Spring 1990

The Planet, 1990, Spring

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The Beauties and the Beasts of Bellingham

A SPECIAL REPORT
The Planet is a quarterly publication of the Associated Students Environmental Center at Western Washington University. Address comments to Viking Union, WWU, Bellingham, WA, 98225.

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SPRING, 1990

IN THIS ISSUE:

City Trees
Urban forestry brings clean air, beauty and homes for wildlife to Bellingham.
By Kim Clay.

What Goes Up
Big-city air pollution problems may soon plague our pristine region.
By Sara Olason.

Whatcom Watchdogs
Find out how you can help your neighbors protect the local environment.
By the Planet staff.

City Critters
Urban wildlife is vital to the health of our city -- but the animals need our help.
By Peter Donaldson.

Beaches
How to discover the wonderful world between the local tides.
By Thomas Noland.

German Perspective
West German visitor questions her new world -- and finds new questions for her homeland.
By Ruth Noellgen.

Heart for the Soil
Local farmers prove land stewardship makes crops flourish.
By Michael Purcell.

Turning the Tables
The Planet interviews Michael Frome.

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Front Cover: Whatcom Creek rushes toward Bellingham Bay.
Back Cover: Sailboats berth at Bellingham Bay.
Photographs by Rich Fotheringill

City for Sale

My roots in Bellingham are deep and strong. My mother and her brothers and sisters grew up on the south side of the city, in a big yellow house fringed by poplar trees my grandfather planted. Not far north, my father's family still populates the city of Blaine, where my parents are clearing ground for the house they will retire to this summer.

So though I've lived in Bellingham just two years, I find myself surrounded by landmarks: Wilson Library's oak tables, which my mother polished between quarters to earn her tuition at Western; Larrabee Elementary School, where one relative is said to have scaled a drain pipe and been sent home by the principal; and in Blaine, the house where my father's mother cooked over a woodstove in the basement while the upper story was constructed, brick by brick.

With these landmarks awaiting me, my move north to Bellingham from Renton, a city in central Puget Sound, seemed more homecoming than migration. There were certainly differences: Here I found abundant, thriving environmental groups, hills covered in forest, relatively clean air, and a noticeable absence of rush-hour traffic.

But the parallels between my old home in Renton and my new-yet-familiar home in Whatcom County hit me when I read an article in the March, 1990 issue of the business magazine Washington CEO, which proclaims: "At last, Whatcom County seems ready to fulfill its destiny as a hub of regional and international commerce."

How might this destiny arrive? CEO describes a major manufacturers' outlet mall planned for Blaine; as many as five golf course communities "now on the drawing board"; expansion of ARCO's Cherry Point refinery; a proposed Port of Bellingham waterfront convention-hotel complex; the Canada-United States free trade agreement; and other means of "marketing" Bellingham and Whatcom County.

Mentioned or quoted in the article is a Who's Who for Bellingham, from Mayor Tim Douglas to Trillium Corporation President David Syre to Bellis Fair General Manager Gary Shimada. But where, I wondered, were the presidents of local environmental groups, speaking about their visions of the region? Where were environmental scientists, wildlife biologists, botanists and birdwatchers?

They were left out of this corporate picture, but they might have suggested that Bellingham's economic health depends on its environmental health, and that more and bigger industries, shopping malls and subdivisions will make Bellingham into another Renton, where clean air, clean water, abundant wildlife and other environmental values are near extinct.

Twenty-five years ago, most of my mother's family left Bellingham in search of jobs. Today I return with my conviction that employment and environment can -- and must -- coexist, whether by converting Georgia-Pacific to a paper recycling mill, promoting Whatcom County as the breadbasket of organic farming, or by other environmentally sound means.

Writing is hard work, and I've learned this year that editing is even harder. Yet writers and editors jump in and do their jobs, and their work can change the status quo. We should expect local leaders to do the same -- to resist the sales pitch buzzing all around them, and to heed the muted voices speaking for the Bellingham environment.

Sara Ann Olason
Seeing the City for its** TREES**

Michael Pilarski believes trees have a vital message for humans. "Trees would like to enter a symbiotic relationship with humans," said the bearded founder of Friends of the Trees Society. I heard Pilarski speak about urban forestry at the Bellingham Tree Extravaganza, a plant sale with educational workshops held March 31. Wearing wire-rimmed glasses, Levis and a plaid flannel shirt, Pilarski spoke with great passion about his visions of a greener Bellingham, where parking lots are surrounded by trees, hanging gardens flourish on every wall, half of our streets are replaced by trees, gardens, and trails, and most of our lawns grow food instead of grass.

STORY BY KIM CLAY
We have the chance to make a greener city a reality.

Pilarski brought his message to Bellingham at a time when cities across the nation are discovering the benefits of urban trees. In the city, trees provide animal habitat; soften the appearance of our built environment, giving aesthetic pleasure; cleanse the air by removing carbon dioxide to produce their own food; and work as natural insulators, shading buildings that would normally require air conditioning in the summer, reducing energy use. Volunteer tree-planting programs have sprung up in cities such as Atlanta, New York, Philadelphia, Houston, Chicago, and San Francisco to derive these benefits.

Pilarski's visions of urban forestry may seem futuristic or even utopian, but they are slowly taking shape in Bellingham. Through the city's street tree program and the work of community organizations, we have the chance to make a greener city a reality.

Bellingham’s street tree program, managed by the Parks and Recreation Department, began in 1975 with a call for “freeway and thoroughfare landscaping; significant areas of natural vegetation to be preserved; special provisions for hill area development,” and a guide to acceptable tree varieties. The plan recommends trees be preserved on land that will be developed, an idea supported by the Community Builder's Handbook, which says: "Existing tree growth on any site is desirable. It is possible to build economically on wooded land by selective clearing, even for lower priced housing. Too many times handsome acreage has been deliberately bulldozed to have earth before construction. Such denuding destroys for years the increment in value that a stand of trees gives to a residential community."

My own involvement in the greening of Bellingham started shortly before the Bellingham Tree Extravaganza, with an invitation to a York Neighborhood Association (YNA) meeting, which I found taped to my mailbox early this spring. Any York neighborhood resident who attends one meeting per year is considered a member of the association. President Michael Chiavario told me the YNA was revived about a year ago after 12 years of inactivity.

I was inspired when I learned the association's environmental committee was planning a street tree celebration for the York neighborhood. I had witnessed urban deforestation up close last summer at The Willows retirement community close to my workplace. The retirement home was once surrounded by a thick greenbelt of evergreen forest — a buffer between the homes in this special community and the busy city on the other side. Today, most of the greenbelt is gone, bulldozed to make way for parking lots and a new building for St. Joseph Hospital. How pleasant can it be, I wondered, for The Willows residents to sit out on their decks, watching cars pull in and out of gravel parking lots? This scenario is common in our rapidly growing community, and it illustrates the need to preserve and increase the number of stands of trees in our city.

My husband, Steve Schaffer, and I volunteered with the YNA to canvass our block to promote a plan to plant trees along the grass strip between the streets and
sidewalks of the York neighborhood. We went door-to-door asking our neighbors to participate in this street tree celebration, organized by the YNA, Puget Power, and the city. Though many were renters whose landlords wanted maintenance-free yards, and other residents believed there were already too many trees in the neighborhood and were annoyed by the prospect of having more dead leaves clutter their sidewalks each fall, most residents thought it was a great idea.

At the next YNA meeting, we learned that more than 200 trees had been ordered in our community — quite a success in our eyes, especially since residents paid $10 per tree (a $15 saving from the market value). James Luce of the Bellingham Parks Department and Tim Wilson, division forester for Puget Power, spoke to us about their involvement and the importance of urban forestry. Luce later told me Bellingham’s street tree program is continuing with a grant from the Department of Natural Resources to inventory and manage the city’s trees, and to plant more. When I asked Luce why food-producing varieties were not acceptable, he told me fruit trees drop fruit onto streets, producing public safety hazards, and are more susceptible to pests.

