Environmental Education Initiative, which she hopes will address the growing need for environmental studies graduates to be trained as environmental educators. In winter 2007, she will teach a new Environmental Education course designed to provide Environmental Studies/Sciences students the skills to translate their knowledge of the sciences into engaging environmental education. In the spring these students will then have the opportunity to work with a variety of community partners in the field, delivering environmental education programs in marine, wetland, stream, or forest ecology. There is also the possibility of an overseas service-learning opportunity in Peru next summer.

Katie received a summer grant to work on a book that will explore the relationships between biodiversity conservation, forest management practices, and cultural gathering traditions in the United States. The focus will be contemporary harvesters, who are often economically and politically marginalized, and environmental and social justice issues surrounding forest management. This work will draw from ethnographic research she conducted in 2002-2003 while working at the Institute for Culture and Ecology.

The Environmental Studies Program looks forward to the continuing scholarly, pedagogical, and activist dynamism Katie adds to the community, and to supporting Katie as she proceeds with these important projects.

Graduating Class of 2006

THESES, PROJECTS, AND RESEARCH INTERESTS

Jason Carriere

Concentration Areas: Natural Science-Based, Social Science-Based, and Policy-Based Approaches to Environmental Issues

Research Interests: My thesis is entitled "Risk Assessment: Where Science, Politics, and People Collide." Is risk assessment science? Is toxicology politics? Are we the public as polluting as industry? The answers to these questions are more debatable than ever in today's political and scientific environment. My thesis will take a multidisciplinary approach to examining risk assessment as an example of "science-based" or "evidence-based" policy making. The Environmental Protection Agency's 2003 decision not to regulate dioxins and PCBs in sewage sludge, or "biosolids," will serve as a case study of current rationale and decision-making at the EPA, and how they incorporate risk assessments and other scientific information into their decisions. The analysis will draw from the disciplines of Environmental Sociology, Political Ecology, Toxicology, and Biology. The thesis includes a critical analysis of the scientific methods used in risk assessment and in the production of knowledge used for risk assessment, looking at the quality of assessments from a scientific perspective. Institutional factors that influence the production of scientific knowledge, such as the impact of funding sources, competition for funding, peer review, publication biases, and a host of other more "socially constructed" factors in science are also discussed. Finally, risk assessment is discussed in terms of environmental justice. Due to the highly technical and verbose nature of most assessments, they tend to create an elite class of informed decision makers and an underclass of people affected by those decisions but with no power to participate. Steps that could be taken to democratize environmental decision-making are discussed, and possible solutions to the "problem of biosolids" will also be explored.

Jennifer Garmon

Concentration Areas: Landscape Ecology; Conservation Planning; Nonprofit Management.

Research Interests: My thesis research involves adapting and applying a framework for using alternative futures analysis to craft restoration strategies for Oregon white oak savanna in the Willamette Valley. Once widespread, oak savanna is

now one of the most endangered ecosystems in the United States. While oak communities have been identified as conservation priorities, those working to restore oak savanna face significant challenges.

Conifer invasion of oak savanna resulting from fire exclusion has been identified as a major factor in its decline, in addition to encroaching development, agriculture and invasive exotic species. In addition, competing interests and values complicate oak savanna restoration efforts. Restoring Oregon white oak savanna will require immediate implementation of innovative and effective strategies.

Despite this urgency, these challenges have not been explored systematically. Alternative futures analysis emerges as a promising approach to guide these restoration decisions in two respects: by forecasting the on-the-ground effects of implementing different restoration options, and by incorporating ecological knowledge about landscapes into decision-making processes. This research project will adapt and apply a framework for using alternative futures analysis to guide restoration decisions for oak savanna in the southern Willamette Valley. Specifically, this research will involve stakeholders to develop a set of alternative restoration scenarios, assess how stakeholders prioritized these scenarios, and evaluate how the scenarios address the challenges facing oak savanna restoration in the Willamette Valley.

Beobjeong Kim

Concentration Areas: Environmental Economics; Public Policy; Environmentally-friendly Land Use.

Research Interests: I'm interested in application of environmental economics in public policy areas. In particular I'm interested in emissions trading schemes as an alternative tool to traditional regulations, to address environmental concerns cost-efficiently.

Sarah Mazze

Concentration areas: Educating for Sustainability; Environmental Writing; Nonprofit Management.

