

EVENTS ECO FAIR

WEDNESDAY APRIL 22nd

PANEL DISCUSSION: at the Cabrillo College Student Center, 7 pm.
The panel includes: Russ McCallie, county supervisor; Phil Harry, lawyer; Dr. Robert Scott, citizen; Charlie Woods, student; Dr. Fred Schurerer, science; PG&E, industry. Allan Abramson, UCSC student is moderator.

...180,000 babies will be born today--and every day--into a world where two thirds of those already born will die of starvation or malnutrition...

THURSDAY APRIL 23rd

FREE MOVIES: at the Nickelodeon, 210 Lincoln St., SC, from 11am to 4pm.

FREE SLIDE SHOW: by Chuck Abbott & Bill Fieberling at the Veteran's Hall on Pacific Ave., 8pm.

SPEAKEPS: Senator Alan Cranston will speak at Stevenson College Courtyard, UCSC, at 10am.
Phil Harry, candidate for Supervisor, will speak at Crown Dining Hall, UCSC, at 12 noon. sponsor: Conservation Lunch.

...we in the united states will use 360 billion gallons of water today--the same water into which we will intentionally pour the raw and half treated sewage--ie, shit--of 160 million people & the waste--ie, poison--of hundreds of thousands of industries. This is the 'water' you will drink today...

FRIDAY APRIL 24th

MALL DAY: exhibits, music. at the Pacific Ave. Mall, 9am to sundown.

SPEAKER: Jesse Unruh will speak at Crown College Courtyard, UCSC, at 12:30pm. sponsor: Citizens for Unruh.

DEBATE: on the question of "Nuclear Power Plants--Coastal Land Uses: beneficial or destructive to Santa Cruz county." The debators are Leslie E. Carbert, PG&E tax economist and Phil Berry, president of the national Sierra Club...at the Santa Cruz Civic Auditorium, 8pm.

...10,000 people will starve to death today...and every day...In the United States we will intentionally spray our crops with 2 million pounds of deadly poison--pesticides-- and add 2 million pounds of chemicals to our processed food. This is the 'food' you will eat today...

SATURDAY APRIL 25th

TOUR: of the UCSC gardens, all day.

TEACHERS' WORKSHOP: "Teaching Children How to Love the Earth" at College College V, UCSC, from 9am to noon.

LUNCH FOR TOWNSPEOPLE: Cowell and Stevenson Colleges, UCSC, 11am. State Senator Nicholas Petris & Prof. Jean Langenheim will speak at 12:15

WORKSHOPS: all at 1:30pm.
Air Pollution--with E.E. Spitler (Standard Oil), Prof. Joe Bunnett (moderator) & Ed Munson (Monterey-Santa Cruz Unified Air Pollution Control District) & Thomas Hall (Hughes Aircraft)--at Crown College
Transportation--Senator Petris, Bert Muhly (Santa Cruz County Planning Commission), Phil Berry (Sierra Club), and Prof. Manny Shaffer (moderator)--at College V.
Land Use--Milt Frenckle (State Parks), Norman Livermore (State Resources Dir.) & Mrs. Edgar Wayburn (Open Space Activist)--at Stevenson.
Water Pollution-- Dr. Welton Lee (Hopkins Marine Station), Dr. Svi-hus (S.C. County Dir. of Public Health), Mike Sonnen (Sanitary Engineer), Prof. Gary Griggs (moderator)--at Merrill
Population--Larry Pearson (ZPG), Prof. Abel Lerner (Berkeley economist), Dave Strickland (moderator)--at Cowell
Personal Commitment--Joan MacIntyre (Friends of the Earth), Jim Hunt (Berkeley Ecology Action), Cynthia Wayburn (moderator)--at the Quarry, 3:15pm.

...14,000 tons of poison gasses and solids will be added to the air above Los Angeles today--and every day--Repeat this figure for every city that has automobiles. This is the 'air' you will breathe today.

IS POPULATION "CONTROL" THE ISSUE?

Public debate on the population problem has recently been cast into molds which obscure the significant issues.

One common public stance represents population as the "overwhelming crisis," that is, things are so bad right now that drastic measures are our only hope for survival.