Tim Wilson explained Puget Power’s role in urban forestry. He said Puget Power is interested in urban forestry as a mutual benefit to the community and to the power company. Because power outages can be caused by broken trees or limbs falling onto power lines during storms, Puget Power wanted to help the community choose the best varieties of trees for landscaping under power lines. Most power lines are 25 to 30 feet high, and trees planted under power lines should grow to 25 feet maximum at maturity. Some species he suggested were Japanese maples, some dogwood species, and dwarf flowering plums and cherries.

When April 7th arrived, I anxiously waited for the auger truck Puget Power provided and operated to dig the holes for the trees. First a pick-up truck arrived toting YNA volunteers and the flowering cherry trees we had requested. The auger truck came soon after and dug two perfect holes with its monster of a drill. James Luce and YNA volunteer Lynn Torno came later to help us plant our new trees. Luce carefully explained to our household how we should care for our trees.

Through this cooperative effort, 213 trees were added to our neighborhood that day. As Luce drove away, I introduced myself to my new leafy friends, and recalled a song Pilarski taught us:

"Trees, trees, trees.
Every dream I dream is trees.
Maple, alder, oak,
and hemlock --
Let them all grow."

Kim Clay is a student of environmental studies at Western. Her new cherry trees are flourishing.

Our planet’s dire need for forests convinced Michael Pilarski to found the Friends of the Trees Society in 1978. An ardent childhood tree-climber, Pilarski is a passionate supporter of the movement to “re-green” the earth.

Because trees absorb carbon dioxide to make their own food, many feel tree-planting may help stabilize our planet’s climate, by curbing atmospheric levels of this “greenhouse gas.” One hundred million growing trees would take up an estimated five million tons of carbon each year.

With supporters all over the world, Friends of the Trees seeks to:

• Promote reforestation and Earth-healing activities throughout the world;
• Encourage self-employment and right livelihood using local, renewable resources and based on harmonious, non-oppressive relationships with nature and other people;
• Assist people in Earth-healing activities by distributing seeds, plants and horticultural information;
• Act as a network center for information on the world-wide “Green Front.”

If the success of the 1990 Bellingham Tree Extravaganza is any indication, the city is ready for greening. To help plan the 1991 tree extravaganza in Bellingham, contact Fairhaven Neighbors, Inc. at P.O. Box 4093, Bellingham, 98227.

Along with organizing annual spring tree sales, workshops, courses and conferences, the society publishes the International Green Front Report — a compendium of articles, organizations, periodicals and information on the movement to “re-green” the earth. You may reach Friends of the Trees Society at P.O. Box 185, Port Townsend, WA. 98368. -S.O.
These are not idle concerns. Across the nation and around the world, air pollution causes human sickness and death, damages crops and buildings and destroys lakes and forests. Americans spend more than $10 billion each year on medical problems caused by outdoor pollutants (and perhaps $100 billion annually for those caused by indoor pollution -- cigarette smoke, radon, and others). Each year we lose as much as 20 percent of the nation's soybean harvest, and some of our forests, to ozone. Germany's dying Black Forest has become a familiar reference in discussions of acid rain; so have acidified lakes in Sweden and the northeastern United States.

With these facts and a healthy curiosity about the state of the air in and around Bellingham in mind, I visited the Northwest Air Pollution Authority (NWAPA), the agency responsible for overseeing air quality in Whatcom, Skagit and Island counties. At the agency's offices in downtown Mt. Vernon, I spoke to air quality control specialist Cindy Spens and technical coordinator Jamie Randles, who gave me some disturbing data on local air pollution.

STORY AND ILLUSTRATIONS BY SARAH OLANSON
In 1988, nine Whatcom County industries spewed an estimated 63,000 tons of pollutants into the air (see next page). The figures seemed distressingly large to me, especially after I learned these monitored air pollutants -- particulates, carbon monoxide and so forth -- are only a few of the better-known ingredients in our aerial pollution soup. Each year, tens of thousands of chemical compounds, some of them carcinogenic or extremely toxic, are released into our nation's air, yet only a few are regulated or even monitored.

The Environmental Protection Agency reported that in 1987 more than 40 million pounds of toxic emissions were released over Washington state -- an equivalent dose of about 600 pounds per square mile, or nine pounds for each state resident. In some urban areas, cancer risks from breathing this toxic soup may be as high as one in one thousand. Our state Department of Ecology is working to establish standards for a long list of these "air toxins," possibly including dioxins from solid waste incinerators, chloroform from pulp mills, perchloroethylene from dry cleaners, and a host of others. Until these toxic substances are monitored and controlled, we can only guess at the true health of the air we breathe.

I also learned that regulating industries is just the beginning. While we're accustomed to blaming industries for air problems, we've begun to realize smaller, individual sources are also damaging. Locally, woodstoves release about five times more particulate matter than Georgia-Pacific's waterfront pulp and paper mill -- some 790 tons per year. State-wide, automobiles also contribute many times more of some pollutants than industry. (See next page for pollution statistics.)

Still, compared with Denver's "brown outs," Los Angeles' smog alerts, and Europe's distressing pollution problems, Bellingham's air seems utopian. By some measures, our city's air quality is fine. Downtown Bellingham, where carbon monoxide is monitored, lacks the "urban canyons," streets lined by skyscrapers, which trap carbon monoxide in larger cities. In 1988, levels of this colorless, odorless and deadly gas were within legally acceptable levels, as were particulate levels measured by monitors in a few Bellingham neighborhoods. The city's only recorded outdoor air pollution violation for 1988 was for sulfur dioxide emissions from Georgia-Pacific's Bellingham mill.

But these few monitors inside the city limits didn't tell me the whole story. When I looked to the sky beyond Bellingham, I discovered dark clouds on this mostly sunny horizon. In April I visited Tony Basabe, a University of Washington air pollution researcher whose studies of our region's ozone pollution support a growing scientific conviction that the Pacific Northwest is no haven for clean air. In the upper atmosphere, ozone forms a vital protective layer that shields our planet from ultraviolet radiation. Scientists are concerned that holes in the ozone layer, probably caused by our use of fluorocarbons as refrigerants and spray can propellants, may lead to increased skin cancer. But closer to the ground, ozone damages plants, and is a strong eye and respiratory tract irritant.

Automobile exhaust is a major source of the hydrocarbons and nitrogen oxides that mix in sunlight to form ozone. But critical ozone levels are usually found outside city limits. Because the ozone-forming reaction takes five to seven hours to complete, maximum ozone levels are found five to fifty miles downwind of major urban areas. During the hot summer of 1988, Basabe and University of Washington research partners Robert Edmonds and Timothy Larson discovered rural, forested areas of Whatcom County were receiving ozone from Vancouver, B.C. at levels that matched or exceeded national standards; a similar ozone plume extended south of Seattle.

Through the work of Basabe and others, the wooded western slopes of the North Cascades have joined the list of ecosystems known to be potentially threatened by air pollution. Ozone is the only regionally dispersed air pollutant known to directly harm trees: In some species, it causes a characteristic discoloration of leaves that drastically reduces photosynthesis. In 1986, scientists found one-third of the pine trees they surveyed in Sequoia, Kings Canyon and Yosemite National Parks in California showed signs of "ozone mottle," and
TAKING STOCK OF STACKS

The Northwest Air Pollution Authority (NWAPA) publishes an annual emissions inventory estimating the amounts of certain air pollutants released by “Class A” sources within its jurisdiction. As defined by NWAPA regulations, Class A sources generally emit, or have the potential to emit, more than 50 tons of pollutants per year.

Based on actual source emissions tests and estimation factors, the most recent inventory indicates nine Whatcom County industries released about 63,000 tons of five air pollutants in 1988: hydrocarbons, particulates, nitrogen oxides, sulfur oxides and carbon monoxide.

