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Aaron Coffin
Western Washington University

Sara Olason Western Washington University

Huxley College of the Environment, Western Washington University

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the Planet

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Spring, 1989

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STAFF

Editors: Aaron Coffin, Sara Olason Photo Editor: Michael J. Lehnert Typesetter: Ellis Baker Layout Adviser: Rod Burton Faculty Adviser: Michael Frome

Writers: Martin Laczny, Geoff Tallent, David Einmo, Jeff Pedersen, Pam Wood, Mark Hines, Annette Zukowski

Front cover: Logging debris in Smith Creek, near Lake Whatcom. Photo by Aaron Coffin. Back cover: Emily Dagg-Olsen working in an Outback Farm garden. Photo by

Michael J. Lehnert.



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The A.S. Environmental Center Viking Union #113 Western Washington University Bellingham, WA 98225 phone: (206) 676-3460, ext.5477

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EDITORIAL

-- Spring Report Card

by Aaron Coffin

This Spring edition of The Planet is the year's final publication of the A.S. Environmental Center, and time to hand out environmental grades for some well known people. These grades are purely the opinions of this writer, and should not be construed otherwise.

President of Western Kenneth P. Mortimer: B+ -- for getting Better.

While A's are reserved for all-out environmental Advocates, Mortimer gets high marks for his support of the preservation of the Outback Farm, and his open ear to environmental concerns at Western. It would be great to see President Mortimer become an environmental leader among Washington's college administrators.

Governor Booth Gardner: C -- for more Commitment necessary.

Booth supports a ban on oil exploration off the coast of Washington and is also concerned about the clean-up of the radioactive mess out at Hanford. However, Gardner should take a stand against the transformation of Washington from "The Evergreen State" to "The Clearcut State" and speak up for a certain endangered species of owl.

The Western Student Body: D -- for Dormant.

Low marks for apathy and moldy sandwiches in the recycling bins. This school could be setting the pace. Recycled paper on campus, environmental education, and edible food at the cafeterias should be immediate demands.

Mayor of Bellingham, Tim Douglas: D -- for Development.

Bellingham seems poised on the brink of becoming North Tacoma, as Mallmania sweeps the Northwest. Mayor Douglas and Bellingham City Council should act now to preserve the beauty of this area.

President of the United States, George Bush: F -- for Fraud.

Lies and deceit. Perhaps it's about time to use the I word.

The People of the United States: C -- for Comatose.

The Silent Majority is still watching re-runs of "Happy Days".



Photo by Beth Fries

The tree at a send-off rally at the University of Washington

destroy old growth ecosystems a lot faster than sun, wind, water and time replace them.

If current logging rates continue, the Northwest could lose 70 percent of its spotted owls in the next 50 years, along with the massive, wise old Douglas firs themselves. The U.S. Department of Fish and Wildlife's proposal to add the spotted owl to its list of threatened species may help

save old growth for owl habitat. But the scuffle over the owl takes our attention away from other factors that have caused millworkers to lose their jobs: mechanization of mills and export of raw logs.

U.S District judge William Dwyer will hold a hearing on 425 proposed timber sales June 13. AFRE member Beth Fries said, "This is the final time for ancient forests."

Bellingham's Puget Sounders promotes environmentalism for everyone

Puget Sounders is a non-profit, Bellingham-based environmental education group that has emerged as an active force in local and regional issues. The group's aim is "to get the public involved in environmental conservation," said founder Arnie Klaus. "Showing people that through their involvement they can affect the quality of life."

truck last April. They stopped at cities and towns across the U.S., and were

gon May 19.

expected to return to Portland, Ore-

Timber cutting has reduced Wash-

ington and Oregon's natural Douglas

fir forests to a fraction of their original

acreage. Only a few percent of Califor-

nia's original redwoods remain (see

article by Martin Laczny). And south-

east Alaska's Sitka spruce forests are also disappearing. Estimates of ex-

actly how many acres of old growth

are left vary widely depending on the

source, but it's clear that chainsaws

These are not empty statements. In less than a year, Puget Sounders has grown to more than 250 members and has an impressive record of involvement and accomplishments:

• Initiated the public campaign that resulted in the addition of 98 acres of land at Clayton Beach to the Larrabee State Park.

 Coordinated volunteers in the oiled bird clean-up following the Gray's Harbor oil spill.

 Researched secondary sewage treatment programs for Bellingham that may provide 75 percent federal funding from a program for innovative and alternative applications. Puget Sounders also has actively ongoing programs, including an Oiled Bird Rescue network and a "Trail Net" effort to preserve and connect Bellingham's 47 miles of trails into a comprehensive urban trail network that would be one of the largest in the United States. In addition, Puget Sounders regularly sponsors educational programs for the Bellingham area community.

Photo by Michael J. Lehnert

Members are often actively involved; their activities depend on the issues each person is interested in, said Klaus.

On April 15, Puget Sounders acquired a toll-free phone number (1-800-447-3330) to expand the scope of its activities to a state-wide level.

Bellingham area people interested in joining or volunteering with Puget Sounders can call (206) 676-8094, or write to: Puget Sounders, P.O. Box 4112, Bellingham, WA 98227.



Arnie Klaus in Puget Sounder's office in downtown Bellingham.

Running parallel between the Fairhaven parking lot and the Outback Farm, in a densely forested ridge, are two rustic cabins looking much the same as when they were built in 1928.

The Outback cabins, old but sturdy looking, were built by Farrar and June Burn. The adventurous couple, returning from a trip to Alaska, fell in love with the Puget Sound region and bought two acres of land, then known as Juneacres. They were homesteaders, living off the land and appreciating the simple things in life.

In 1974, a WWU cadre sought to re-

turn to that simple way of life: The

Outback Farm Cabin Project was established. Led by Fairhaven instructor Andy Kooh, students returned the cabins to their original condition and tried their hand at homesteading.

The upper cabin contains and the Couther Form library and two

the Outback Farm library, and two sceping areas. The lower cabin pro-vides sleeping for two. There is no running water and no electricity. The sole energy source for heating and cooking is a wood stove.
Students involved in the project were

expected to chop and haul their own wood, haul water from the Fairhaven residence halls, practice organic gardening, cook their meals, develop

compost piles, and handle livestock. They learned to live off the land, much like the Burns family did in the 1920's. They developed a healthy respect for the Earth and learned self-reliance. The cabin project was like a dinosaur from some ancient time -- reminding us of how life used to be. Then something happened.