Research Interests: Most outdoor education programs focus on treading lightly on the land for the duration of the program and while in the wilderness, yet may not initiate discussion of

how those skills transfer to students' daily lives. Based on the information gathered from a series of interviews with National Outdoor Leadership School alumni and students, in my thesis I examine how the local example of minimum impact can inform living a less resource consumptive lifestyle on a more global scale. The question becomes: does the environment end at the wilderness boundaries for students, or to what extent are they able to carry home and expand their knowledge of living lightly? This study focuses on a little-explored realm of environmental education, as much of the adventure education research focuses solely on participant self-concept or uses a qualitative methodology to look at course effects on participant environmental ethics.

Sarah is pursuing a joint degree in magazine writing.

Courses taught: 411 Comparative Approaches to Sustainability.

Kathryn Moore

Concentration Areas: Natural Systems; Natural Resource Policy.

Research Interests: Natural resource law and tax law.

My terminal project is entitled "Conservation Easement Stewardship: A Pilot Project for the Oregon Watershed Enhancement Board." I am pursuing a joint MS-JD with the Environmental Studies program and the School of Law and have taken advantage of the joint campus system by taking courses at the Oregon Institute of Marine Biology, Oregon State University department of Forestry, and the Hatfield Marine Science Center. I've served as one of the directors of the Public Interest Environmental Law Conference (PIELC) and am active in the law school's student environmental law organization. I've also taught courses in ecology and evolution and have worked for the Oregon Watershed Enhancement Board (OWEB) and helped develop a pilot monitoring program for their conservation easements.

Adam Novick

Concentration Areas: Principles and Methods in Conservation Policy; Conservation Policy in Law and Land Use Planning; Conceptions of Nature, Environment, and Conservation.

Research Interests: I am interested in public policy to conserve biodiversity in ecosystems that are on private land and whose survival depends on active management. I am especially

interested in the Willamette Valley's oak savanna and upland prairie, which are disappearing not only to development, but also to fire exclusion and invasive exotic species. Based on empirical evidence and research by others, I find that policies to regulate species might be exacerbating the loss of these two ecosystems in the name of saving them, by inadvertently discouraging conservation-minded landowners from trying to conserve or maintain them and encouraging their active destruction, due to the effect of regulation on the market value of land. I also find that as a society, we tend to mislead ourselves about the nature and effects of such policies, apparently so that we may tacitly sacrifice biodiversity as a weapon to fight development. If we are to save these ecosystems with constraints on public funding, I conclude we need to (1) clarify whether the primary objective of conservation policy is to conserve biodiversity or limit development, and (2) consider an alternate policy strategy of protecting the conservation market for these ecosystems, to allow citizens to use private investment in land to try to conserve or maintain them. However, I also conclude that to take such steps, we need to examine fiercely held concepts of nature and conservation and expand the concept of ecosystem to more fully recognize an ecosystem's interactions with its biophysical and social environment. Some related interests include political ecology, environmental economics, game theory, property and wildlife law, collaborative planning, communicative planning, narrative policy analysis, Leopold's land ethic, and distortion of policy debate in controversial natural resource issues.

Kirsten Rudestam

Concentration Areas: Water Resources & Sustainability; Cultural Perspectives of Place; Political Ecology.

Research Interests: I am interested in the ways in which people experience, perceive and relate to places, and how this influences environmental behaviors. My studies focus on issues of water scarcity and availability. As populations grow and impacts of global climate change manifest, water conflicts due to limited supply are proliferating, even in the rainy Northwest. Water related conflicts appear to be complicated or precipitated by the collision of regional narratives, while water itself serves as a metaphor that connects individuals, institutions, history and place. I am interested in investigating several questions: How do people perceive their local current and future water supply? How do they envision and describe the landscape and their place within it? What are the relationships between the ways in which people describe their "sense of place" and the ways in which they understand themselves?

Jason Schreiner

Concentration Areas: Social Theory; Philosophy; Political Ecology.