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**TOTAL:** 63,037

**Total, Whatcom County**

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Smaller emissions of the following were also estimated for 1988: **mercury** (0.14 tons, Georgia-Pacific), **chlorine gas** (0.2 tons, G-P), **fluorine gas** (35 tons, Intalco), **aldehydes** including formaldehyde (30 tons, ARCO and 12 tons, BP Oil), and **hydrochloric acid** (2.3 tons, Olivine and 136.9 tons, TRC).

Industry smokestacks account for only part of our state’s air pollution. “Non-point” sources, such as automobiles, home heating and other widely scattered sources, together contributed about six times more of the five major pollutants — hydrocarbons, particulates, nitrogen oxides, sulfur dioxide and carbon monoxide — than industry in 1986, according to state Department of Ecology figures for Washington’s air pollution:

**Vehicle transportation:**
- On- and off-road gasoline and diesel.

**Other non-point sources:**
- Small boilers, residential heating (coal, oil, natural gas and wood), slash burning and others.

**Point sources:**
- Industrial boilers, pulp and wood products mills, metal and oil refineries, power plants, chemical and cement plants, transportation equipment manufacturers, airports, public administration and others.

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6 the Planet / Spring'90
tests are underway to determine how Douglas fir (a very ecologically and economically important species in our region) and other native species respond to ozone.

I learned ozone is only one air pollutant that threatens our region. Acid precipitation, once thought confined to highly industrialized areas, is now of such concern in Washington that our state government has established special programs to address it. Researchers have begun investigating how acid fog, alone and in combination with ozone, might harm our mountain forests. Both acid rain and acid fog are born when nitrogen and sulfur compounds -- emitted from automobiles, coal-fired power plants and other sources -- are chemically converted to acids in the atmosphere; the acids combine readily with cloud droplets.

Much concern about acid precipitation focuses on alpine lakes. Scattered throughout the Cascades, many alpine lakes lack the soil and weathering rock that act as natural buffers against acid rain for lakes at lower elevations. Some fish, algae, mayflies and other aquatic creatures cannot survive in acid waters. So far, researchers have not found acidified lakes in the North Cascades as they have in northeast and midwestern states. But "we do have a significant number of very sensitive lakes, which would be susceptible to moderate amounts of acid deposition," says Ed Rashin, coordinator of the Department of Ecology's acid deposition program. Puget Sound does not rely on coal-fired power plants, a major source of sulfur dioxide, for its energy. But like forests, lakes are the subject of further studies, especially to determine how pollution stored in snowpacks might harm lakes when the snow melts each spring.

After these mental excursions into the North Cascades, I circled back home, to consider again how my neighbors and I treat our air. Standing on the sidewalk before the Federal Building in downtown Bellingham, I gazed up at the carved scrolls and arches that grace this historic building, and considered how other land-county and state under siege from more cars, more woodstoves, more industries? For a planet whose temperature may rise due to the greenhouse effect, producing conditions even more conducive to ozone formation? It could mean that gains made in air quality since passage of the Clean Air Act in 1970 will be offset by serious losses, in Bellingham, the North Cascades, and many other places -- unless we treat clean air as an endangered species.

We can drive less. We can conserve electricity. We can recycle. These individual actions will help, but blaming only "we the people" for air pollution is unrealistic. I admire the Environmental Protection Agency Science Advisory Board's suggestion that individuals, communities, industries and government must all do their part -- from tuning up cars to controlling land use, and from setting up gas scrubbers on power plants to enforcing energy standards. With this cooperative approach toward preserving the atmosphere we all share, those of us who love to venture in and around Bellingham are sure to find fewer days when we must hold our noses or change our minds.

Sara Olason studies environmental journalism at Western.
I recently became a household activist. Two months ago, my Thursday morning alarm was the sound of the garbage truck, noisily swallowing the neighbors' garbage outside -- the signal for my roommates and me to frantically run our overflowing garbage cans to the curbside. Since I moved in with new roommates, we've changed our habits: In two months we've collected only three bags of garbage, with the rest put in the compost pile or in recycling bins. Our household's conversion to composting and recycling is just one example of environmental activism in our community. In Whatcom County, environmental organizations address just about every concern or interest -- from recycling to water quality, wildlife conservation and many others. Following is a directory of Bellingham environmental organizations. Join one, and help your neighbors protect and preserve our local environment.

Associated Students Environmental Center
is run by students of Western Washington University, and provides information and programs on environmental topics for the campus and Bellingham community. The EC staff brings entertaining, informative and often controversial speakers to campus, and organizes annual Earth Day celebrations, among many other projects. This year, the EC staff helped bring unbleached, recycled paper to the campus bookstore -- and enthusiastic students bought out the supply in just a few days.

Office in the Viking Union, Western Washington University

Citizens United for Safe Paper
is a group of consumers alarmed at the contamination of coffee filters, food packaging, waterways and other parts of our environment with dioxin, a byproduct of the chlorine-bleaching process used to whiten many common paper products. CUSP calls for an end to chlorine-bleaching of wood pulp, and encourages manufacture of unbleached paper and paper bleached by non-chlorine methods.

671-3326, or P.O. Box 2663, Bellingham, 98227

Story by Tim Northern, with Peter Donaldson, Sara Olason and Matt Hanewald
ILLUSTRATIONS BY JOEL WEST
Concerned Southside Citizens organized in 1988 to address environmental impacts of the Alaska ferry terminal's arrival in Fairhaven. Through intense negotiation, CSC convinced the city and Port of Bellingham to agree to a number of measures to protect wildlife habitat, neighborhood character, and other important environmental qualities of the Fairhaven area. Besides persevering to ensure environmental protection of Padden Lagoon and other areas around the ferry terminal, CSC remains active today in involving citizens in public hearing processes. As part of working to keep agencies accountable to the environment, CSC awaits the outcome of a suit it filed last year, asking the court to rule that the city and port had broken some terms of the original agreement.

676-5254, or P.O. Box 4234, Bellingham, 98227

Environmental Resource Services (formerly Bellingham Community Recycling) works to educate the community on responsible solid waste disposal, emphasizing recycling and waste reduction. Formed in 1982, ERS operated Bellingham's pilot curbside recycling program until 1989, when Recycling Services, Inc. took over home recycling collection. With a 67 percent participation rate, Bellingham's curbside recycling program is among the most successful in the state. ERS provides educational programs for Bellingham and Whatcom County.

733-8307, or the Recycling Hotline, 676-5723 / 384-8040

The ERS office is in the Herald Building, 1155 N. State St. #623, Bellingham, 98225, is open 9 a.m. to 5 p.m., Monday through Friday.

Earth First! says "No compromise in defense of Mother Earth." Our planet's dire environmental problems spur Earth First! activists to use any effective action that is not violent to other people to save our remaining wild lands. EF'ers are autonomous individuals who choose whatever tactics they feel are most effective -- from press conferences to civil disobedience to monkey wrenching.

P.O. Box 773, Bellingham, 98227

Friends of Lake Whatcom seeks to protect the source of Bellingham's drinking water through better regulation of logging and development in the Lake Whatcom watershed. Through public education, and lobbying of state and local governments, FLW speaks for preservation of lives, health and property of Lake Whatcom-area residents, as well as for water quality.

671-2365, or 3229 North Shore Road, Bellingham, 98226

Environmental Perspectives produces media productions to educate all people about environmental issues. Listen for the "Earth Watch Report," aired on KGMJ-AM and KUGS-FM, and for radio announcements on water quality issues and on Bellingham's curbside recycling program.

758-7048, or 2800 Haxton Way, Bellingham, 98226

Greater Ecosystem Alliance represents the interface between the research, academic and activist communities organized to protect all native species and ecological functions in Washington's wild North Cascades and Olympics. Projects include: public education seminars; field research; legal action to protect grizzly bears; and the Ancient Forest Rescue Expedition, a traveling program that educates people across the nation about our old-growth forests.

671-9950, or P.O. Box 2813, Bellingham, 98227

The Alliance publishes "Northwest Conservation: News and Priorities," and offers internship opportunities.