The project was terminated last fall; the cabins barred and locked.

The cabins may never be lived in again. But they continue to rest on the ridge where they were built, visible from the roadside -- symbols of a simpler time.

The Outback farm Western administrator that the Outback was a hazardous area. The Uni The Outback Farm-usually a place become self-insured and the cabins, built in 1928, did not meet building codes. The sauna, crudely built but functional, was also considered potentially hazardous. To make matters worse, pressure for increased parking had never been greater and the Outback, sandwiched between the Fairhaven dormitories and Buchanan Towers, could be prime parking lot material. of calm, quiet, and serenity -- became a scene of turmoil and chaos one day last fall when an unannounced bull-dozer in the service of Western Washington University destroyed an outhouse and sauna built by Fairhaven tudents. Tenants were evicted and students. Tenants were evicted and padlocks were put on the rustic cabins, Suddenly the Outback-a symbol of student self-determination for nearly 20 years- faced the danger of extinc-

But now the future of the farm may be brighter. Fairhaven and Huxley deans, seeking to preserve the Outback as a place for students to gain hands-on experience in sustainable agriculture, quickly put together an ad-hoc committee to develop an agricultural ecology major incorporating laboratory studies at the Outback Farm. The major consists of 6 core courses and requires students to take at least one laboratory course in sustainable agriculture at the Outback.

Ernst Gayden of the Huxley faculty, and other committee members stress the importance of teaching students sustainable agriculture techniques.

"We're polluting ground water and streams, causing erosion, and producing vegetables that contain residues of herbicides and insecticides with commercial agricultural methods," Gayden said.

"Sustainable agriculture uses the ground to grow food with minimal soil loss through erosion, and without pollution of ground or surface water. The food produced is clean and uncontaminated by chemical residues."

Gayden is optimistic the new agricultural ecology major will be approved and funding provided to hire an instructor to lead lab work at the Outback.

Not everybody, however, is as happy with the major. Connie Stone, committee member and sustainable agriculture instructor, feels the major doesn't place enough emphasis on hands-on work at the Outback. "The emphasis is being placed on marketing and building rather than systems thinking," Stone said. "The Outback and sustainable agriculture have been a way of getting away from that capitalist philosophy because the world can't sustain that kind of thinking."

"The administration's attitude seems to be that 20 students a quarter is not enough to justify our use of the land."

-- Gary Bornzin

Stone feels students who major in agricultural ecology will get an overabundance of training in economics and marketing but may never learn to actually grow plants. However, she concedes that any major incorporating work at the Outback is better than none at all.

Some Outback supporters contend the agricultural ecology major isn't necessary to legitimize saving the farm. Fairhaven instructor and committee member Gary Bornzin believes the Outback has always been a healthy,



Photo by Michael J. Lehnert

productive outlet and a valuable resource, cared for and appreciated by the students. Bornzin points out 610 students have enrolled in 43 classes and 91 students have completed 289 independent study credits at the Outback since 1970. Currently about 20 students utilize the Outback each quarter.

"The administration's attitude seems to be that 20 students a quarter is not enough to justify our use of the land but I think it is," Bornzin said.

"The feeling was we needed a more substantial program and the degree will provide that but it won't replace the things that have been going on out there for the past 10 years."

The Outback has had its ups and downs, its share of supporters and critics, and that is not likely to change. As Western becomes an increasingly competitive and respected university and enrollments increase, administrators juggle limited funds and assess priorities. Places like the Outback become vulnerable.

How can the Outback -- located on five acres of land with a creek running through it, once known as Hidden Valley -- remain unchanged in an evolving university? Outback supporters themselves disagree on whether the Outback should modernize with the rest of the university. Some think students should be left alone to live in the rustic cabins and cultivate their gardens without intervention from the administration.

Then there are those, like Gayden, who envision great changes. Possible uses for the Outback in the future, according to Gayden, are as a place to teach horticulture, alternative master gardening and permaculture, and as an alternative technology site, incorporating solar power, water, wind and other natural sources of energy.

"We would focus on energy and food growing," Gayden said. "It would be a place where teachers from public schools bring their classes to see alternative technology."

The Outback has had its ups and downs...and that is not likely to change.

The Outback Farm and the green, fertile land on which it rests have great potential. And fortunately, smothering the land with asphalt to create another parking lot is no longer seriously considered. President Mortimer and the university parking advisory committee have expressed a desire to see the Outback remain intact. Most Western faculty and students hope the Outback farm remains a place where students can grow, learn, and develop a healthy understanding of the earth and their relationship with it.

by Mark Hines

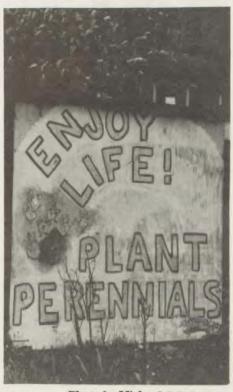


Photo by Michael J. Lehnert

Trans Contract of the Contract

Pesticide detective scopes herons, habitat

A gentle morning breeze sweeps the saltwater-laden spring inland toward a wooded stand, where a perspiring wildlife toxicologist brushes aside a stinging nettle before pushing his way through elderberries and salal to reach his goal: a healthy Great Blue heron colony on Samish Island, about 20 miles south of Bellingham.

Don Norman, a graduate student at Western's Institute of Wildlife Toxicology, is there to collect egg shells discarded by herons from their nests. Later, in the institute's lab, he will test membrane remaining inside the shell fragments for chemical contamination.

Collecting shell fragments is one of two nonlethal methods pioneered by Norman for monitoring chemical contamination levels in Great Blue herons. Another method salvages chicks -- alive or dead -- that fell or were pushed by siblings from the nests.

The glamorous myth of a researcher shouting "Eureka!" in the lab is just that: a myth.

"I haven't found anybody who's ever used these techniques," Norman told me in the Arntzen coffee shop, adding that his methods, which do not affect the overall health of heron colonies, are as valid as lethal methods used in the past.

Norman's heron project differs from most institute projects. It emphasizes "ecotoxicology," a general approach to studying environmental effects of chemical contamination. Institute projects usually look at the effects of individual pesticides on certain species within a habitat, including a specific, commercially grown crop.

Ecotoxicology is a new word to me. As Norman explained, it is still an imprecise science. Researchers inves-

Wildlife

tigate diverse areas -- water quality, the health of plankton and other basic food sources, the health of salmon and other fish, and herons themselves -- providing an accurate, overall picture of the environment and contributing to better decision-making.