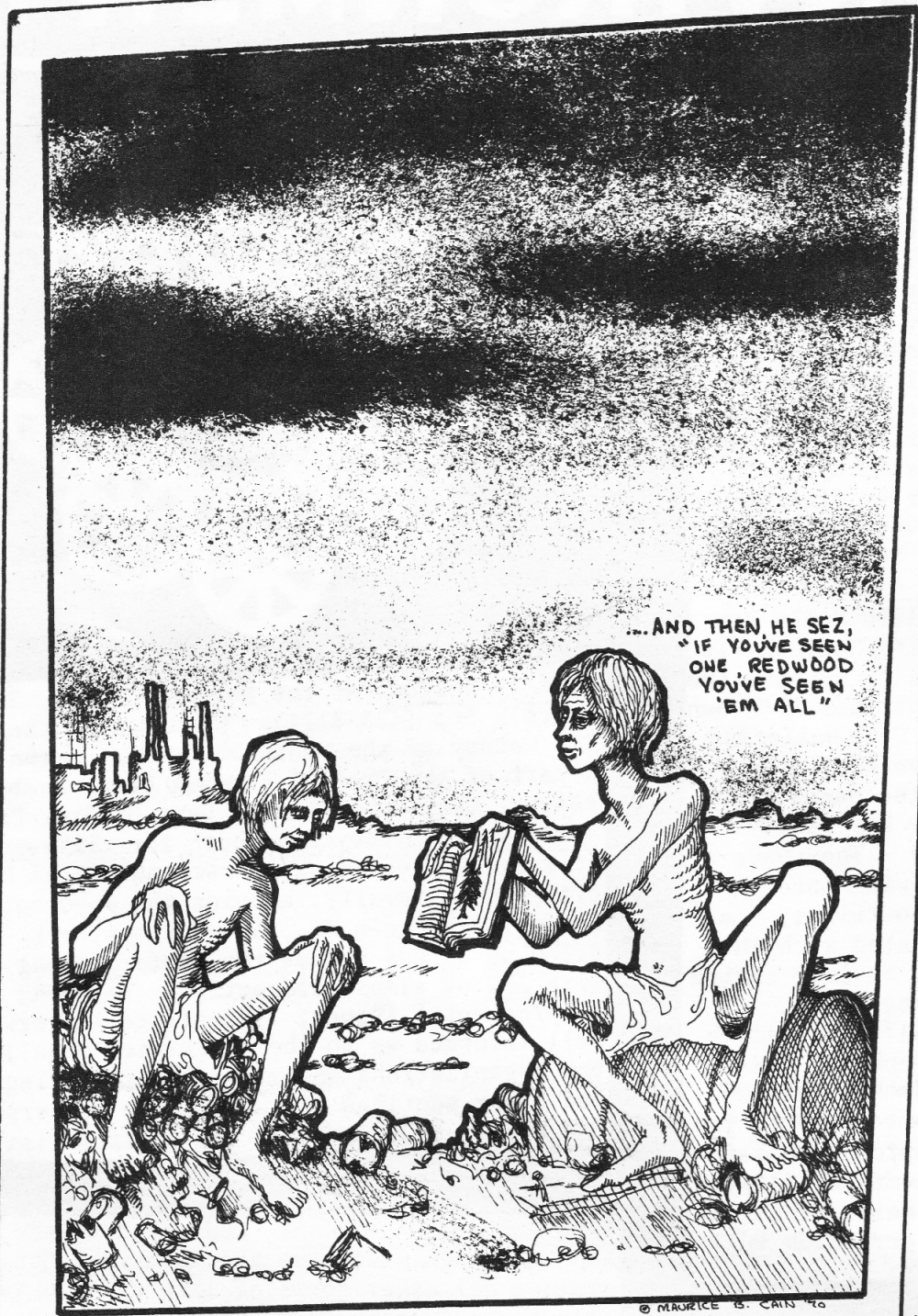
Reaction to such proposals is immediate and obvious. Third world nations believe that we don't want to share our wealth. We prescribe measures for them which we refuse to use at home and therefore appear to be imperialists.

Emotional reaction to population control proposals as they appear, one at a time, is both easy and not to the point. The point is that compulsory solutions of any kind are not acceptable.

Where then is the problem and can there be any solution? We should no longer speak of population control. The problem is one of attaining stable population size for the developed nations of the world.

It seems clear that all people sincerely concerned about the problems of overpopulation in the United States should concentrate on working toward conditions under which any woman will be free to choose whether or not to abort her fetus.

Allan Abramson



FREE SPAGHETTI DINNER
SPECIAL ISSUE

- | | | | |
|-------|--------|-------------|--------|
| | Rabbit | Said | |
| Gret | Tom | Diane | |
| Erika | Dick | Jean Claude | |
| Jan | Tim | Shoe | Martin |
| | Maury | Dave | |

office: 1383 Pacific Ave. #1
Santa Cruz
phone: 423-6449
mail: P.O. Box 984
Santa Cruz, Ca. 95060

To the community---

We offer you this special issue of the Free Spaghetti Dinner / containing alternative and expanded perspectives on the "ecological crisis" / we assume that you are interested in the quality of your "environment" / for most everyone realizes that we all use the same air, water and land / yet, because ecology "naturally" affects all does not mean that we all are affected equally by a polluted river, rotten air or large scale suburbanization of the coast / for some--minority groups and the poor, for example--these environmental catastrophes are merely insults heaped on a pile of injuries and injustices / this is all by way of stating that "Ecology" is a white middle class movement/ which gives rise to hope for radical changes in our society, now that we (white middle class people) feel "oppression" in the air we breathe, the scarred land we live on, or polluted water we can't drink / we may come to feel from our "oppression" that major changes are not luxuries to be pursued leisurely, but necessities to live in this world./ I suggest that only when this feeling of oppression pervades the middle class community, will there develop meaningful dialogue (with whatever language is necessary) among us and already "oppressed" groups / which is one way of resolving the real conflicts in this society.