Lake Whatcom Watershed Defense Coalition seeks to prevent clear and present hazards to Lake Whatcom wildlife, water quality and slope stability, by taking responsible action to protect this vital community resource. With public education as the main goal, the Coalition supports improved land use planning and regulation in the watershed.

671-0328, or 26 Sudden Valley, Bellingham, 98226

Meetings are at 7 Westbrook Court in Sudden Valley, or at locations announced in the newsletter, "The Floodlight."
Neighbors Opposing Power Encroachment wants to bring limits on construction of big power lines to public vote next fall. Formed a year ago, NOPE expresses concern over potential health problems due to electromagnetic radiation from twin 230,000-volt lines proposed by Puget Sound Power & Light. Running south from the British Columbia border along Noon Road, one of the lines would stop at a Bellingham power substation; the other would pass through Whatcom County to connect with a Sedro-Woolley line. Potential reductions in adjacent property values is another NOPE concern. As we go to press, NOPE is collecting signatures in hopes of placing an initiative on the November general election ballot, which would limit lines carrying more than 115,000 volts to industrial zones.

734-4541, or 2111 Lincoln St.
Bellingham, 98225

NOPE will provide a half-hour documentary video and speakers to interested groups.

North Cascades Audubon Society is a chapter of the National Audubon Society. NCAS has worked since 1970 to protect the wildlife and environment of Whatcom County -- and has won some big successes. NCAS facilitated The Nature Conservancy’s acquisition of more than 600 acres of low-elevation old-growth forest at Noisy Creek, helped establish the Mt. Baker Wilderness Area, and gained stewardship of Scudder Pond and Finkbonner Island. NCAS interests include monitoring timber sales and forest management, air and water quality, environmental education, wildlife preservation, and others addressed by several NCAS committees: Adopt-A-Forest, Clean Air and Water, Education, Friends of Noisy Creek, Wild Bird Care and Wildlife.

734-6007, or P.O. Box 5805,
Bellingham, 98227

Join NCAS general membership meetings the fourth Monday of the month, January through May and September through November, 7:30 p.m. at the Pacific First Federal Savings Bank in downtown Bellingham. Members of the National Audubon Society automatically become NCAS members.

North Cascades Institute dedicates its efforts to increasing understanding and appreciation of the rich natural, historical and cultural legacy of the North Cascades. NCI offers a range of projects and programs for 1990: field seminars on archaeology, photography, birds and many other subjects; teacher training workshops; outreach programs for wilderness education in schools; senior Elderhostel programs; an outdoor mountain school for children; and several publications, including a field guide to the Skagit River watershed and curriculum guides on mountains and wilderness.

856-5700, or 2105 Highway 20,
Sedro Woolley, WA, 98284

Most seminars are offered for academic credit through Western Washington University.

Point Roberts Heron Preservation Committee seeks to preserve the large, thriving Point Roberts heron rookery and adjacent green spaces that buffer the herons’ habitat. The committee works with land owners, concerned citizens, local planners and wildlife experts in Canada and the United States to protect the home of about 650 great blue herons. The rookery is an international resource, and the committee has members from both sides of the border.

945-0787, or P.O. Box 1421,
Point Roberts, WA, 98281

Puget Sounders has worked since 1986 to provide environmental services to individuals and groups -- from organizing conferences, to litter pick-ups and interpretive exhibits along trails. Among many other projects, Puget Sounders helped convince our state legislators to fund acquisition of Clayton Beach in 1989; organized volunteers for oiled bird rescue; and created the first toll-free phone line in the country to help the public address environmental issues.

676-8094 for local calls, or the environmental hotline, 1-800-447-3330

Visit the office in the Clover Building on Holly Street in downtown Bellingham, or write P.O. Box 4112, Bellingham, 98227.
Safe Airport for Everyone

Safe Airport for Everyone seeks reasonable measures to control noise pollution at Bellingham International Airport, including: use of newer, quieter aircraft; an eight-hour nighttime quiet period for commercial jets; and a 600-foot runway extension, which the Port of Bellingham’s Environmental Impact Statement says would serve all current airline and aircraft operating conditions in all types of weather. SAFE recently filed suit in Whatcom County Superior Court, asking the court to rule that the Port’s environmental impact study fails to consider all future impacts of airport expansion. SAFE emphasizes that its requests are intended to protect the health of local citizens, and are not meant to stifle airport growth.

733-5344, extension 102, or 3212 Northwest Ave. Suite C, #204
Bellingham, 98225

Safe Waste Management Now

Safe Waste Management Now promotes safe waste management practices through education, involvement and action. Working for safe disposal of hazardous, medical, radioactive and solid wastes; for waste reduction; and for more participation in local recycling programs, SWMN is a voice for environmental health in an era of increasing waste disposal problems.

384-2762, P.O. Box 1396,
Bellingham, 98227

Washington Native Plant Society: Koma Kulshan Chapter

Washington Native Plant Society: Koma Kulshan Chapter encourages appreciation and preservation of Washington’s unique flora. Goals include: preservation of endangered flora, conservation of threatened habitat, education of the public on the value of native species, and enjoyment and study of native plants. The quarterly publication Douglasia, and occasional papers presenting in-depth plant studies, educate and inform members of chapters all over the state.

671-9556

Meetings are the first Wednesday of the months October through May, 7:30 p.m. at the Pacific First Federal Savings Bank downtown.

Washington Sea Grant

Washington Sea Grant is a program of the University of Washington that educates the public about issues affecting the marine environment. Since the Marine Plastic Pollution and Control Act took effect in December, 1988, restricting the dumping of ships’ garbage in United States waters, the Sea Grant program has worked to reduce marine garbage around Bellingham. Waste disposal and recycling sites and pumpout facilities at Squalicum Harbor now encourage local boaters to help protect our marine waters.

676-6429, or 19 Harbor Mall,
Bellingham, 98225

From hiking clubs to political organizations, many other Whatcom County groups touch on environmental issues as part of what they do — whether by traversing green forests or promoting the greening of government. The Bellingham Mountaineers, Mt. Baker Hiking Club, Raptor Roost Wild Bird Rehabilitation Center, Squalicum Beach Committee and Whatcom Environmental Coalition are just a few of the additional groups described in the Whatcom County Environmental Resource Directory, compiled by Bill McCallum of the North Cascades Audubon Society. The 1990 directory, available at local libraries, also includes city, county, state and federal government agencies, plus tips on writing to your representatives.

Look for an updated directory soon.
A recent encounter with urban wildlife made me realize the importance of Bellingham's silent party -- the animals.

I enjoyed watching a great blue heron stand over the mouth of Whatcom Creek. Blue-gray feathers flashed in stark contrast with the industrial dock's white buildings. Motionless for nearly five minutes, the sound of my approaching footsteps finally convinced it to unfold its three-foot wings and fly out across the bay. This brief experience left my mind trouble-free, my spirit joyful for the rest of the day.

When I saw the heron, I realized few cities the size of Bellingham can boast such a diverse array of wildlife, so close to home.

Surrounding mountains and forests support populations of deer and coyotes; local creeks and ponds provide habitat for beavers and muskrats; opossums and raccoons adapt to life around yards and roads. Bellingham's mild climate offers refuge for many bird species, from bald eagles to stellar jays to ducks and occasionally a white pelican, an endangered bird rarely seen in close contact with human populations.

Each animal contributes something unique to our city, whether the gaze of a deer or the rousing screech...
Nearly a casualty of human contact, red-tailed hawk "Helen Reddy" was injured by a shotgun blast. Now at Raptor Roost, a wild bird care center run by Lois and George Garlick, the hawk is stronger but still has a few feathers missing. Photo by Michael J. Lehnert.

Aldo Leopold said it best in his 1953 essay, Conservation:

"The last word in ignorance is the man who says of an animal or plant, What good is it? If the land mechanism as a whole is good, then every part is good, whether we understand it or not. If the biota, in the course of eons, has built something we like but do not understand, then who but a fool would discard seemingly useless parts? To keep every cog and wheel is the first precaution to intelligent tinkering."