Because herons are at the top of the food chain, they make an excellent indicator species for marine shoreline ecosystems -- much as northern spotted owls indicate the overall health

of old-growth forests.

During his three years of study, Norman spent many hours in the field, rain or shine: "You're out there and you're getting stung by stinging nettles and, when you're looking for shells, you don't wear your good clothes because the birds are always regurgitating or defecating over the edge of the nest on you."



Photo by Michael J. Lehnert

Each time he obtained samples, Norman returned them to the institute lab for chemical analysis. The glamorous myth of a researcher shouting "Eureka!" in the lab is just that: a myth. His long hours of painstaking work identified moderately high levels in all samples, about 3 parts per million in some, of organochlorines and polychlorinated biphenyls (PCBs). Organochlorines include DDT and DDE, a related component. PCBs are a mixture of more than 209 individual compounds, manufactured until banned in the United States in the early 1970s.

As we talked, I learned these particular chemicals accumulate in the fatty tissues of herons and other animals because few enzymes or bacteria occur naturally to break them down. In fact, Norman said, PCBs and DDE are all over the world, including Antarctica, so it's typical to find these compounds in the Puget Sound

"As we became more knowledgeable of biology...we moved from identification of birds to ecological understanding to conservation."

-- Don Norman

Norman repeatedly visited three of the approximately 40 heron colonies in Washington, concentrating his research in colonies on Samish Island, in a national wildlife refuge on the Nisqually delta and on Dumas Bay, north of Tacoma. He told me the largest colonies in Washington are located in Skagit and Whatcom counties, all on private property: Point Roberts, with about 700 mating pairs; Samish Island, 350 pairs; and Birch Bay, 200 pairs.

Although chemical contamination had earlier weakened the eggs of many herons -- drastically affecting reproduction rates in the '50s and '60s -- in the 1970s, the heron population appeared to be growing. Now the number of herons has declined to about 2,000 birds in Washington, with the same number in British Columbia. Norman points to lingering chemi-

cal contamination, habitat encroachment and predation for the continued decline of this endangered species.

Norman's interest in Great Blue herons is a natural extension of his life in Louisiana, where he and his 10-year-old buddies ardently studied birds. They watched Louisiana's state bird, the brown pelican, disappear, giving them a different perspective from most bird lovers: "As we became more knowledgeable of biology -- moving from the little Golden Guides to the Peterson guides to the taxonomical guides -- we moved from identification of birds to ecological understanding to conservation."

Toxicology

In his quest to conserve the birds he loved, Norman moved to Seattle, where his father grew up, and majored in oceanography at the University of Washington. After graduating, he worked at UW as a research technician for the environmental health program. He learned of the institute, scheduled a meeting with then-director Ron Kendall and, two weeks later, found himself studying wildlife toxicology as a graduate student.

"You can tell a lot about an ecosystem -- a forest or a wetland -- by looking at contaminants..."

-- Don Norman

"Wildlife toxicology is a method to study environmental issues. It's also its own entity, its own discipline. You can tell a lot about an ecosystem -- a forest or a wetland -- by looking at contaminants found within its biological organisms. These wildlife exist despite runoff from agricultural products, hazardous and industrial waste processes, all of which are sources of

contamination," Norman told me.

"This research is not just for the animals' sake; it's to help humans ensure their own health and the health of economically important marine species. I'm trying to do research that will help maintain our standard of living while preserving wildlife.

"This research is not just for the animals' sake; it's to help humans ensure their own health..."

- Don Norman

This summer, Norman will complete his research and publish the results. His next endeavor is a three-year, paid scholarship as a doctoral candidate at the University of Pennsylvania. Although his ecological studies emphasizing ornithology will take him far from the wooded wetland of Samish Island, Norman's goal is still the same: asking the important questions relating to long-term preservation that are never asked.

by Ellis Baker

Opportunity, adventure draw Netherlands student to Huxley institute

Eric Hol of the Netherlands wasn't sure what to expect when he arrived in Bellingham last year to study at Western's Institute of Wildlife Toxi-

He soon discovered many differences between the Netherlands and the United States. For instance, American's have a non-stop lifestyle: "In the Netherlands, life stops at six. Everything shuts down. Here life goes on 24-hours-a-day and I just love it. It's so dynamic." He particularly likes working in the lab any time he chooses. "Sometimes you get ideas in the middle of the night and you have to work it out and you have the energy ... In the Netherlands, you can't do that."

Hol now spends those long days and nights in the lab developing nonlethal techniques to test birds for chemical contamination. In the Netherlands, he spent more time testing spiders: "It's impossible to do a study of mammals and aviary there. It would involve such a big part of the Netherlands. So that's why you hear we use spiders. You can easily keep track of where they are going. Even some-times beetles are not usable because they run out of the plots.'

Hol has a masters degree in environmental sciences with an emphasis on soil pollution and a second, post-doctoral degree in wildlife toxicology, both from Agricultural University in Wageningen, Holland.

Hol's chosen profession, wildlife toxicology, is highly valued in the Netherlands, but he'd rather explore the world than stay home: "The reason why I'm here is more choosing for adventure. ... I've got the opportunity to travel around the world and work in other places. I think that's pretty important to me. I would like to prefer that over making a lot of money and staying in the same place.

Pesticides and other chemicals are regulated in the Netherlands, but pre-marketing studies are not required of chemical manufacturers as they are in the United States: "I think that will come in three or four years, but for this kind of work I'm doing here, there are simply no jobs in the Neth-



Photo by Michael J. Lehnert

erlands now...

"Pesticide use in Europe -- the levels they use are not as high as here and the most dangerous chemicals are already banned from the Netherlands. I mean, use of o.p. pesticides is pretty low." O.p. -- organophosphate -- pesticides, such as diazinon, are among those researched by Institute staff and students to determine how wildlife are affected by those pesticides in the environment.

Culturally, there are many differences between the Netherlands and the United States. Hol noticed that American cities are designed around one item: cars. Most Dutch walk or bicycle the way Americans drive or

fly.
"Going somewhere here means you're
"Go or to Segoing to Vancouver, B.C., or to Seattle. In the Netherlands, going that distance means you're leaving your country. I lived 50 minutes from Amsterdam by car. If I go down to Seattle, it means I go the same distance to Brussels, or wherever. Going to Portland covers the distance from where I used to live and Paris.