Research Interests: My thesis proposes to reconstruct the categories and logic of Marx's dialectical method to include the ecological dimensions of his thinking, which recent scholarship has begun to reveal. In this way, I hope to provide historical materialism with the "earthly basis" called for by Marx and Engels in the original presentation of their method. The thesis proposes that Marx uses the concept of "social metabolism" to explain human existence as a particular form of life grounded in a larger earthly life-process. With this concept, I argue, Marx articulates the "human" as the "ensemble of the social relations" of physical, biological, and conceptual processes which configure historically-specific societies of specifically "human" bodies. Understood in the

full sense in which it articulates the intricately interwoven dimensions of human existence—ecological, social, and mental—the concept of social metabolism provides historical materialism with a comprehensive framework for discerning historically-specific socio-ecological formations and ideologies of human-nature relations, and can thus serve as a powerful "earthly basis" for social critique and political ecological praxis.

My other scholarly interests include the thinking of Enrique Dussel, Deleuze and Guattari, and Whitehead, as well as agri-food studies, ecofeminist phenomenology, permaculture, the Progressive Utilization Theory, and various future studies.

Courses Taught: ENVS 411 Philosophy of Agriculture (Fall 2005); ENVS 203 Introduction to Environmental Studies: Humanities (Summer 2006).

New Staff Member

MARY ANN LARKIN

When Mary Ann Larkin isn't spending time with her three horses, dogs, and countless cats, you can find her in the Environmental Studies office, wrapping up her second year as the Environmental Studies office manager. Before moving to the area with her husband to help take care of his parents, she worked as an administrative assistant at Whitman College. She also served sixteen years at Chico State, working for the Art Department, and seven years at Humboldt State working in various offices. Mary Ann loves working on a college campus and says that at the University of Oregon she has learned a lot regarding the environment and how to articulate her views concerning environmental issues. Mary Ann looks forward to fulfilling another passion by joining the local horse show scene. In California, Mary Ann worked for the American Quarter Horse Association and attended horse shows monthly. A native of northwest Kansas, she recently returned to her childhood home after several decades of absence and loved every minute of it.



Community Achievements

The Environmental Studies Program is pleased to announce that **Alan Dickman** (Senior Instructor, Research Associate Professor, Biology) was named the new Environmental Studies Program Director. He will succeed Daniel Udovic in June 2006.

Bari Doeffinger (First-year master's student, Environmental Studies) participated in the University of Oregon Balkan Music Ensemble's concert on March 24, 2006.

Janet Fiskio (Doctoral student, ESSP and English) presented two papers: "Becoming-Rat, Becoming-Roach, Becoming-Human" at the Association for the Study of Literature and the Environment in June 2005 and "Toward an Urban and Social Ecology of Knowledge" at the International Association for Environmental Philosophy in October 2005. She will present the paper "As a Leaf from a Tree" at the Thoreau Society in July 2006. With Olivier Clarinval, Janet has a translation of Maurice Blanchot's "The Philosophical Discourse" forthcoming in *Critical Assessments of Merleau-Ponty*. Janet served on the local organizing committee for the 2005 ASLE meeting. She has been accepted into the Neotropical Ecology Program in Ecuador for July/August 2006 and expects to go to the Galapagos.

Jenna Garmon (Second-year master's student, Environmental Studies) helped to put on a series of focus group meetings as part of an oak savanna restoration and fire hazard reduction research project headed by **Bart Johnson** (Associate Professor, Landscape Architecture) and **Scott Bridgham** (Associate Professor, Biology and Environmental Studies). The purpose of the meetings was to identify the issues most relevant to oak savanna restoration and to develop a set of land management approaches that could be applied to a variety of oak savanna restoration sites across the southern Willamette Valley. Participating stakeholders represented a range of interests and areas of expertise including private and public land owners and managers, and technical experts (e.g., ecologists, fire managers).

Patrick Hurley (2005 doctoral graduate) has been hired as Assistant Professor in the Department of Political Science at the College of Charleston in South Carolina.

Sarah Jaquette (Doctoral Student, ESSP and English) presented "Eco-Politics of the 'Border Life': The Social Value of Thoreau's Natural History Writing" in November 2005 at the Pacific Ancient and Modern Languages Association Conference in Los Angeles. In March 2006, she presented "Endangering Organ Pipe?: Immigrants, Nature, and Security along the US-Arizona Border" at the Association of American Geographers conference in Chicago. She published a booknote in *Environment* magazine of *Literature and the Environment*, an anthology edited by Scott Slovic and George Hart. She served on the Graduate Committee to help organize the Association for the Study of Literature and the Environment 2005 conference in Eugene last summer. Sarah also published a book review of *Sowing Empire: Landscape and Colonization* in the March 2006 edition of *Capitalism, Nature, Socialism*.