One place to begin to appreciate and understand "every cog and wheel" is in our local parks. The city maintains 1,711 acres of community park land, located mostly on Lake Padden and Lake Whatcom, and on four streams: Squalicum, Whatcom, Padden and Chuckanut. Some of Bellingham's most natural wildlife habitats are the forested Lake Padden watershed, the undeveloped tideflats of Chuckanut Bay, and the steep slopes of Arroyo Park. The shoreline of Boulevard Park provides habitat for marine life. Smaller neighborhood parks and landscaped areas add more space for wildlife.

I've also found I can enjoy wildlife without heading to a city park. In April I visited another animal watching site, the beaver pond located where Alabama Street meets Lake Whatcom. One early spring evening I watched a beaver swim toward its lodge in the center of the pond, leaving a silent wake behind. Courting red-wing blackbirds sang as I walked the well-traveled trail along the pond's edge.

But these common encounters will become a thing of the past if we continue to make life tough for Bellingham's animals. We see apartments, malls and houses springing up around us. Unless carefully planned, these developments hold dire consequences for urban wildlife.

Without natural areas in which to live and move, animals are forced unwillingly into dangerous interactions with humans. Trapped or "man-locked" between roads, highways and developed areas, animals become casualties as they move or search for food. Tim Lucy of the Bellingham-Whatcom County Humane Society told me the Society regularly treats raccoons that have ingested rat poison or insecticides, or that have been struck by cars. The annual roadkill of animals on American highways may be 100 million, estimates Julie Lalo, writer/editor for Pennsylvania State's public information news bureau.

Roads and buildings act as fragmenting forces, and can in fact be more dangerous than actual loss of habitat acreage. Some scientists believe habitat fragmentation is a serious threat to biological diversity, and is the main cause of today's extinction crisis.

Rapid urbanization affects bird populations as well as mammals. The most critical element is the loss of nesting areas, for many migratory birds pass through
Bellingham looking for their annual nesting sites. Birds also suffer from shootings, pesticides and domestic cats. I learned from Bellingham bird rehabilitator Lois Garlick.

So how can we live better with our animal neighbors? Tim Wahl, park planner with the Bellingham Parks and Recreation Department, told me "people management" is often more important than wildlife management.

Reproductive cycles of the American dipper or water ouzel, for example, suffer considerably from the lack of walking trails in Whatcom Creek Gorge, the birds' only nesting site in town. Without well-defined trails, people damage sensitive nesting areas as they carve their own trails through this beautiful gorge. One way to prevent this tragedy is to increase controlled access to public areas. People need to understand what's at stake when natural areas are lost or damaged.

Another important step is for communities to set aside land for wild animal populations. One method exists in the city's municipal code, which requires developers of new subdivisions to allocate space for greenbelts or park land, or to pay $300 per lot into a park site acquisition fund. (This ordinance is a step toward preserving space for wildlife, but we're just beginning to adequately protect wetlands; see box).

Since most remaining open space in and around Bellingham is privately owned, land-owning citizens need to understand the relationships between humans, property lines and nature. For example, many of us would enjoy living near a marsh, where we could look out our windows at a pristine natural environment. But if beavers next door build a bigger dam and the newly developed area is flooded, who's to blame?

We once thought them useless lands, fit only to grow skunk cabbage and mosquitoes. Today our attitude toward wetlands is changing. We recognize that these unique areas -- commonly called swamps, bogs or marshes -- are vital for wildlife habitat, water purification, flood and erosion control, education and recreation. We know that about 20 percent of federally listed threatened or endangered species depend heavily on wetlands.

Our realization of wetlands values comes almost too late. Washington state has only about half of its original wetlands, and as many as 2,000 wetland acres are lost in the state each year. Long viewed as prime sites for farms, industries and other developments, wetlands across the nation are disappearing under fill and pavement.

Bellingham is no exception to this sad pattern. According to the Bellingham Wetlands Task Force (a group of local developers, property owners, environmental advocates, biologists and city staff appointed by the mayor in 1989), the estimated 350 acres of wetlands that survive in Bellingham are only a remnant of abundant wetlands once scattered around the city.

Why are we losing wetlands? One important reason is a dearth of laws to adequately protect wetlands and other wildlife habitat. In 1988 the Washington Department of Ecology estimated 75 percent of the state's wetlands were unprotected by local, state or federal laws.

But, the DOE asserts, "wetlands are not lost only because people don't care, but also because people don't know." Locally, there is hope for better awareness and protection of wetlands and other wildlife habitat, through these measures:

- City of Bellingham planners are preparing a wetlands ordinance based on several recommendations of the Wetlands Task Force, including no net loss of wetland functions, and a rating system that would prioritize wetlands preservation. Filling or development of highly sensitive or rare wetland types would be prohibited and large buffer strips would be required around such areas; development of some other wetland types would be allowed, but lost wetlands would have to be replaced. (In May the city council passed an emergency 90-day measure protecting most of Bellingham's remaining wetlands from overnight development while this long-term ordinance is considered; expect a public hearing on the ordinance early this summer.)

- The Wildlife Committee of the North Cascades Audubon Society is compiling an inventory of Whatcom County wildlife habitat. Working on the premise that "where there's wildlife, there's habitat," Audubon member Ann Elssinger is soliciting reports of local wildlife sightings. The inventory should help make planners aware of important wildlife areas before development proposals arise. (Send reports of sightings to NCAS at P.O. Box 5805, Bellingham, 98227).

- A proposed Whatcom County sensitive areas ordinance (SAO) would protect critical wildlife habitat, streams, wetlands, agricultural lands, areas prone to erosion and landslides, and steep and unstable slopes. Proposed by local citizens concerned over the effects of our region's rapid growth, the ordinance would require special development standards for such areas. Besides conserving important wildlife habitat, the SAO would protect human lives and property from dangers such as landslides, and preserve the water, soils and greenbelts we all enjoy. SAO proponents expected to submit their proposal to Whatcom County officials early this summer. Contact Clare Fogelson at 398-2139 for information. -S.O.

And who's forced to move out? We must always approach construction with conservation in mind.

We must make a concentrated, cooperative effort involving government, business and citizens in the interest of the animals. Only the establishment and maintenance of corridors or greenways can sustain animals' needs to move. "Greenways have the potential to be this country's most important land-based effort for conservation and recreation in the next several decades," says a report from the President's Commission on Americans Outdoors. The best hope for successful green-
ways are our streamside woodlands. These wooded areas are conduits stretching along Bellingham’s streams and creeks, offering food, water and safety for traveling animals.

Wildlife corridors can also be built from fragments of existing paths so prime building land is not necessarily “locked up” for habitat. “Bellingham’s old railways and trails can provide excellent pathways for safe animal travel,” Wahl says.

Finally, we need a transition away from our single-species survival outlook, toward the survival of ecosystems. Too often we spend vast quantities of time and money saving only visible or publicized species, such as the bald eagle, while forgetting that even the smallest plant and animal -- “every cog and wheel” -- plays a part.

One result: a rising tally of threatened and endangered species. As of September 30, 1988, the number of species listed as threatened or endangered worldwide topped 1,000, with more than half of those species native to the United States. In the last century, at least 17 species have become extinct in Washington state. Today The Nature Conservancy reports 27 state-listed endangered species.

Though the days of standstill traffic, skyscrapers, and a million-plus people seem far away in Bellingham, we must act now to preserve our wildlife. As a recent transplant from Seattle, I witnessed first-hand how quickly animal and bird habitat can be lost. I saw streams once filled with spawning salmon thick as stepping stones become choked with soil or piped through concrete culverts, while wooded areas east of Lake Washington were mowed down like troublesome weeds.