"You start thinking on a completely different scale here: larger, wider, bigger... We're living so close together over there it's maybe something which, on the other hand, is really amazing for an American to experience.



The detrimental effects of debris torrents could increase the lake's turbidity (making it unusable as a water source), destroy fish runs and damage property. Many residents remember the 1983 debris torrents when several area homes were swept into the lake.

Because of these potential dangers, logging in the watersheds has met resistance from Lake Whatcom residents and environmental groups, such as the Washington Environmental Council (WEC). One such battle was the appeal over Trillium Corporation's logging in the Smith Creek Watershed.

The Trillium Corporation, a local development company, owns 1,600 of the 3,600 acres in the Smith Creek Watershed. In the late summer of 1988, the company filed an application with the Department of Natural Resources (DNR) to log 120 acres which included Creek No. 33 (a tributary which flows into Smith Creek). While the DNR was investigating the site, the Washington Environmental Council (WEC), a non-profit organization, and Dave Cottingham, an area resident, became aware of the application and felt strongly that the area around the creek should not be logged.

The detrimental effects of debris torrents could increase the lake's turbidity (making it unuseable as a water source), destroy fish runs and damage property.

DNR last fall granted Trillium a Class 3 logging permit which does not require an environmental evaluation and would have given Trillium the right to log to the edge of the creek. This is when the conflict began. "When controversy comes to a head, then the DNR has an obligation to make a decision on the best biology and science," said DNR Governmental Forester Dick Skvorak. The DNR site experts decided that there was not "a potential for substantial debris flow," but Cottingham and WEC did not agree since the area had a history of debris torrents.

Cottingham told The Planet this area "should definitely have been given a Class 4 permit not only because of the potential for substantial debris flows but also because of the old growth in the Smith Creek Watershed." A Class 4 permit requires an environmental impact assessment of the area to be logged. In this case, the State Environmental Protection Act (SEPA) would take precedence and require an environmental study for any major action, Cottingham said.

"The DNR is working amidst regulations which are loose in some areas and tight in others. Its intent appears to be to protect the industry," Cottingham said.

WEC and Cottingham filed a joint appeal with the Forest Practices Board in the fall of 1989, which led to an out-of-court settlement with Trillium. The settlement stipulated that Trillium would underwrite a private environmental impact assessment, and would not cut within 100 feet of Creek No. 33 unless and until evidence shows logging will not damage the stream. While awaiting the outcome of the assessment, Trillium will submit applications for logging only 275 acres. Also, the company must give 30 days notice for upcoming logging applications and allow Cottingham to inspect the sites.

But Trillum is under no legal obligation to follow the outcome of its own assessment, which is not yet known. Shelley Weisberg, a regional repesentative of the WEC, feels community pressure will be a very important force in deciding Trillium's actions.

Jim Johnston, fisheries biologist with the Department of Wildlife, expressed further concern, "Anytime you log an. area there are going to be impacts. Fish resources were severely impacted by the 1983 slide. The cutthroat population in Lake Whatcom was reduced by a half, and it nearly wiped out the sockeye salmon in the lake; the population declined from 5,000 fish to where you can count them with four hands. Logging has caused this as far as I am concerned," he said. The fish rely upon gravel for their spawning beds and debris torrents wash away the gravel. Logging accelerates this process, remarked Johnston. Johnston would like to see in-stream rehabilitation as co 671- 303 part of any logging in the Lake Whatcom area.

Photo by Aaron Coffin

Johnston, WEC and Cottingham are not alone in their efforts to to protect the lake. Friends of Lake Whatcom, formed in the fall of 1988 after the Smith Creek appeal, is a broad-based group concerned with protecting the lake through public awareness.

lake through public awareness. Whatcom County Council and Bellingham City Council are in the process of preparing a Water Management Plan. And the Timber Fish and Wildlife Agreement, consummated in January of 1983, was negotiated between a large number of groups including the DNR, the Departments of Wildlife and Fisheries, the timber companies, the WEC, and local Native American tribes. One of the outcomes of the Agreement was that all of the interested groups would be provided with copies of the logging applications. While some feel TFW is a step in the right direction, "just because things are better, does not mean that they are all right," commented Strode.

The Smith Creek appeal and the outcome of the settlement could well establish a precedent for the future of Lake Whatcom and its watersheds. While citizen activism has been instrumental in protecting the watersheds, reciprocal action from the City and County is needed before this area's beauty and resources are sabotaged. Whether we choose to protect these vulnerable areas will have long term effects on Bellingham's quality of life

For further information, contact: Friends of Lake Whatcom c/o Gordon Scott 3112 Alderwood Bellingham, WA 671- 303

by Annette Zukowski



Clearcutting in watersheds increases the likelihood of debris torrents -- particulate matter such as mud, rocks and trees swept into the current and flowing into the lake.

What future

Less than 35 feet from our small boat, a burst of ocean spray erupted into the sky. A 50-foot gray whale surfaced above the Pacific Ocean waves. His triumphant spout sounded like an army of horn-blowing Vikings. With nearly uncontrollable excitement, the 10 of us aboard the guided whale-watching vessel pointed toward the whale. I felt like a child discovering a new world. I had seen many whales on television and movies, but now the artificial screen was gone and I was coming into the whale's living room.

As quickly as he surprised us, the whale dove back into the cold water, raising his tail as if to wave good-bye. I wasn't ready for the whale's departure. I had traveled more than 315 miles to Ucluelet, a small coastal town on Vancouver Island's west side, for the chance to come into such close contact with a whale. My experience was not about to end so abruptly, however. With another burst of air sounding like the synchronized popping of 10 logging-truck tires, he surfaced again, this time bringing two friends with him.

I had seen many whales on television and movies, but now the artificial screen was gone, and I was coming into the whale's living room.

My fascination with the whales intensified and turned to concern when I began to question their uncertain future as they swam toward the Siberian hunters and the oil-polluted waters near Valdez. Off the coast of Vancouver Island, they seemed so unaware of the potential tragedy awaiting them in Alaska.

The whales dove back under, reappeared about every 20 seconds to breathe, then disappeared for five



minutes. The trio continued this cycle until our tired boat could no longer keep up with the mammals, which were longer and appparently stronger than our 35-foot craft.

It was not the gray whale's consuming appetite that nearly led to its extinction...but rather the human lust for whale oil and meat.