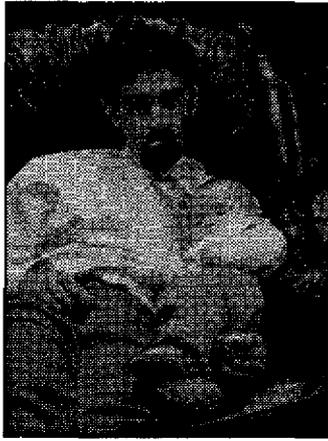
Chris Jones (Continuing master's student, Environmental Studies) currently serves as the president of the board of directors of the Friends of Buford Park and Mt. Pisgah, a Eugene-based non-profit.

Kathryn Lynch (Undergraduate Co-Advisor and ELP Co-Coordinator) received a Summer Research Award to work on her book over the summer.

Chaone Mallory (Doctoral student, ESSP and Philosophy) accepted a tenure-track position as Assistant Professor in the Philosophy Department at Villanova University. She also published an article entitled "Ecofeminism and Forest Defense in Cascadia: Gender, Theory, and Radical Activism" in the March 2006 edition of *Capitalism, Nature, and Socialism*. In October, she and her partner Stephen welcomed a new baby boy, Zephyr, who joins sister Rohanna and brother Solstice.

Galen Martin (Adjunct Professor, Environmental Studies) has a chapter published in a new book: "Conservation and Recreation Planning on the Caribbean Coast: Cahuita, Costa Rica," in *Environmental Planning in the Caribbean*, J. Pugh and J. Momen, eds. (2005) Burlington VT: Ashgate Publishing. Galen has also been appointed as a member of the Lane County Food Policy Council.

Sarah Mazze (Continuing master's student, Environmental Studies and Journalism) has been working as the Climate Leadership Initiative's program assistant since February.



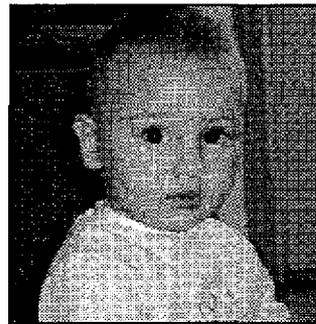
Steve Mital (2001 graduate, Environmental Studies, and Undergraduate Co-Advisor and ELP Co-Coordinator) and **Amy Chinitz** (2003 graduate, Environmental Studies) have a new baby. Jason Chinitz-Mital arrived on April 17, 2005. So far Jason likes bubbles, disco music, and the Philadelphia Eagles despite their disappointing 2005-06 season.

Adam Novick (Second-year master's student, Environmental Studies), with help from **Matthew Peterson** (First-year concurrent master's student, Environmental Studies and Community and Regional Planning), organized and participated in a discussion panel on "Conserving Biodiversity on Private Lands: Finding Common Ground" for the 2006 Public Interest Environmental Law Conference. Panelists included Jonathan Soll, Willamette Basin Conservation Director for The Nature Conservancy; Scott Black, Executive Director of the Xerces Society for Invertebrate Conservation; and urban developer and rural landowner Mia Nelson. Matt introduced and moderated the discussion. Under the theme of "Making ethics visible," the Second Midwest Environmental Ethics Conference accepted a presentation proposal from Adam, titled "I can see it now: using supply curves to synthesize conflicting interpretations of Leopold's land ethic." The journal *Environment* published Adam's review of "Correction Lines: Essays on Land, Leopold, and Conservation," by Leopold biographer and conservation biologist Curt Meine. Responding to public comment that Adam submitted to the Oregon Board of Forestry in conjunction with its annual strategic planning, the Board has instructed the Oregon Department of Forestry to explore policy alternatives for conserving the Willamette Valley's oak savanna, in its work for 2006-2007. Adam is spending spring term working to maintain oak savanna on private land with cost-share support from a grant awarded him by the US Fish and Wildlife Service under the Landowner Incentive Program and administered by the Oregon Department of Fish and Wildlife. Also with cost-share support from the grant, Adam has been advocating for development of a programmatic safe harbor agreement for oak savanna, to address inadvertent regulatory disincentives for conserving or maintaining it.