Aside: It is regretful that the Mall merchants do not feel the urgency of our situation, by keeping the commercial atmosphere out of the Santa Cruz Spring Fair. We invite you businessmen to close your doors Friday, April 24 and join us in the streets. Said

if the people accept the apple they will be driven from the garden, or the garden will disappear.

the people will be forced to work by the sweat of their brow.

(that is to say, they will have to expend all their energy to preserve their continued existence.)

Once the destruction of the environment is complete man will have to make it on his own.....

his own air to breathe,
his own fertile soil to grow,
his own water to drink.

Man, if he accepts the machine and the dark world of cogs and artificial power, will with the knowledge gained deny the greater knowledge.

The mechanical slave is master for man, the mechanical slave fed by oil is death.

There is real power, there is real science!
A cog is a toy, the sun is a marvel of engineering.

POWER MUST BE USED ONLY WHEN NEEDED!
KILLING A FLY WITH A SLEDGE HAMMER IS EVIL.

T. WALDO BUCK



The end of the rainbow

De-mystifying Ecology

Item: The San Francisco Examiner recently editorialized that although the deteriorating quality of our environment is of great concern, "let us not be mis-led by radicals who wish to use ecology as a club to bludgeon our economic system." Mystification. Our economic system--indeed, any social system--is within the ecological realm, not abstracted from it, and not to study its very fundamental role in man's relationship to his environment is to miss the point.

Item: Pesticide poisoning and residual build-up are "side effects" of spraying. Air pollution is a "side effect" of the internal combustion engine. Riots are "side effects" of poverty and frustration. Mystification. Biologist Garrett Hardin states: "In calling certain effects "side effects", the apologist is implying that they are secondary, that they don't really count, that you shouldn't be concerned about them. "Side effect" is a bit of word magic by which the user seeks to control the world or people's perception of the world.

THE MYSTIFICATION OF ECOLOGY

The issue of ecology has become mystified. By removing it from its rightful universal context, the mystifiers have rendered it sterile, one-dimensional.

What the majority of the people think of as ecology, is really an awareness of the deteriorating quality of their environment. No one is sheltered from this conclusion, as the mass-media has pounced upon stories of ecological destruction with an enthusiasm heretofore reserved for gang rapes or bloody murders. But, as is to be expected, the media has isolated a word, ecology, equated it with a set of problems--environmental pollution/population--and has spoon fed its watered down version of reality to the trusting public: let's get together, talk things over, write your congressman, and pick up empty beer cans. Unfortunately, this mystification of the ecological perspective renders us impotent in solving the heavy questions of the day within the relatively short time we have, simply because the popularized version of ecology is applied in a strictly superficial, single-issue, anti-ecological context. This, of course, is precisely what the mystifiers--the politicians, industrialists, and "educators" wish to see, for it makes manipulation of the issue and the entrenchment of their interests much easier. A more realistic ecological perspective reveals how innocuous and futile this piecemeal approach is.

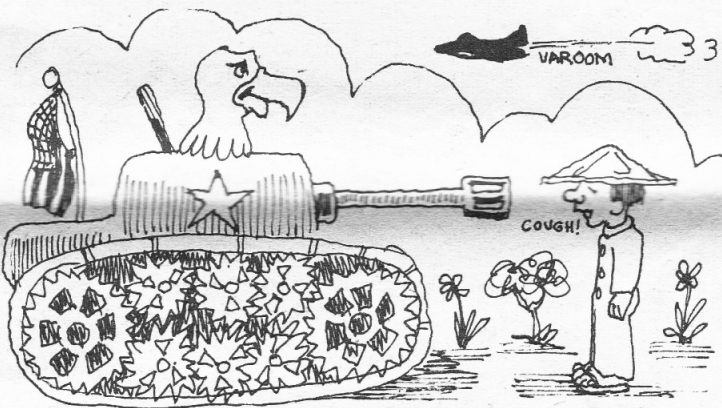
WHAT IS ECOLOGICAL PERSPECTIVE?

Ecology is the total interaction of individuals and species with their environment and how this interaction constitutes a system. Individual species can be studied, but ultimately the relationship of that species to the rest of nature is the object of study. When we apply an ecological perspective to a problem (studying all possible

inputs) we are using a systems approach, looking to the total system and the integration of sub-systems within the larger context, to see how it influences the subjects development. If we pursue the larger question of man's relationship to his environment, we must identify the sub-systems which govern his behavior (physical, psychological, social, spiritual). If we are to explore ways of bringing man into harmony with nature, it's reasonable to assume we must find ways of bringing man into harmony with man.

Lewis Herber writes that the ecological focus has enormous implications; "...ecology is a critical science--in fact, critical on a scale that most radical systems of political economy failed to attain--but it is also an integrative and reconstructive science". The implication is that no phenomenon (i.e., air pollution, war, poverty) is an abstracted occurrence, but, in fact, a manifestation of the complex ecology of society. Herber elaborates:

Modern man's despoilation of the environment is global in scope...Human parasitism, today, disrupts not only the atmosphere, climate, water resources, soil, flora and fauna of a region; it upsets virtually all the basic cycles of nature, and threatens to undermine the stability of the environment on a world-wide scale...Ecologists know that a destructive parasitism of this kind usually reflects a disruption of an ecological situation. What imparts a profoundly critical function to ecology is the fact that man's activities raises the question: what are the conditions that have turned man into a destructive parasite? What produces a form of human parasitism that results not only in vast natural imbalances, but also threatens the very existence of humanity itself?