I later learned the whales were feeding during their periodic five-minute disappearances. Below, on the sandy seafloor, live tiny crustaceans called amphipods, and tube worms, which the gray whales eat. Resting the side of their heads and mouths against the seafloor, the toothless whales suck in a mass of bottom sediments. The whales select their meals by pushing their huge tongues against the roof of their mouths, sifting out sand and water through comb-like baleen strainers hanging from their upper jaws. The gray whale is the only baleen whale that feeds in this way; other baleen whales strain their food from the ocean waters.

While visiting the Wickaninnish

Centre in the Pacific Rim National Park near Ucluelet, I was amazed to learn from a biologist that it takes at least 100 million of these tiny amphipods to equal the 30-ton weight of an adult whale. Yet these small crustaceans make up the bulk of the whale's diet.

However, it was not the gray whale's consuming appetite that nearly led to its extinction in the late 1800 s, but rather the human lust for whale oil and meat. By the 18th century, Basque whalers had hunted all of the grays in the Atlantic Ocean. The Pacific Ocean nearly followed suit.

Recounting the tragic death of commercially hunted gray whales, Barry Campbell, the Pacific Rim National Park's assistant interpreter, explained the uses of the whales: "The blubber was rendered into oil, and often the meat was then either made into pet food or various dietary supplements, and the bones were ground up into meal."

Campbell said that 120 years ago it would have been unlikely to see the spouting whales I saw so commonly off the shore of the Pacific Rim National Park this spring. Incessant

for Whales?



Illustration by Garth Mix

commercial whale hunting nearly annihilated entire populations. Fortunately, in 1947 international protection was finally given to the grays, and the eastern Pacific herd has increased from only a few hundred whales to more than 16,000. International protection was important because the whales migrate from the Arctic, their summer home, to their winter range in Mexico, crossing four international borders each year.

"The whaling that is occurring in Siberia is a legal loop hole."

--Barry Campbell, assistant park interpeter

While I traveled alongside the whales in a boat, I thought about the hunters. I had seen films of whales surfacing for a breath of life only to be crossed with a harpoon of death. Each time the whales spouted in front of me, I recounted the tragic view I had seen on film. It would be so easy to hunt these whales; they were so confident and unassuming. I won-

dered what would happen to these whales when they completed their northern migration to the Bering Sea near Alaska and the Soviet Union, where Siberian hunters waited for them.

"There is no quote 'commercial' whaling of gray whales going on. There is a quota, however, of about 300 gray whales a year that can be taken by the native people of Siberia

"(The whales) won't swim into the oil and suddenly die. It could be a long-term thing."

--Barry Campbell

or western Alaska," Campbell explained.

However, Campbell said most of the hunts occur in eastern Siberia, where some of the hunters have been accused of commercially selling whale products. "The whaling that is occurring in Siberia is a legal loop hole. It's listed as subsistence whaling, but there are strong suspicions that they not only use the whale meat that they need, they also sell and grind up the meat for mink feed. They have mink farms and they feed their mink with whale. It's not listed as commercial whaling. But there is strong suspicion of there being commercial whaling."

My concern for the whales deepened when I returned to Ucluelet and saw the front page of the Seattle Times: "Tanker in massive spill off Valdez." I knew the whales would be migrating through the same waters that Exxon polluted with more than 10 million gallons of oil. What would happen when the whales sifted through the sandy seafloor off the coast of Valdez, searching for amphipods? Would they be asphyxiated by submerged oil?

I asked Campbell how he thought the Exxon oil spill would affect the whales' future. He sighed. It will be many years before the spill's effect on the whales is understood, he said in a dejected tone.

"It's kind of like the human experience: there are an awful lot of subtle things. Cancer is a subtle thing in some respects, in that most cancer exposure will occur over a 25-year period before it finally develops. It could be somewhat the same with gray whales. All the toxic chemicals that are in the environment -- spills and hazardous materials -- will lead in the end to increased mortality in the whales. But it's not an instant thing. They won't swim into the oil and suddenly die; it could be a longterm thing." He paused, then added somberly, "I don't think anyone knows."

As I took my final glimpse of a gray whale surfacing, then casting his mighty dorsal fin into the air, I hoped the waving of his tail was only a goodbye -- and not a farewell forever.

by David Einmo



Photo by David Einmo

Spirit Eag



Find an environmental issue or area close to your heart and work on it while still in school.

Knowledge of the process will be important when you graduate."

Photo by Pam Wood

Community involvement is an inspiration to all local environmentally concerned people, including Western students. Spirit Eagle is a Western Washington University student, pursuing a bachelor of science degree in environmental studies, with an emphasis on human ecology, environmental resource use and Native American rights. Her concern for the environment and Native American rights has brought her from Orcas Island to study at Western.

Island to study at Western.

I caught up with Spirit Eagle to ask her about her involvement with the Madrona Point issue and to get her perspective -- a Western student who is working on a real environmental issue, not just a class exercise.

Madrona Point is a peninsula of land located on Orcas Island, between Eastsound and Crescent Beach. Spirit Eagle became involved with Madrona Point preservation two and one-half years ago. "I became aware of the

Northwest Building Corporation's (NBC) development proposal on Madrona Point, which is an indian burial ground. The final Environmental Impact Statement had just been released. I learned that the Lummi, whose burial area was impacted by this development, had not been notified. I let them know about it, and from then on,

"The Lummi, whose burial area was impacted by this development, had not been notified."

--Spirit Eagle

my life changed dramatically."

Spirit Eagle feels that Madrona Point should be preserved in its natural state: "It is important to me, because of the environmental and cultural significance Madrona Point possesses.

Madrona Point is sacred land and a place of spiritual replenishment. Thousands of sea birds use Madrona Point. Bald eagles teach their young how to fish between Madrona Point and Indian Island.

"Trees, including Madrona trees, hundreds of years old and a meadow headland at the southern end of Madrona Point, containing many wild-flowers found in the higher elevations of the North Cascades, are threatened. The Point is ecologically sensitive: there are plant species threatened, and animals of special concern. Development of Madrona Point would result in loss of habitat for these plants and animals."

After notifying the Lummi Nation of NBC's proposed development, Spirit Eagle was appointed liaison to the Lummi indians from the Madrona Point Committee. Spirit Eagle has completed a cultural resource survey, which the Lummi indians used in their written

testimony before the San Juan County commissioners and planning commission. She also testified in the hearings.