Stacy Rosenberg (2005 doctoral graduate) completed her doctoral degree in Summer 2005.

Kirsten Rudestam (Second-year master's student, Environmental Studies) presented a paper at the Interdisciplinary Conference held at Brown University in April 2006.

During the past year, **Ted Toadvine** (Assistant Professor, Philosophy and Environmental Studies) published articles in *Environmental Ethics*, *Environmental Philosophy*, and *Chiasmi International*, and his essay "Naturalizing Phenomenology" was reprinted in a popular environmental philosophy textbook. Ted presented papers at four national and international conferences — the 55th International Phenomenology Congress (the Netherlands), the International Association for Environmental Philosophy, the Association for the Study of Literature and the Environment, and the Society for Phenomenology and Existential Philosophy. He was also an invited speaker at a conference on Environmental Ethics sponsored by the Center for Applied Ethics, California State University at Long Beach. Ted co-directed the 30th International Conference of the Merleau-Ponty Circle, held at the University of Oregon in September and October, and was elected to the post of Secretary for the International Association for Environmental Philosophy. He completed three edited works that are currently in press: *Nature's Edge: Boundaries in Environmental Thought* (SUNY Press), *The Merleau-Ponty Reader* (Northwestern), and *Merleau-Ponty: Critical Assessments of Leading Philosophers* (Routledge).



Shangrila Joshi Wynn (Doctoral Student, ESSP and Geography) and her husband James welcomed their first child, Addison, on September 3, 2005. He is the apple of Shangrila's eye.

The **Environmental Studies Club** held its inaugural meeting on January 13, 2006. The club is open to Environmental Studies and Environmental Science majors, minors, graduate students, and faculty (and anyone interested in environmental issues). Current and future activities include outdoor adventures, films and food events, a t-shirt design contest, an environmental essay and photo contest, volunteer workdays, campus outreach and education projects, and ecological conversations. With over 40 people participating in the first meeting, the club has generated a lot of enthusiasm. The club meets on the first Wednesday of each month for a potluck dinner and on the second Thursday for a meeting to plan activities.

The **first-year Environmental Studies graduate students** participated in a mini-conference on March 13 and 15, 2006. Presentations included:

- o **Rebecca Briggs** (Master's student): "Community-level decision making and statewide planning goals: The tensions within Oregon's land use laws"
- o **Bari Doeffinger** (Master's student): "Renewing ecological identities through classical music"
- o **Diana Fischetti** (Concurrent Master's student, Environmental Studies and Geography): "Voluntary simplicity: Social movement for collective change or individual lifestyle choice?"
- o **Meghan McNeil** (Master's student): "The environmental constraints on succession in oak savanna in the Willamette Valley, Oregon"
- o **Matthew Peterson** (Concurrent Master's student, Environmental Studies and Community and Regional Planning): "Conservation incentives for private landowners in the Southern Willamette Valley"
- o **Rebecca Silver** (Master's student): "A moral economy under pressure: Fair Trade coffee's social and environmental impacts in El Salvador"
- o **Joshua Skov** (Doctoral student, Environmental Studies and Economics): "Whose natural capital? Allocation of ecosystem value in water quality trading"

The **Environmental Leadership Program** is working on a number of projects for the 2005-06 academic year:

- o In the on-going Restoration Stewardship Project, students are working with local watershed councils and private landowners to survey, monitor and assess several restoration projects in the Willamette Valley. They are collecting a wide variety of data in the field to help watershed councils determine the success of restoration techniques and efforts. New this year, they will be working with Deschutes Basin Land Trust to help establish baseline data for restoration efforts in eastern Oregon.
- o The Environmental Histories Project explores how our historical understandings of place influence the ways in which we see ourselves and act within the world. Students are learning ethnographic research methods and how to use audio and digital video recording to develop professional-quality radio stories and/or video documentaries that highlight local stories and environmental narratives that enhance our communities' understanding of their unique natural and social environments.
- o The WorkSMART Team is helping local businesses monitor their electricity consumption and determine ways to conserve energy. During the spring term, the team is conducting in-depth energy assessments for middle schools in the 4J and Bethel School Districts.