The truth is that man has produced imbalances not only in nature, but more fundamentally, in his relations with his fellow man--in the very structure of his society. To state this thought more precisely: The imbalances man has produced in the natural world are caused by the imbalances he has produced in the social world."

The great industrialization of the world, the thing which brought us our so-called 'prosperity' is just such an imbalance. There is an ecological principle that says diversity is a factor in the stability of an ecosystem. The industrial process violates that principle. Firstly, it gathered great numbers of people to work its machines, and concentrated them in several places, thereby creating massive imbalances in the population distribution. Secondly, in building the cities in piecemeal, unplanned fashion, organic evolution was reversed. By covering the diverse natural landscape with a synthetic blanket of asphalt, concrete, and glass, it rendered the area incapable of handling any kind of biological blight, let alone the massive amounts of pollutants the factories disgorged into the environment. This now simplified environment became easy prey for chronic smog, water pollution, noise and desensitized monotony. Thirdly, on the social scale, people, economically trapped in the cities and totally dependent on others for their survival, succumbed to centralistic manipulation of their lives. The human scale gave way to the mass scale and the individual was all the more easily swept aside or neglected in face of a bureaucratic social structure.

This, of course, had an effect on the agriculture. To feed these dense concentrations of people the few farmers who stayed on the land to compete in the 'open market', resorted to mass-scale, high-intensive sin

gle crop farming--biological simplification of the worst sort--which led to the unrestrained use of pesticides, an act we will not know the ultimate consequences of for generations.

So, while this great industrial adventure continued (raping the resources of the planet) enriching a select few families beyond the wildest dreams of Kubla Khan, bringing the 'good life' to many Americans and raising many others from the curse of starvation to the blessings of malnutrition, the very earth was rotting beneath our feet and we could find no solace in our fellow man.

This is but one over-simplified example of how the relationship of our social ecology to our environment can be seen. The relationship exists at every turn.

The grape strikers from Delano, who suffer pesticide poisoning and poverty, are victims of the ecological problem.

The American worker, who has seen his paycheck climb and his standard of living decline in the last ten years, is a victim of the ecological problem.

The black man who suffers in the worst living conditions in the urban slums, who lives in the shadows of the industrial smoke-stacks, who faces racist discrimination in jobs, housing, and education, whose infant mortality rate is far higher than the white middle-class--he is a victim of the ecology crisis.

The American Indian, who was brutally slaughtered and imprisoned in the name of 'progress' for white men, is part of the ecology crisis.

The Vietnamese peasant who finds his jungles napalmed, his rice crops destroyed, he's a victim too.

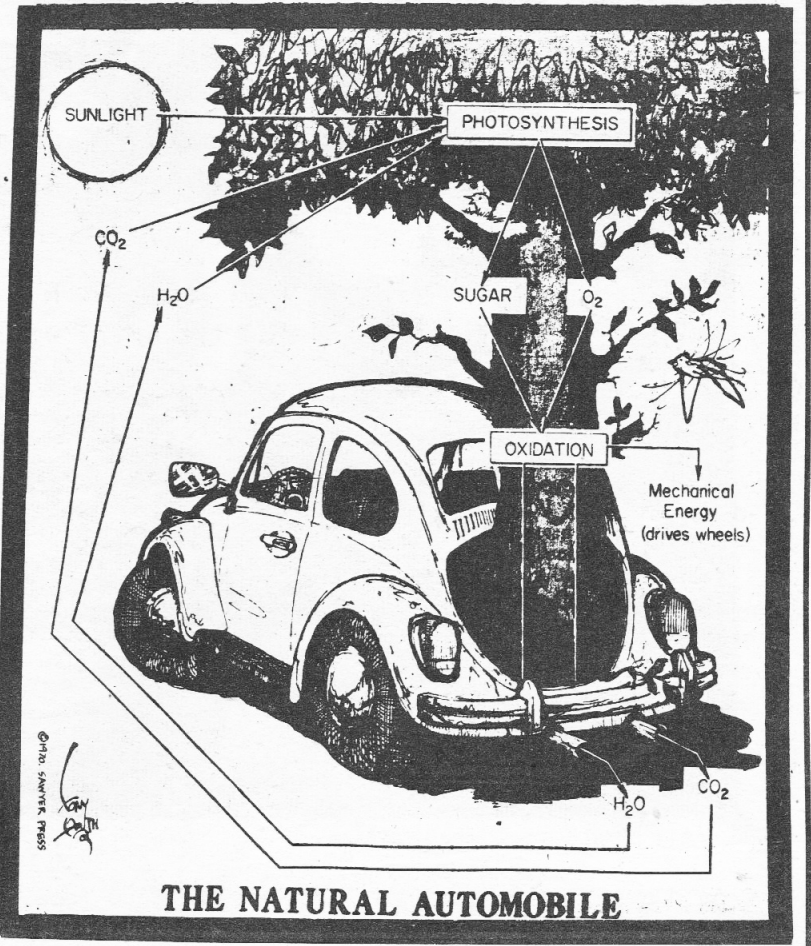
The underdeveloped countries of the world, who see their resources being plundered and devoured, their labor exploited, and their environment destroyed so that we Americans with 7% of the world's population, can satisfy our insatiable appetite for 50% of the world's produced goods, they too have a stake in this crisis.