Her Huxley education has enhanced her experience with the Madrona Point issue: "Huxley College has a very good reputation within the community and state; therefore, Huxley credentials are important to me and my work on

the Madrona Point issue."
She offered some advice to Huxley students: "Find an environmental issue or area closest to your heart and work on it while you are still in school. Knowledge of the process will be important when you graduate. Through my participation with the Madrona Point issue, I have realized state and federal governments are understaffed and can not keep up on all environmental issues. They need to hear from citizens who are concerned about

"State and federal governments are understaffed and cannot keep up on all environmental issues. They need to hear from citizens."

--Spirit Eagle

environmental issues. Individuals can make a difference."

Spirit Eagle's ideal outcome for Madrona Point would be for the Lummi Nation to receive appropriations from

che Bureau of Indian Affairs to purchase Madrona Point from NBC, with enough money to have a caretaker and to manage the Point.

"I feel that Madrona Point should be left as is. Also, the ideal outcome would include the doctor's house, the home of Washington State's first registered female doctor, on the National His-toric Register. I feel the chances for this outcome are excellent.

My conversation with Spirit Eagle led me to believe that recognition for students such as Spirit Eagle, who are working on environmental issues while in school, could promote fellowship and camaraderie, and strengthen community spirit.

by Pam Wood

Madrona Point is a peninsula on Orcas Island, between Eastsound and Crescent Beach. Northwest Building Corporation (NBC) proposes development of the point, while the Lummi Nation claims Madrona Point to be an area of ancestral burial grounds, and the Madrona Point Committee (an Orcas Island citizen's group) supports preservation of the point. The Lummi Nation and the Madrona Point Committee, representing two separate cultures, are werking together for the preservation of a land sacred to both of them.

Currently efforts toward preservation continue. On February 10, 1989, a simultaneous prayer vigil was held on Orcas Island and in Seattle. This vigil was organized by the Church Council of Greater Seattle in conjunction with the Lummi Indians and the Madrona Point Committee. Funding sources are being sought by the Lummi Nation and the Madrona Point Committee to purchase Madrona Point from NBC. Representative Al Swift has asked Congress to appropriate \$1.5 million toward a purchase by the Lummis. New supporters for the preservation include the San Juan County commissioners, Puget Sounders, the Church Council of Greater Seattle, and the Orcas Island business community.

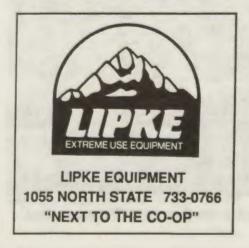
At the same time, NBC's efforts toward development continue.



Illustration by Tony Tenorio

Orcas Island is part of the San Juan Island chain, almost due west of Bellingham. Madrona Point is circled.







Campesinos & College Students



Third World Studies in Mexico

One of the many exciting programs at Huxley College and Western, of which many students are not aware. is Third World Studies in Mexico. The Center for Applied Human Ecology/Appropriate Technology offers these courses in and around Morelia, Michoacan in conjunction with Western's Foreign Study in Mexico program. I was fortunate enough to discover and participate in these programs for the last two winter quarters. They provided me the opportunity for first-hand learning about agriculture, shelter, energy, society, and people in the Third World.

Morelia, Michoacan is located in the central highlands of Mexico, between Guadalajara and Mexico City. The state of Michoacan is primarily agricultural with a temperate climate. The area is also one of the poorest, with many peasants or campesinos practicing subsistence farming or going to the United States for seasonal labor. Morelia is the capitol of the state, and is located in the mountains about 6,000 feet above sea level. The city has about 700,000 people and is growing rapidly, but it still retains much of the colonial appearance of a 500-year-old city.

The first program in which I partici. pated, "The Urban Ecology of the Mexican City," took place in Morelia. Through class assignments, I learned how the city functions. I observed various neighborhoods, noting every form of transportation in the city and what goods were being transported. listing all the goods at the market and where they came from, observing a construction site, and finally drawing a plan of our host household, how the home was made and what the family did. The class took two field trips and was also required to keep a journal of these projects and any other observations we may have had over the quarter. Out of this class, I developed a great deal of respect for the people of Mexico and a strong interest in their culture. I actually learned more about the city of Morelia, where I lived for four months, than I know about Bellingham, where I've lived for the past four years.



This spring provided the only clean drinking water for the village. David, the youngest son of the family I stayed with, gets the daily water.

The second class, "Village Intern-ship in Appropriate Technology and Rural Development," offers a chance to become familiar with a third world rural setting and to experience an extremely different lifestyle. The first half of the class took place in Morelia. where I lived with a host family and studied intensive conversational Spanish. After four weeks I headed to the village of El Resumadero to live with a campesino family and observe its lifestyle and the village dynamics. El Resumadero, with about 700 people. is located about 45 minutes from Morelia by bus. To help me under-



Photo by Greg Goodale A campesino and his son milk their cows in a near-by village. Western student Greg Goodale lived with this family.



Photo by Geoff Tallent One weekend, the village where I stayed put on a Mexican version of a rodeo, where the village men could prove their machismo.

stand the village, I was given a list of questions to answer which included: Where does the water come from? Where does the waste go? What food is eaten? How is it produced or where does it come from? Diagram the house and who lives where. What energy is used? What transportation is available? What is the political structure of the village? To answer these, I had to rely on third-class buses and walking for transportation; help carry water from a small spring about a kilometer away; discover a new form of outhouse: eat unfamiliar food; and sit around drinking a lot of spiked coffee with the family while trying to ask questions about how things worked.

Village life provides quite a learning experience. The different approach to living, different economics, and different surroundings gave me a basis for comparing lifestyles, and grounds for questioning aspects of ours in North America. I also gained an appreciation and understanding for the rural Mexican way, and I hope to go back and experience it more fully.

My experiences in these two classes are invaluable, and have provided many new interests. Some of the best parts of my college experience have been in Mexico, and I hope to continue living and studying there after I graduate.

Third World studies provide an understanding that could help students in all areas of interest, and would be especially useful for those considering going into Peace Corpstype situations. I hope more people will consider these classes in the future.

Interested students can contact professor Ernst Gayden at E.S. 344, or phone 676-3976.

by Geoff Tallent



Photo by Greg Goodsle
A seven year-old boy carries a
bundle of fire wood. While most
cooking is now done on gas stoves,
tortillas are still cooked in the
traditional way, over a wood fire.