- o The Non-Timber Forest Products Team is examining people/plant relationships and how biodiversity is being tapped to promote both conservation and rural economic development. Forests have always been places for humans to harvest foods, medicines, and materials for clothing, shelter, spirituality, and decoration. Today, even in post-industrial countries such as the U.S., people from diverse cultural, ethnic and economic backgrounds continue to gather plants for a broad range of reasons. Yet these people and the biodiversity they rely upon have been marginalized in modern forestry. This project is giving students an opportunity to develop social science research skills and contribute to the discussion regarding sustainable forest management and social justice.
- o Students are also working on the Western Turtle Habitat Evaluation Project with BLM wildlife biologists to map western pond turtle habitat conditions in several sites throughout the southern Willamette Valley. The data will be entered into a master BLM database and used to prioritize future turtle habitat restoration work.

Steve Mital took three undergraduate students — **Stephanie Erickson, Jenny Bedell-Stiles, and Jesse Jenkins** — to the regional campus sustainability conference in Chico March 6-7, 2006. The conference was titled: "Towards Sustainability: Western Regional Conference and Expo." Stephanie presented her work as an Associated Students of the University of Oregon Senator in creating the new Energy Conservation and Alternative Futures Fund (ECAFF), and Jesse and Jenny presented their work to convince the dorms to buy wind power.



Steve Mital and ENVS Grads at Energy Conservation and Alternative Futures Fund workshop project proposals

New Graduate Students

Rebecca Briggs, Master's

Concentration areas: Environmental Planning and Management; Geography.



I am interested in approaches to land use planning and management in the United States. I'm specifically interested in how to balance conservation and sustainable communities. Related areas of interest include conceptions of nature and landscape, rhetoric, legal mechanisms for conservation, community-based and regional planning, and evaluation of policy effectiveness.

Bari Doeffinger, Master's



Concentration areas: Geography; Environmental Education / Communication.

I am studying the formation of popular culture and ecological identities in hopes of engaging non-scientific, non-outdoorsy people in nature and environmental issues.

Diana Fischetti, Concurrent Master's

Concentration areas: Global Political Economics; Environment and Development.



Dual degree: Geography and Environmental Studies.

My interests, broadly, include consumption patterns in industrialized nations, particularly the social, and cultural impacts. More specifically, I am interested in attitudes about consumption and the creation of space for simple living through voluntary simplicity and home power. I am also

curious to understand the factors beyond attitudes about consumption that spur the creation of space for more simple living (i.e. religious convictions, economic motivations, social networks). I would like to determine whether the status of voluntary simplicity is a social movement for collective change, versus a dispersed, individual lifestyle choice. And I would like to understand the ways in which voluntary simplicity links to (i.e. reacts to or impacts) broader-scale dynamics and processes/structures.

Meghan McNeil, Master's

Concentration areas: Ecology; Environmental Policy.



I am interested in ecology, restoration, and environmental policy. I am currently working on a project examining the environmental constraints on succession in oak

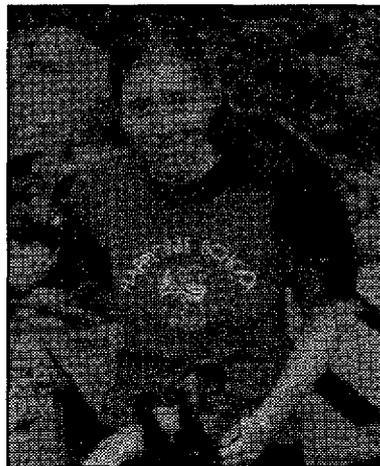
savanna in the Willamette Valley. Primarily I am looking at soil characteristics and how these affect successional patterns in a former oak savanna after 150 years of fire suppression.

Christine Oriol, Master's



Interests: National Parks; Mountainous Areas.

Christine is an exchange student from France.



Rebecca Silver, Master's

Concentration areas: Environment and Development in Latin America; Nonprofit Management.

Certificate: Nonprofit Management.

I am interested in the relationship between environmental and development issues in Latin America, especially the ways in which local, national and global-level political, social and economic factors shape environments and human well-being. I am currently looking at these ideas in the context of the free trade/fair trade debate as it is playing out in relation to the production of coffee in El Salvador.

Joshua Skov, Doctoral

Environmental Sciences, Studies, and Policy (ESSP).

Focal Department: Economics.