And the banks and corporations of America who continue to show increasing profits by manipulation of artificial/abstract money mechanisms, while the inflation spiral drags the majority of the population further into debt, they too are part of the ecological problem.

We will have to unravel the complex ties in our society that exists between business and government, focusing on the legal/economic web that brings these two supposedly separate elements together. We will have to identify how the military perpetuates its influence over the domestic scene, and the tremendous resources they bleed away from the people. We must become aware of the priorities in our society and who determines them, and see in whose interest certain policies are made.

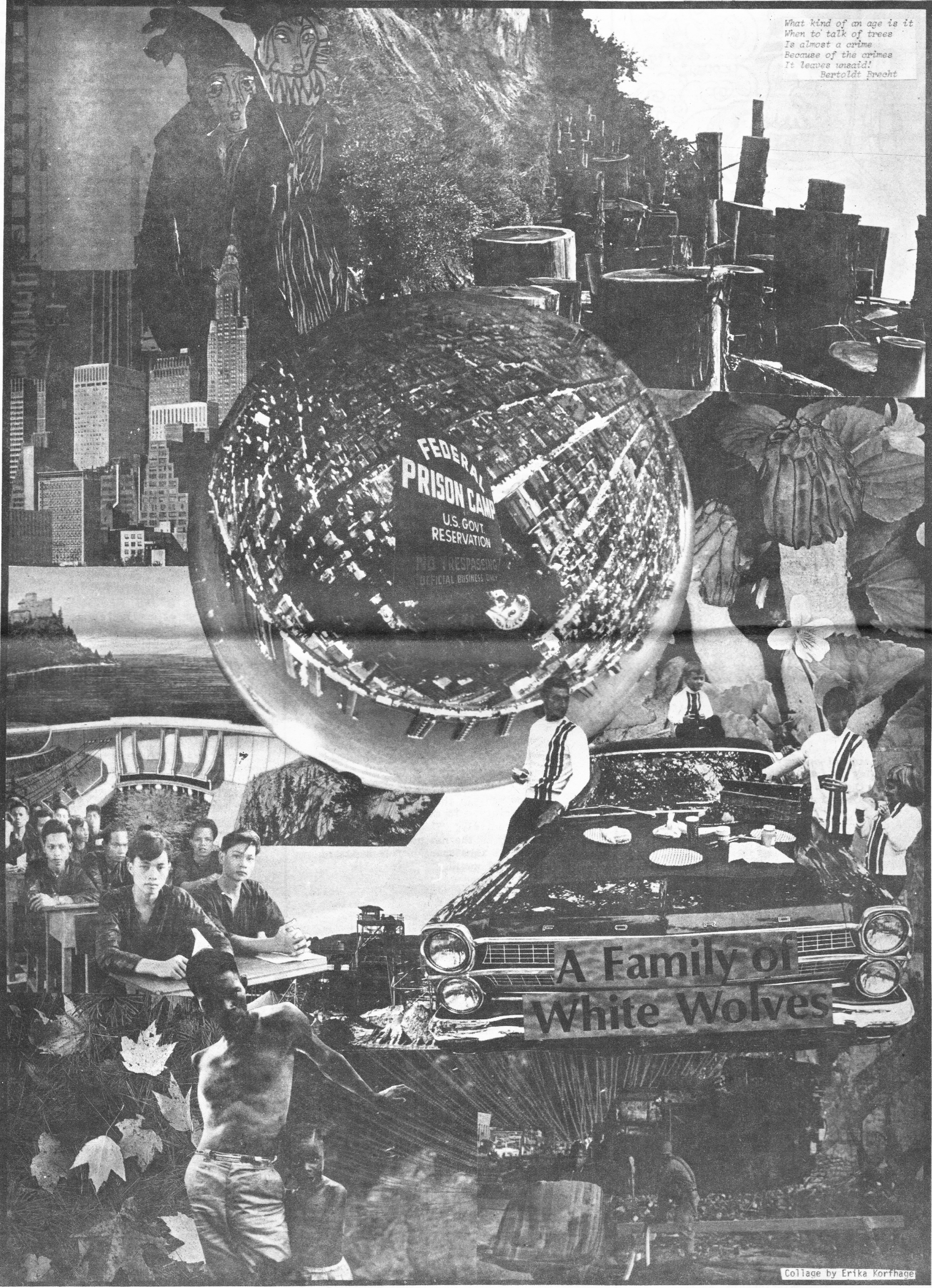
So when the politicians, conservationists, businessmen, and 'educators' talk about preserving the open spaces, or cleaning up the beaches, or saving the pelicans, and call it ecology, do not be mystified: these are relevant and important issues to be sure, but they are only a very small part of the story. And unless we uncover the rest, we may never know how that story ends.