Bellingham citizens must rally around our disappearing animal neighbors. Ultimately, we as well as the animals will win. O

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**How you can help your animal neighbors**

With housing developments, shopping malls, roads and other symptoms of urban sprawl all around us, it’s easy to believe survival of urban wildlife is a lost cause. But a little research reveals several steps each of us can take to help our animal neighbors -- beginning with our state government in Olympia, and ending in our own backyards:

- Support Initiative 547, a growth management bill that would require cities and counties to adopt comprehensive land use plans. If approved by voters next November, the bill would protect environmentally sensitive areas such as forest lands, farms, open space and wetlands from urban sprawl. The initiative needs 200,000 signatures before July 6, 1990 to appear on the November ballot. Call the Citizens for Balanced Growth Alliance at 671-4940, or 527-7909 in Seattle for information.

- Join the state’s Backyard Wildlife Sanctuary Program. Started in 1985, the program provides tips on making yards "animal friendly," and certifies yards as official backyard wildlife sanctuaries. For information and application forms, contact the Washington State Department of Wildlife at 16018 Mill Creek Blvd., Mill Creek, WA, 98012.

- Plant trees and shrubs around your home; add bird baths or other water sources to your yard; help birds survive the winter with well-stocked bird feeders. Consult the Backyard Sanctuary Program for specifics on these projects.

- Invest in a good bird book; you’ll be surprised at the many birds you can identify -- and thrilled when you spot a rare species on the wing. Golden and Audubon guides to birds are excellent resources.

- Learn about the threats to urban creatures. Along with loss of vegetation, birds suffer from overspraying of insecticides, proliferation of domestic cats, competition from highly adaptable, non-native species such as starlings, and flying into windows. Awareness is a step toward solving these problems.

- If you find injured wild birds, call Raptor Roost at 676-9111; contact Sardis Wildlife Center at 366-3863 for help with injured and orphaned birds and smaller mammals; or call the Humane Society’s emergency dispatch at 647-4637 or 384-6633.

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Peter Donaldson studies environmental journalism at Western.
SAFARI
AT THE
SURFLINE

Take a look at local beaches... you'll be surprised at what turns up.

STORY BY THOMAS NOLAND
ILLUSTRATIONS BY SHARON BETTIS

The cool sands of Larrabee Beach sparkle in the sun like a giant sheet of sandpaper. With clipboard, identification guide and pencil in hand, I am ready to explore a world of marine life just beyond the Bellingham city limits on Chuckanut Drive. My first discovery comes even before I reach the beach: Tossed up on the cement boat ramp is a tiny piece of red seaweed that I identify as **Porphyra perforata**.

Called "nori" in the Japanese fish markets back home, a processed form of this slightly salty seaweed is edible and very tasty with a little raw fish and rice, and it is the start of a wonderful experience in the joys of exploring life on a typical beach around Bellingham.
Imagine what it would be like to be cemented in one place for the rest of your life. This is life for the common white barnacle, *Balanus glandula*, which covers many of the rocks at Larrabee. These marine crustaceans, closely related to crabs and shrimp, settle on the rocks when they are young, free-swimming larvae, and secrete calcium carbonate shells that look like small white volcanoes. While the tide covers them, these shrimp-like creatures fan their legs in and out, bringing captured food inside to their mouths. To watch barnacles "eat with their feet," look for their tiny brown feather-like appendages spewing out of the white cones in Larrabee's tide pools. Barnacles are one of many surprises you'll find when you look closely at Larrabee's rocky beach. Brown and black periwinkle snails, scattered around in rocky cracks and crevices, are another. These snails, which I identified as *Littorina scutulata* and *L. sitkana*, are often tiny but can be incredibly abundant. While studying rocks in the San Juan archipelago, I counted more than 500 periwinkle snails in a single one-meter square. These snails spend their days grazing on marine algae and diatoms that appear as greenish-brown scum on the rocks, giving these snails their affectionate name, "scum eaters." Another kind of grazer with an excellent camouflage appears as gray cones or bumps on the rocks -- but bumps that move. These creatures are limpets, and like their namesake, the limpet mines used by frogmen in World War II, they stick to rocks with great force. (Resist the temptation to pry them off; they have delicate undersides.) I found two types of limpets at Larrabee: *Colisella digetalis* and *Notoacmea persona*. Limpets are also scum eaters, and are an excellent way to measure pollution. An absence of limpets means there are probably high pollutant levels or a recent oil or chemical spill.

Although the Latin names are important in scientific identification and research, don't let them intimidate you. If you see something that looks like an upside-down ice cream cone stuck to a rock, it's probably a limpet. With this common sense mentality, you will be amazed at the number of animals and plants you can identify and read about. A good field guide, written by my friend Eugene Kozloff, *is Seashore Life of the Northern Pacific Coast*. Closer to the water, you will see other kinds of snails. One variety that is particularly easy to find and identify are Nucellids, which are white to gray in color. Nucellids feed on barnacles, periwinkles and limpets by drilling tiny holes in the shells of their victims, and sucking out their insides. For this they are equipped with rasping tongues called raduli (singular radula). You can find victims of these and other carnivorous snails (like the moon snail) by looking for shells with perfectly circular holes drilled in them. Be careful when you pick up beach shells -- sometimes they are not occupied by their original owners. Hermit crabs, called *Pagurus hirsutiusculus*, abound at Larrabee, where you're sure to find them poking out of snail shells. For unlike most crabs, hermit crabs are not completely covered in a chitinous shell, and must find snail shells in which to stick their rear ends. The crab's name means "hairy," and if you hold one in your palm and look closely, you will see it's covered with tiny hairs. Like most crabs, hermit crabs are
scavengers, eating whatever they find. Bunches of the blue mussel *Mytilus edulis* found at Larrabee are very important, for they serve as a biological sanctuary, providing shelter and moisture for many animals. Mussels filter sea water over gill-like organs that trap food particles, earning their description as "filter feeders." Mussels attach themselves to rocks and pilings by tough threads, whose strength still puzzles scientists. Some people (myself included) find they like to study these creatures best by immersing them in a plate of garlic butter. (But consult regulations before taking and/or eating beach life -- see box.) At Larrabee I was lucky to find a purple sea star, *Pisaster ochraceus*, hiding on a rock near some *Ulva*, a common, leafy green alga. The sea star's deep purple color makes these hard, spiny creatures one of my favorites. They are wonderfully adapted to a life of predation on other marine animals, and consume snails, clams, mussels, limpets, chitons and other shellfish. More amazing than the sea star's diet is its method of eating. With a clam, for example, the sea star's ploy is to grip its prey in its legs and pull until the clam weakens, allowing its shells to gape open. Through a gap as small as one-half millimeter, the sea star can force its stomach through the hole, digest the muscles that hold the clam's shell closed, and consume its prey when the shell falls open. If you find a sea star, turn it over and examine the rows of suction-cup feet along its legs.

Here are some tips for making your beach visits safe and productive -- for yourself, and for the creatures that dwell between the tides:

- For a rocky beach overflowing with barnacles, snails, algae and other creatures, visit Marine Park, near the ferry terminal in Fairhaven. Take time to explore shallow tidepools here.
- A completely different type of beach is the Chuckanut mudflats, south of Fairhaven. Turn right off Chuckanut Drive onto 21st Street (just before the Chuckanut Bay Gallery); follow the road, which turns into Fairhaven Avenue, to a dead end near the flats. Look for mats of green algae, zillions of mounds made by worms below the muddy surface, and great blue herons offshore.
- For a close-up view of sea stars, sea cucumbers, fish and sea urchins, stop by the marine life tanks at the Squalicum Harbor Marina Center, off Roeder Avenue. An educational display describes intertidal life.
- Remember when you walk on the beach, your feet are lethal weapons; try to keep your steps on top of marine life to a minimum. Walk on the higher, drier beach when not observing the life beneath your feet.
- If you turn over rocks or logs, put them back as you found them. While keepsake collections are fun, it's best to leave shells, rocks and driftwood for future beach visitors to enjoy (and for marine animals, such as barnacles and hermit crabs, to use as habitat.)
- Consult the Washington State Department of Fisheries for regulations on shellfish harvest, red tide and chemical pollution. Licenses are required to harvest some shellfish. The department's 1990-91 shellfish guide is available at the Larrabee State Park office, and at outdoor recreation and tackle stores.
- You'll see more at low tide: consult tide tables in the yellow pages "EZ" section of the Bellingham phone book, or purchase a small pocket tide book.