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German traveler finds disappearing Redwood giants

My neck hurts from hours of leaning back and watching the canopies in the clouds. Ghostly dancing treetops vanish out of sight. Ravens and gulls declare it wilderness, and the bear's steps remind us we are strangers. This is one of the last quiet places. No sound of cars, airplanes, people or factories impairs our perception of nature. We left progress several miles behind, for our adventure in the remote parts of Redwood National Park, and Highway 101 seemingly doesn't exist.

Angela and I came from Marburg, in West Germany, to explore America. More than a decade ago I dreamt of the unimpaired natural areas that still survive west of the Atlantic. Far east, where I live, there is not one square yard of wilderness left, and the lack of any large-scale preserves is

discouraging.

"Impressive" and "overwhelming"
were the words I heard most when I asked students at Western (where I am an exchange student) about the Redwoods. Yet reality is always more complicated. Strolling down Damnation Creek Trail, I found everything I came for: silence, wilderness, contemplation Other trails, like Miners Ridge, James Irvine and Lost Man Creek also lead to unspoiled nature. Yet the visitor always walks a line close to progress.

In 1968, after a long struggle, 58,000 acres were set aside as a national park. Grab a map and you'll see the misery of the Redwoods: a thin line along the coast, chopped into three state parks and a small national park, and intersected by the old and new Highway 101 s. In 1978, a total of 48,000 acres was added to the national park. That land was purchased from a

large timber company; before they left, the company sheared everything to the ground.

The Forest Renewal Trail now shows regrowth on an early 1960's clearcut. But our walk along the trail was the shortest walk we took in any forest --



Illustration by Sera Oleson

after ten unbearable minutes, I had seen enough. As reminders of the ecotragedy, dark stumps still overtop the regrowth. A Redwood germinated on my birthday is nice, I thought, but it cannot replace a tree germinated on the birthday of Christ. (In Washington state, the timber industry still dares to put them on a par.) The most infamous disaster, the area along Redwood Creek, is being restored by the National Park Service, by rescap-

ing hillsides and replanting. in old fairhaven 1210 11th St Bellingham, WA 98225 HOURS: 10 - 10 Monday thru Seturday 10 - 6 Sunday

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I observed a variety of problems in the park: lack of ecological fire management, crowds of visitors with their cars, air pollution from cars and nearby pulpmills. There was also administrative inefficiency. The three California state parks within the national park boundaries cannot be transferred to the National Park Service, because Congress denied funding for these areas. It doesn't make sense.

The problems of Redwoods outside park boundaries are even more severe. Logging and other changes of the habitat continue to decimate the surviving Redwood population. The remaining 100,000 acres of old-growth Redwoods comprise only five percent of the total ground a hundred years ago. The trees can't keep pace with us. It takes only minutes to flatten a tree that has grown for one or two thousand years.

While in Redwood National Park, I saw a lot of management mistakes. But there is only one incurable mis-take Americans could make: not to

preserve the area.

Since the turn of the century, innumerable concerned citizens have made the right decision, and have fought for America's natural heritage. They are the people who brought the "giants in the mist" to Angela and me. Today the struggle for the Redwoods goes on. In perpetuating the creative tradition, the Save-the-Redwoods League works on public education and fund-raising, in order to buy additional acreage for the state parks. The League needs and deserves support.

For me, no place will match Redwood National Park. The inspiration I got strolling among the giants taught me more than any classroom. Back in Germany, I will draw strength from the colors and feelings I gathered in

the wilderness.

For details on efforts to expand the parks, write to Save-the-Redwoods League, 114 Sansome St., Room 605, San Francisco, CA, 94104.

by Martin Laczny





Why Western Needs an Environmental G.U.R.



Illustration by Tony Tenorio

I once sought a friend's advice during the seemingly endless search for "easy" classes that fulfill a General University Requirement with minimum effort. She told me Huxley 202 was such a class, and I signed up. However, that supposedly simple Social Science GUR turned out to be one of the most important, eye-opening classes I would take in my collegiate career, and a class I believe should be ranked with English 101, Math 102 and the basic sciences as a requirement of all university students.

I was acquainted with issues in Huxley 202 only to the degree I'd read about them in the newspaper. Much of the information was new to me. It elicited many feelings: shock, anger, depression, fascination, and even some amount of grim determi-nation. I came away with the knowl-edge that environmental problems are real, but not insurmountable, and that even I can have a positive influence. I reveled in the fact that at least a handful of humans in our overpopulated world were making an effort to change the way we look at the environment, and were striving to cure some of its ills.

Huxley 202, "Environmental Studies: A Social Science Approach," is an

overview-type of course. Non-science majors will have no trouble grasping the material. The course studies

environmental problems socially, economically, politically, and humanistically. It covers issues such as the world's overuse and over-reliance on fossil fuels; our inefficient use of forests and cropland; the rapid depletion of world rainforests and the accompanying effects on our atmosphere; overpopulation; and energy and agricultural alternatives.

Universities such as Western stress a basic "liberal arts" education to help broaden students' understanding of the world and its inhabitants. and to give them the ability to formulate and express their own thoughts. To this end, students learn to read. write and communicate in English 101; they learn algebra in Math 102; they learn about X and Y chromosomes in Biology 101. In the past these classes may have been all that was necessary to form a well-bal-anced, educated human who could speak correctly, balance a checkbook and understand the miracle of life. However, times change and so do requirements.

GUR requirements need to be up-dated. Western's administration is continually looking at new GUR programs, but often times real world changes occur before a well-balanced. relevant program can be established.

I looked through the current General Catalog and found no environ-

mental issue-oriented courses offered in any program outside of those offered by Huxley College. This means students can, if they choose, receive a college education and a diploma without ever taking a course on environmental issues. Huxley College Dean John Miles said many students often do just that.

A bright note, however, is the fact that at least 1,500 students enroll in the Huxley GUR courses every year, and most of them are freshman. This is definitely a step in the right direc-

Because most of Western's programs do not offer an environmental course, it is up to individuals to decide whether they need one. The sad point is, many of the students who think they do not need an environmental course are the ones who need it the most. Majors in business, technology or any other subject may believe they don't have the time for an environmental course, or they may think it simply is not necessary. However, these are the same students who could be in a position to instigate change or educate others outside of school.

Huxley College encourages nonmajors to be involved in environmental studies and combined majors (mating courses in biology or journalism programs with environmental studies courses) have been successful. Environmental courses can also be an attractive alternative to the standard GUR offerings by looking at issues socially and humanistically as

well as scientifically.