Rick Gladstone



THE NATURAL AUTOMOBILE

What kind of an age is it
When to talk of trees
Is almost a crime
Because of the crimes
It leaves unsaid!
Bertoldt Brecht



A Family of
White Wolves

Water Polluters:

Sewage (whole county is overburdened and treatment is inadequate, mostly primary treatment which produces essentially chlorinated sewage - Monterey Bay, county creeks and rivers are all polluted), P.G.&E. and Kaiser (thermal and chemical pollution at Moss Landing), Wolfson meat packing (North Mission St., pouring raw sewage into Bay), Logging (siltling of creeks and clogging of waters with slash).

The environmental crisis culminates in a question of survival for mankind. Cultural factors, the way in which groups of people view their relationship to their environment and their fellow men, have been largely responsible for the crisis. The cultural changes needed to prevent a depleted and poisoned planet will not have industrial or government sources. Those cultural changes must be fostered and lived by individuals. Each of us must be responsible for altering his own life style so that future generations do not suffer for our lack of foresight.

We, the consumers, must begin consuming less. (We, in the United States, with 6-7% of the world's population, control the consumption of 50% of the earth's products. In 15 years, with 9% of the population, we are expected to consume 83% of the products.) Consuming less presents few real problems. Mostly it is a matter of disengaging ourselves from luxuries. The process may be painful for some--it will require that we overcome our lust for material wealth and live a life which is not so physically soft.

Dane Hardin
Santa Cruz Ecology Action

Land Polluters:

Soil erosion - Rock quarries (Scotts Valley, North Coast; destruction of the topsoil, scarring of the land), Land Developers (North Coast, South Coast, S.L. Valley--simplification of environment, topsoil runoff), Logging (North Coast, S.L. Valley, Yante - removal of watershed, topsoil erosion), County Dept. of Roads (Whole County - erosion, Land slides), "McDonalds Hamburger" Architecture (Ocean St., Mission St., Speedy 7/11 conspiracy), Freeways - (Highway 17, "route 4", Highway 1 expansion), Suburban spread (Seaside, North Coast-Scaroni-Wilder Ranch Developments), Army Corps. of Engineers (Zayante, Pescadero etc. Dams, Yacht Harbor fiasco - Army Corp are heavers disguised as people; they can be found building dams on any water that moves).

Getting into it!

Save water--don't bathe every day unless you are exceptionally dirty, and put bricks in your toilet tank (each flush flushes less). The possibility of serious water shortages is real enough, but in addition, it takes electricity to run the pumps which provide your daily water, and electricity means Moss Landing.

Conserve trees by using less paper. Provide your own shopping bag or basket and reuse paper bags, boxes, envelopes, plastic bags and other containers. Write on both sides of paper. Avoid paper towels and napkins--use cloth. If you must use paper products, avoid colored paper--the dyes released in the manufactures' effluent pollute streams. Also, bring old newspapers to the back of Bookshop Santa Cruz so that they can be made into new paper (recycled).

Pick up hitchhikers. Join a car pool. If you must use an automobile, use a small one--small engines use less fuel and make less smog. Also, antismog devices operate best on well tuned engines, so keep your engine tuned.

Shirts don't need washing after one wearing. Start digging human looks and smell. Off the cosmetics and deodorant, bottle and chemical clutter in the bathroom.

Do not accept labor saving conveniences at face value. We must realize that our convenience oriented consumer habits and our demands for such products as electric pencil and knife sharpeners, electric can openers, and gas barbecues are very expensive in terms of cost to the environment and often require electricity or fossil fuels for their operation. It is these power demands which make necessary such monstrosities as Moss Landing or the oil leaks in the Santa Barbara Channel.

Buy milk and wine in returnable bottles and beer in tapper kegs. Not only does this cut down on trash, but eliminates the pollution and consumption of resources caused by continually manufacturing new containers. Meadow Gold delivers its home delivery milk in returnable bottles, as does Swiss Dairy at 2303 Mission. Bargetto Wines come in returnable bottles. The wines are available at several local liquor stores and the bottles can be taken back to the winery at 3535A N. Main in Soquel, for a few cents refund.

The environmental issue has become a real bandwagon, and many advertisements now contain some claim about how that company is doing "good things" for the environment. Write to the company and ask them exactly what they are doing which will lead to an ultimate solution of the environmental crisis. Many of them have a very shallow concept of the problem. Also, be alert and informed so that you know what they are really doing and saying. Being as well informed as possible is essential for intelligent action.

getting it on!

Shower with a friend. Showers use less water than baths. Use soaps instead of detergents. By law, all detergents must be biodegradable, so too many suds are no longer the big problem they were. Instead, in an effort to make their product more effective in hard water, the manufacturers have introduced phosphate bases into their detergents. The resultant high levels of phosphates act as fertilizers which cause great growths of algae and lead to a process called eutrophication, which is presently killing Lake Erie.