Another part of sea star anatomy are the tiny, crab-like pincers called pedicellariae that cover its arms, which you can see with a 20x hand lens. The pincers are used as a defense mechanism, to keep plants and animals from landing and growing on the sea star. As you walk the beach at Larrabee, don't forget the many animals that live right under your feet. Take a look under the sand, too: You'll find an amazing variety of marine worms living in the mud. I saw more animals at Larrabee than I could write about. I hope I have whetted your appetite to do some beach combing and exploring yourself. A word of caution and warning: Remember you are a visitor to the beach, and the animals and plants you see are living creatures. Treat them with the respect they deserve.

Thomas Noland is a naturalist whose favorite topics are insects and marine biology.
hen I came from West Germany last September, I knew little about the Pacific Northwest. I knew something about the United States, having spent almost half a year in travel across the country five years ago. I found most Americans helpful, courteous and outgoing. But living in one place for an entire year is a different story. There is no escape — you must be ready to encounter, as the Germans say, “the other side of the coin.” I came ready and eager to discover Bellingham. My introduction was overwhelming. Two friends, one from Germany, took me to see Chuckanut Drive. It was a beautiful day, the air fresh and clear, the low sun soaking the impressive scenery with orange light. My friends and I jumped out of our car to enjoy the wind and warming sun. Other cars drove past, people who had chosen the same scenic route. They stopped, as we did, but did not even leave their vehicles. Strange, I thought, but then I remembered tourists I had seen in American national parks. They make sure to drive every “scenic loop,” but never hike anything longer than a paved, half-mile trail.

I find a lot I like about America and Americans, with their strengths and weaknesses. But I can’t get over my impression that the reluctance to leave their cars is somehow symptomatic of something deeper. I know this is a generalization, but I observed Americans build a certain distance between themselves and the insecurities of “real life.” Like Peter Sellers in the movie “Being There,” they seem to carry around a remote control to switch the channel in case they do not like the program.

As another example, I remember a trip to California during Christmas vacation, when my friend Eckhard and I camped along the California coast.
One day we watched a father and his two sons preparing for a hike. It took them quite a while to dress up, with all their equipment -- backpacks, sunglasses and knives. They left with the faces of men undertaking a serious mission. After less than one hour, however, they were back. I could hardly believe they had completed their mission.

I could only conclude they thought camping out meant playing a short version of the "discovering nature game." We were also stunned by all the people acting out their own soap operas in front of their recreation-vehicles. They were happy adjusting their vehicle's awnings to the sunlight and rearranging chairs ten times a day. Acting out their little dramas replaced interacting with nature.

There is another part to the story. I have met many people who feel a strong connection with the place they live. They have chosen Bellingham because they love nature and the great outdoor opportunities this small city has to offer. These people should enlighten others who take nature's benefits -- clean air, unpolluted streams, and recreational use -- for granted.

Maybe I feel that way because I come from a country where there is no healthy forest left. The destruction caused by acid rain and other pollutants taught me to appreciate mother nature's miracles. I wonder if it always takes disasters to wake people up. Why are trees in the Northwest not fully protected? Public agencies such as the Forest Service should lead in conservation, instead of putting ancient trees at the disposal of clear-cutting timber companies.

Driving between clearcut hills along Mount Baker Highway, or Highway 20 along the Skagit River, I feel sad and angry. A friend recently heard a logger say: "I don't understand why they want to preserve all these damn trees -- they look all the same to me!"

I wish Americans would learn from the disasters and mistakes of other countries, but in America I discovered ignorance about different cultures and about international politics. When the Wall between East and West Berlin came down November 9, I happened to watch the 6 p.m. news at Plaza Pizza on campus. While I was emotionally overwhelmed, the people around me were busy munching their pizza slices, showing no interest in the historical event. This illustrates American students' inadequate background about European countries.

There is another side to the coin, too. Many students have shown passionate interest in my opinion on "all the exciting things that are happening over there". But over all, Germans back home tend to be much more aware of politics. After class or after studying at night, my fellow students and I often went to one of the numerous cafes or "Kneipen" to discuss current news. We, as students, tried on our own to compensate for the lack of diversity in our education.

Here at Western, no one wants to waste time on "useless" discussions. After class everybody hurries home or to the library to study for his or her next exam. The United States educational system, as I observe it, grooms students to be competitive; it isolates students from each other instead of teaching them to cooperate. As a result, most American students I know do not see the point of working together, as a team. Yet it will certainly take cooperation, not competitiveness, to protect and insure the future of the planet Earth. Cooperation should be a primary goal of higher education.

"There is no major problem in matters of the environment, population, energy, etc. that can be resolved by a single discipline," writes John Cairns Jr, Director of the Center for Environmental and Hazardous Materials Studies at the Virginia Polytechnic Institute. I agree, and therefore think highly of institutions that have already taken leave of the "reductionist approach," as Cairns calls it. Huxley College is such an exception. Instead of "determining how things work by isolating the components from each other," Huxley seeks to bring together various disciplines, to train students to deal with the complex array of environmental problems. I hope this approach will make its way in the U.S. -- and in Germany as well.

I disliked many things in Germany when I first came to North America, such as stubbornness, per-
I have learned there are people in Bellingham and at Western who care about the environment, who think globally and act locally.

Despite the obvious inequality and injustice, I found many Americans are proud to be American. But I wondered if they are proud of their nation's potential, or of its actual achievements. Some Americans who are "less patriotic" than the majority realize the boundaries of American freedom. Politically aware people are frustrated, because in the American two-party system, all they can do is vote the lesser of two evils. In West Germany, a small party like the Greens has a major influence on the two dominant parties, the conservative CDU and the social-democratic SPD.

Since "green" ideals and demands for environmental protection have attracted more than five percent of the voters, and the Greens have been represented in the West German parliament for the last decade, the big parties try to incorporate "green" ideals in their concepts. "Being green" has become good politics.

The Greens' success in West Germany may not be transferable to the U.S., but Americans can learn from it: Individuals do make a difference when they cooperate and communicate their ideas and programs to the public.

People around Bellingham have realized they have several means to put pressure on policy-makers. Grass-roots groups such as FOCUS (Forest Concerns of the Upper Skagit) fight to stop clearcutting in the Skagit valley. The Ancient Forest Rescue Expedition travels over 40 states with a giant log, educating people about forest issues.

These efforts encourage me, and help me tolerate the frequent superficiality of everyday American conversation. I have learned there are people in Bellingham and at Western who care about the environment, who think globally and act locally. Since I have become a graduate student at Huxley College, I look forward to another year, and to becoming one of them. ♦

Ruth Noellgen studied human biology in West Germany. Her current interests include toxicology and environmental writing.
Local farmers prove that an eye on the fields and a heart in the soil really works.

The rich dark soil lay in wait for spring planting. As I bicycled toward the corner of Hemmi and Medcalf roads, I noticed a modest white house set back from the country road, looking down from a rise upon well-tended vegetable fields.

Brent Harrison's five-acre farm has supplied summer and fall vegetables and herbs to Bellingham markets for six years. When I visited Brent this winter, I learned his business as a produce grower evolved from his large family garden. The three acres he tills produce a cornucopia of crops for local markets and for his own family: peas, cabbage, carrots, squash, potatoes, tomatoes, sweet peppers, spinach, beets, garlic, fresh herbs, shallots, and watermelons.