As environmental problems continue to plague our world, it becomes increasingly clear that environmental literacy is just as important as lingual, mathematic and scientific knowledge. A solid liberal arts education must encompass environmental issues because these issues affect everyone. The way to promote change and formulate solutions is through education. The issues and material covered in a course such as Huxley 202 educate.

Like many students who come to Western, I was environmentally illiterate. That is not to say I didn't know what the environment was, or what Greenpeace did, or how to recycle; but, my eyes were closed when it came to seeing the environmental big picture." The information I learned in Huxley 202 opened my eyes -- it's time for the collegiate powers that be to open their eyes and make the environment part of a basic education.

by Jeff Pedersen

Planet Waves

Compiled by Sara Olason



Photo courtesy of Greg Mills

Tuna boycott nets support

Members of the Regenerative Society, a Western club, reached Fred Meyer shoppers with the message that dolphins die in the nets used to catch yellowfin tuna, which is stocked on the store's shelves.

"Most people were unaware or sympathetic," club founder Cortlandt Fletcher said. Of the approximately 800 people they contacted, "only about three or four percent were negative." Since the Society contacted them, the Bellingham Food Co-op, Woolworth's, Rome Grocery and Deli, Around-the-Corner Cafe, and Western Washington University food services no longer serve yellowfin (chunk light) canned tuna. The Society continues to lobby Ennen's, Cost-Cutter, Safeway, Fred Meyer and Hayden's food stores to stop yellowfin sales.

Sea Shepherd Conservation Society estimates more than six million dolphins have been killed in purse seine nets since 1960, when this fishing method was first extensively used. The dolphins swim over yellowfin tuna schools, and are caught in the nets as fishermen close them around the tuna. Populations of northern offshore spotted, coastal spotted and eastern spinner dolphins have been decimated by purse seining in the Eastern Tropical Pacific, the area along the coast of Southern California south to Chile.

The dolphin "kill quota" allowed by the Marine Mammal Protection Act was reduced every year between 1976 and 1981, to the present 20,500, where it's remained since. The fishing industry successfully lobbied in 1981 to amend the act, so there would be no further kill quota reductions; the industry claimed it would use safety equipment and techniques to independently attain the goal of zero dolphin mortality. But more than 300 dolper day--one every three-and-one-half minutes--still die, according to Sea Shepherd counts.



Cortlandt Fletcher with dolphin information sign.

Is Whatcom County a medical waste dump?

Safe Waste Management Now is circulating a petition to ban imports of medical waste into Whatcom County. Thermal Reduction Company burns 5 tons of medical waste per day, and wants no limits on how much medical waste it may accept.

The Department of Social and Health Services has stated that unburned virus particles could escape in flue gases or ground water, and that wind, animals, birds or human trespassers could carry infectious materials off the incinerator site. Three TRC workers have signed affadavits stating poorly packaged medical waste sent to the incinerator leaked, putting them in direct contact with blood and other fluids.

Locally-generated medical waste is usually well-wrapped, SWMN director Barbara Brenner said. Local generators know they would have to live with epidemics or other problems from poorly disposed waste, but generators outside the county don't have this incentive, she noted.

And at a time when the county's landfills are spilling over, it seems ridiculous to import more garbage, regardless of its nature.

SWMN is also concerned that offers by Browning-Ferris, a national company specializing in waste hauling, to buy TRC will make the incinerator into a much larger, more dangerous infectious waste facility. TRC presently burns medical waste for the Houston-based company.

For more information, contact SWMN at P.O. Box 1396, Bellingham, WA, 98227, 647-1221 or 384-2762.





Backyard beasts need protection, too

More than half of Americans feed, observe or photograph non-game animals, from hummingbirds hovering at backyard feeders to black bears lumbering along riversides. Though non-game species comprise 90 percent of the United States' vertebrate species, state agencies spent more than 20 times as much to manage game animals in 1986 as they did for non-game species (National Wildlife,

April/May, 1989).

The Fish and Wildlife Conservation Act of 1980, which would provide three dollars of federal money for every dollar spent by states on nongame programs, has never received funding in the eight times it has come before Congress. All the states have developed programs, but haven't found reliable funding sources for them. Hunting and fishing licenses and fees, and excise taxes on game equipment, pay for more than 70 percent of game species management; there's no comparable source of funds for nongame animals. Suggestions for funding include taxing bird feed, or charging 30 cents for special 25-cent nongame animal stamps.

For more information about nongame species programs and problems, contact Watchable Wildlife, Dept. NG, National Wildlife Federation, 1400 16th St. N.W., Washington, D.C.,

20036.



Recycling program may push past city limits

Some of the 62.5 million pounds of potentially recycleable material Whatcom County residents toss out each year may no longer rot away in landfills or sizzle in incinerators. The Whatcom County Council unanimously endorsed a recycling program proposed by Environmental Resource Services (formerly Bellingham Community Recycling) April 20. The plan includes curbside recycling or dropoff boxes, compost sites, yard waste collection, tire recycling, and a pro-

gram to salvage reuseable items from dumpsites. The county will apply for state grants, and hopes to have the program running by the end of the

year.

Within Bellingham city limits, residents will have curbside recycling service beginning this July. Residents will receive free recycling bins, and may put out newspaper, mixed paper, aluminum, glass, tin, motor oil and some scrap metal for pick-up. Garbage rates may change as a result of the city's negotiations with Thermal Reduction Company, but recyclers should save simply by reducing the number of garbage cans they fill.



Ozone: Benefit or bane?

Sunlight is changing automobile exhaust generated in Vancouver, B.C., into a plume of ozone that extends downwind over Bellingham. While the University of Washington and Department of Ecology researchers who found the plume say the ozone levels aren't high enough to hurt humans, they warn it's deadly to plants. Ozone in the lower atmosphere has already been blamed for destruction of forests in Europe.

Too bad we can't use ozone created by cars to patch the upper atmospheric ozone layer over Antarctica. Destruction of Antarctic ozone has been linked to higher ultraviolet light intensities in the region by University of Chicago researchers. There aren't many sunbathers there who will get skin cancer from the added UV light, but Scripps Institute biologists say increased UV light reduces photosynthesis in marine phytoplankton, tiny plants that form the basis of the Antarctic food chain.

Du Pont says the new refrigerant it has designed to replace CFC-12, an ozone-destroyer, will work without major changes in our refrigerators and air conditioners. It will be available after 1993, pending EPA ap-

proval.



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