Post 'No Handbills' on your door. File obscenity forms against companies who send you junk mail. Use libraries. No toilet paper. (Any hygienic suggestions?) No pennies (Gotta start breaking down money somewhere) Save them for melters, a new occupation soon to be on the scene.

No gasoline. Converting your car to propane costs less than \$400, which you'll make back in longer mileage per dollar and increased engine wear. Propane belches half to one quarter the pollutants that gasoline does. Use public transportation when feasible.

Break the style habit. Buy your things used (clothing, furniture, etc.) Every step you remove from the normal process of manufacturing a product decreases the pollution and trash created in packaging and transportation components and the finished product from plant to plant to retail outlet. Used goods have already been produced at a cost to the environment and that cost can only be avenged to the extent that those goods are made to last. Don't be afraid to wear socks of different colors--the only way you can be really sure goods will be completely used is by using them yourself until they are no longer functional.

Conserve fossil fuels and help lessen the need for more Moss Landings by wasting neither gas nor electricity. Unneeded lights not used for reading should be switched to lower wattage bulbs. Keep your home 5° cooler and your own body heat to keep warm. Put on an extra sweater or blanket.

Grow at least some of your own food (grow it organically, avoiding pesticides). You decrease the pollution created by large scale agricultural methods (pesticides and artificial fertilizers) as well as that created by transporting the produce from farm to the grocery store, as well as eliminating the trash resulting from the packaging of foods brought to the grocery store. If you are able to grow some of your own food, you can use your kitchen scraps, lawn clippings and dead leaves for compost. You should also be able to get sludge for fertilizer from the city sewage treatment plant.

No food cans or bottles. Buy staples in quantity. Use Mason quart jars for storing. No disposable diapers.

Back to smelly hampers and long washes--unless reader-mothers have better suggestions.

getting together

Bathe in an ocean or lake if nearby; bathe in groups Japanese-style, where one bucket of water rinses several people. Drink your dishwater. When you finish eating, pour hot water into your biggest dish, scour the inside of the bowl with a stick (or your finger); pour the water into your next biggest dish and dry the first. Repeat the process till you've scoured your smallest dish, then drink the water (garbage tea). (--from the Whole Earth Catalog, suggested by Tassajara Zen Center.)

Find psychological techniques for creating an awareness of 'self' which includes the social and natural environment. "Consideration of what specific language forms--symbolic systems--and social institutions constitute obstacles to ecological awareness."

No cars. Feet are good for two miles, bicycles for 10 in non-hilly areas. Longer distances can be hitchhiked. Communicate long distances via messenger. Close down the transportation network of the Post Office.

Grow your own clothes. (Learn to spin, weave, sew.) Barter for anything you can't produce. Learn to break the habit of unnecessary possessions--a monkey on everybody's back--but avoid a self-abnegating anti-joyous self-righteousness. Simplicity is light, care-free, neat and loving--not a self-punishing ascetic trip.

No lights. When it gets dark, go to bed. Let the Spirit of Night prevail.

Communes can set up communal kitchens, buy some food in quantity, and, if they have land, grow their own vegetables and fruits. The nuclear family is an eco-ripoff. (Solitude and privacy are not incompatible with communal living. A little land allows separate dwelling, and domes allow cheap, easy construction.) A shift toward a more varied and sensitive type of agriculture (more small-scale and subsistence farming) would eliminate much of the call for blanket use of pesticides.

Explore other social structures and marriage forms, such as group marriage and polyandrous marriage, which provide family life but may produce less children. Share the pleasures of raising children widely, so that all need not directly reproduce to enter into this basic human experience. We must hope that no woman would give birth to more than one child, during this period of crisis. Adopt children. If you want lots of kids live with lots of adults.

pieced together from: Dane Hardin
L.A. Free Press
4 Changes

Air Polluters: Rack yard trash burning (whole county), P.G.&E. (Moss Landing, particulate matter, oxides), Lumber Mill refuse burning (Big Creek Lumber on the North Coast), Quarries and Logging (wind erosion from removal of topsoil), Automobiles, (private autos, city & county vehicles, trucks, all fossil fuel burning monsters), P.C.A. (Davenport Cement, obscene disgorging of particulate matter and who knows what else. There's never been a study of P.C.A. stack emissions).

Social Polluters:

Population (the more people produced, the less chance to catch the problem), inadequate distribution of the wealth (few rich, many poor - bad ecology ecology), USC (artificial separation of school and community), rotting school system (teachers overburdened, no expansion), high taxes, poor conditions for farm workers, entrenched/incessant power structure of politicians, businessmen, and police.

PG&E PLANS...

DAVENPORT DISAS

(By the staff of Here and Now magazine)

On April 9, the Pacific Gas and Electric Company (PG&E) announced it had an option to buy 6800 acres 12 miles north of Santa Cruz. It wants to put in a nuclear power plant, eventually with six reactors, each putting out 1,000,000 kilowatts.

What will they do next? About this time last year PG&E made local news because they were dumping 190 tons of nitrogen compounds out of their Moss Landing power plant each day.