As a botany student from the East Coast, I was interested in finding out about small-scale agriculture here in northwest Washington. When I drove across eastern Washington on my way to Bellingham two years ago, I saw large orchards and expansive fields of wheat — important sources of Washington's agricultural wealth. But off the Mount Baker Highway, I recently met Brent Harrison and Mike Finger, two farmers doing things differently.

A few miles from Brent's farm, Mike grows raspberries for local markets and restaurants. He rents the five acres of land where rows of carefully tended raspberry bushes bear sweet, delicious fruit each summer. On another portion of his farm, he plants a variety of vegetables and herbs, including lettuce, tomatoes, squash, and garlic. In addition to local sales, Mike wholesales some of his crop to Seattle. In growing produce for sale, Finger has discovered marketing is critical. "Farming involves 10 to 20 percent growing the crop and about 80 percent selling it," he told me.
The 10 to 20 percent can be labor intensive, as I saw at both farms. To harvest his berry crop, Mike must hire about 30 people to pick more than 20,000 pounds off the bushes. In the past, some Western students have spent part of their summers working in the berry patches. Brent hires people with an interest in farming to help with tasks such as hand weeding and harvesting in his vegetable fields. Both farmers spend a lot of time in their fields, monitoring and improving the soil's fertility.

Like other farm lands, the soil these two men farm must be constantly enriched in order to remain productive. Instead of typical chemical fertilizers, they apply solid and liquid manures, blood, bone and bean meals, mushroom compost, straw, and rock phosphate to maintain nitrogen, phosphate, and other nutrient levels. Soil testing helps determine the health of their fields and correct deficiencies. They recognize the soil as a living ecosystem that needs nurturing to continue to produce healthy crops.

Finger's and Harrison's farms represent a new relationship with the land, one I would characterize as stewardship instead of ownership. Food is grown by building up the soil rather than treating it harshly. You won't find pesticides, chemical fertilizers, or weed killers on their farms because they are certified organic growers. Their methods aren't really "new," for organic practices have been used for thousands of years.

However, organic farms depart from the majority of United States agriculture, which uses huge inputs of chemicals to sustain crop yields. Chemical farming has become standard operating procedure for most large and small farms. One consequence of this chemical approach is many people question the safety of the food they buy. Is it free from chemical residues that may have long-term, adverse health effects? Will some other chemical take the place of Alar, or some other produce replace Chilean grapes, as sources of concern over unseen health risks?

Fortunately, those who want greater assurance of safe vegetables and fruits have alternatives. Growing your own produce is possible, given the time, space, and patience. Another choice is to buy from the organic produce sections in most Bellingham markets. Depending upon where you shop, the selection can be varied enough to compare with that of chemically grown produce — and some of this organic produce, like that from Brent's and
Mike's farms, is grown right here in Whatcom County.

Washington and Texas are the only states that provide regulations for certifying organic growers. The WSDA Food Inspection Division visits organic growers annually to ensure they can sell their produce as "certified organically grown." Both Harrison and Finger have this certification, which involves laboratory analysis of their produce, checking of their farming techniques, and examining what they add to their soil. A "certified" label from the Department of Agriculture gives consumers some assurance of safety that is missing from other, nonorganic foods.

I was interested to find out why these organic growers do what they do. While making money is an important factor, their farms are not their sole means of support; both Harrison and Finger have jobs off the farm. I got the impression that both men like to work with the land, growing food by hard work and ingenuity. They also find pleasure and reward in experimenting with and observing happenings in the field. They have practical attitudes toward organic farming, as well. Brent expressed a desire to keep the soil and ground water relatively free of chemical residues. Mike noted that some believe organic methods are "God's type of farming," but any form of agriculture can degrade the environment. Ideally, the goal is to minimize the damage.

These two farmers are certainly in the minority when it comes to abstaining from man-made chemicals. In 1987, only 41 of the thousands of Washington farms were certified organic growers.

In Bellingham, we have the bonus of access to some of this fresh, healthy produce. The Bellingham Food Co-op, Haydens, Cost Cutters, and Haggens carry Mike's and Brent's vegetables, herbs, and fruits; other supermarkets also stock organic produce. Through buying Whatcom County organic produce, we can show our support for Brent, Mike and other local organic farmers.

Paying the extra cost for organics is worth it for many good reasons: good health, clean ground-water, productive soils, diverse wildlife, and lower energy use.

Without these benefits, nonorganic produce may be more expensive in the long run. Perhaps our demand for fresh, locally-grown organic produce will encourage other growers to adopt principles Mike and Brent use every day. Mike Purcell is a graduate student studying plant biology at Western.
Environmental journalism students have listened to their instructor (and Planet advisor), Michael Frome, talk about interviewing long enough to decide to turn the tables and interview him, as follows:

PLANET: What are some notable interviews you've conducted?
FROME: Do you mean with notables? Or interviews I most remember?
P: Let's say both.
F: Starting with the latest, I've enjoyed interviewing people for my recent and current books. For The Future of the National Parks, I talked with Secretary of the Interior Donald Hodel, former Secretaries Cecil Andrus, Walter Hickel and Stewart Udall, plus the director and former directors of the National Park Service, plus park concessionaires, park superintendents, rangers, and others.
P: What about former Secretary James Watt?
F: He didn't care to see me, but that was his choice. The others were willing and open. Most people are.

P: Do you use a tape recorder? Doesn't it tend to make people cautious?
F: I think a tape recorder is essential and critical. It helps get things straight. I learn something new and different whenever I play back an interview. In due course, the taped interview takes on a value of its own. In 1966 Doubleday published my book Strangers in High Places, about the Great Smoky Mountains of North Carolina and Tennessee. I wish I had taped my interviews with the old mountain men, bear hunters, moonshiners, and Indian shaman -- voices of another age. I wish I had taped people like Robert Frost, the poet, and Jan Masaryk, the foreign minister of Czechoslovakia, whom I interviewed when I was a young reporter, shortly before he committed suicide.
No, I don't think a tape recorder inhibits dialogue, just so long as it's not shoved under somebody's nose and the interviewer is well prepared.
P: In class you've emphasized preparation --
F: Correct; if you go in cold, you'll come out with a pretty poor story, at best what the subject of the interview wants you to have. The more you know in advance, the more you'll learn. That's what environmental journalism is all about.
P: Exactly how do you mean?
F: In our free society the role of the media should be to provide Americans with sound data as the basis of intelligent decision-making. The 1990s clearly present a decade of decision-making in the field of the environment. Yet news people report superficially, scratching the surface. Tragedies like Valdez, Chernobyl, Bhopal, Love Canal and Three Mile Island are covered as "stories" for the morning edition or the nightly newscast by reporters with little background. Consequently the public is poorly served. Few news people dig through files or penetrate the doublespeak of politicians and polluters. But the public needs to understand the ramifications of a degraded environment and the options for coping with it. Environmental journalists can and will make a difference.
P: Do you see this happening anytime soon?
F: Absolutely. The media has a long way to go, but it is doing better. Earth Day 1990 marks the watershed, identifying the environment as one of the major stories, if not the story of the decade. As we continue to deplete natural resources, foul air, water and soil with hazardous poisons, and threaten life on the planet, the news media must pay the same kind of attention to the environment as to city hall, the White House and the baseball park. Moreover, it needs to quit being bland and start being bold about it.
P: What future do you see for WWU environmental journalism students?
F: I see our students as professionals who will be much wanted and who will make their own future. They are doing it already: Neils Nokkentved, a former Planet editor, recently won an award for his investigative reporting in Idaho. Colleen Majors is building her excellent nonprofit environmental radio service. Lisa Friend is on the staff of the recycling service here in Bellingham, writing, editing, spreading the gospel. They are doing what they want to do and others will follow, all making a difference.
P: What have you learned as a writer turned to teacher?
F: Two points come to mind. First, I'm still working to be patient -- to keep standards high but allow students time and space to learn and develop. Second, and maybe more important, students with whom I come in contact are caring and sharing people, who want to give to society more than they take from it.
P: Any last words for the interview?
F: Tell it like it is, without fear or favor.