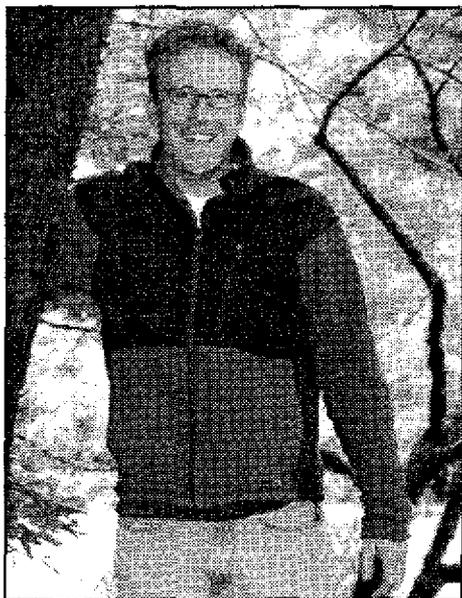
Research interests: market-based mechanisms and trading systems for environmental compliance, conservation and restoration; the commons; definitions and valuation of natural capital ecosystem services.

Josh is a co-founder and principal of Good Company, a sustainability research and consulting firm. For his professional bio, visit Good Company on the web (www.goodcompany.com). Before joining ESSP, Josh taught courses on sustainable development and sustainable business in the Department of Planning, Public Policy and Management.

Courses taught: ENVS 411 The Economic Value of Ecological Systems and Services (Fall 2006).

Matthew Peterson, Concurrent Master's

Concentration areas: Conservation Biology; Conservation Planning.



Dual degree: Environmental Studies and Community and Regional Planning.

My academic interests are in conservation biology, conservation planning, and the successful implementation of natural resource and wildlife policy decisions. I am especially interested in the role

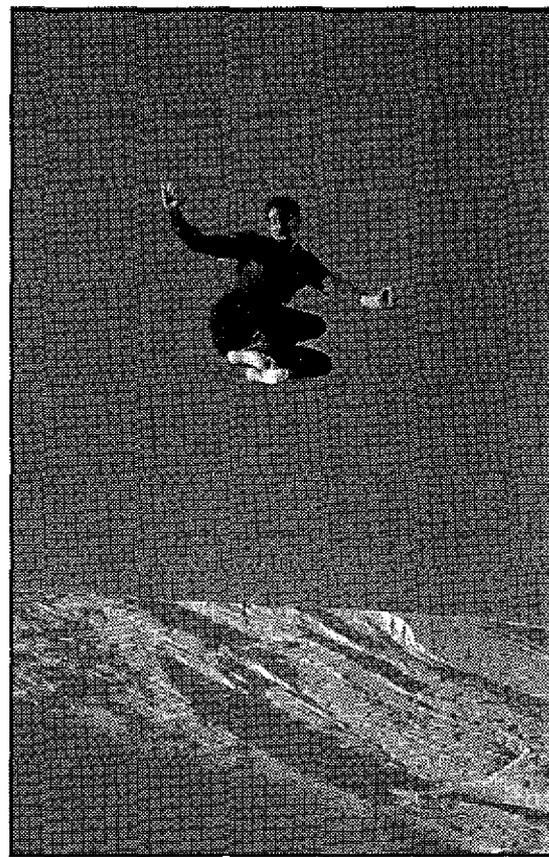
of collaboration as a means to increase public support for contentious conservation decisions.

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*Below: Environmental Studies master's students on Gold Lake snowshoe trail (Meghan McNeil, Rebecca Briggs, Rebecca Silver, Kirsten Rudestam, and Jenna Garmon).
 Right: Steve Mital at White Sands National Park.*



Attention ENVS Program Alumni!

The ENVS Program has created a database of alumni information that you will be able to update online. We hope this database will contain news from alumni about life and work since you left the program.

The Ecotone is also interested in providing a venue for keeping up with fellow Environmental Studies alumni, such as the profile of alumnus Anthony Leiserowitz on page 20. The database is the first step toward this goal. To help build this database and to facilitate future contact with you, the ENVS Program is asking alumni to send email or other contact information (if no email is available) so that you can be contacted in the future.

It will take only a few minutes to send your email or contact information to ecostudy@uoregon.edu. Please help us with this important community-building step!

Snail mail:

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5223 University of Oregon
Eugene, OR 97403-5223**



"Painted Hills" by Rebecca Briggs

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