After a huge public outcry and new regulations from the Monterey-Santa Cruz Unified Air Pollution Control District, PG&E cut down the pollution at Moss Landing. Now they only put out around 30 tons a day, or about 55% of all the nitrogen dioxide and other compounds in Monterey County's air. This compares with about 40% put out by all of the cars owned by that county's 225,000 residents.

PG&E already has an approved site for a nuclear plant next to its conventional facility at Moss Landing. But it has decided that it needs one near here, to serve the growing San Jose area. 27 miles of easements for massive high tension power lines over our hills will also have to be used.

According to PG&E, the atomic plant itself will only take up 400 acres of the land, now owned by Coast Dairies and Land Company. Many feel that the additional acreage may be offered as a park and recreational facility to head off expected opposition to the plant.

Some people at Davenport are sympathetic to this offer, since nearly all other land near there has been snapped up by housing tract developers. One PG&E official has already acknowledged, however, that the utility could subdivide and develop the land itself, under its status as a corporation.

But park or no park, the plant shouldn't be installed here at all.

While it is true that a nuclear reactor cannot explode like an atomic bomb, molten radioactive fuel can melt, become critical, and cause an explosion sufficient to rupture the reactor and release enough deadly fallout

to virtually wipe out Santa Cruz, if the wind is right.

According to the Brookhaven Report, commissioned by the U.S. Atomic Energy Commission to investigate possible reactor accidents, a 100,000 to 200,000 kilowatt reactor, located 30 miles from a typical city could cause up to 3400 deaths, 43,000 injuries, and \$7 billion in property damage. The proposed reactors at Davenport, 12 miles north of Santa Cruz, total 6,000,000 kilowatts.

Utility spokesmen will reply that such an accident is very unlikely; indeed, the Brookhaven Report's lowest estimate of such a catastrophe was one in 100,000.

But there is reason to believe, 13 years after that report (the last the AEC has done, amid industry sentiment that such figures frighten the public), that the likelihood of such an accident may be much greater.

For example, several major plant accidents have already occurred. On October 10, 1957, a reactor at the Windscale Works in England had trouble and discharged more radioactivity than the explosion of an Hiroshima-type atom bomb. All milk and growing foodstuffs over a 400-square-mile area had to be seized.

In 1961, three men were killed while working inside the containment building at an experimental reactor near Idaho Falls, Idaho. According to one AEC official, it was "remarkable that radiation did not escape in sufficient quantity to form a cloud which could have caused disaster....I can only say we were amazed!"

In 1966, an accident at the Enrico Fermi power plant at Lagoona Beach, Michigan, melted some fuel, causing fear of an explosion at any moment for a month. Fortunately, that was averted, especially since the plant is only an hour's drive from downtown Detroit.

In their very informative book Perils of the Peaceful Atom, Richard Curtis and Elizabeth Hogan chronicle case after case where accidents considered normal in the course of industrial work approach disasterous proportions when they occur around radioactive materials. Trucks and trains transporting nuclear materials have crashed; technicians handling nuclear substances have died from

accidents they have not been trained to avoid.

In fact, they mention a dangerous shortage of trained personnel in the field, due to its rapid expansion since 1966.

But the most telling argument against the utilities' claim of nuclear "safety" comes from the actions of the power industry itself.

In the early and middle 'fifties, the Atomic Energy Commission was actively promoting peaceful uses of nuclear energy, but the power companies were reluctant to take out permits to build plants.

A main reason for their foot-dragging was that they were unable to get insurance against the kind of disaster they now say is so unlikely. Not until the government passed the Price-Anderson Act, limiting the utilities' liability to \$70 million (about one per cent of the damages estimated by the Brookhaven Report to property alone), would the utilities agree to take the risk. If the utilities would not risk bankruptcy, why should we believe the odds against disaster small enough to risk our lives and communities?

But even if a plant were never to precipitate a nuclear disaster, a more insidious threat to public safety lies in the gradual accumulation of radioactive wastes and emissions from the normal operation of the plants.

A nuclear plant contains over 200 different radioactive isotopes in its reactor. One of these is iodine 131, considered to be especially dangerous in small amounts because iodine is absorbed by the thyroid gland, where the radioactivity can cause harmful biological changes, including thyroid cancer.

In a survey of cattle conducted by scientists from the University of Nevada, iodine 131 was constantly found to some degree in the cattle's thyroids. This puzzled them, since any such result from nuclear testing should fade away rapidly, due to iodine 131's half-life on only eight days. Their final conclusion was: "The principal known source of I-131 that could contribute to this level is exhaust gases from nuclear reactors and associated fuel processing plants."

Fuel processing plants are an important part of the process to make nuclear-powered electricity. Although one may not be located near Santa Cruz, any increase in the number of atomic power plants pushes up the demand for fuel reprocessing somewhere.

Another reprocessing facility has been caught polluting the environment, at Buttermilk Creek, near Buffalo, New York. On December 16, 1967, concerned citizens and specialists from the New York Health and Safety Laboratory of the AEC measured strontium 90 content in the plant's sewer outlet and found it 13 times the legal limit.

Further, a nuclear power plant creates radioactive waste products that must be removed from the reactor, moved, and stored--usually in subterranean tanks. Some of these tanks have already deteriorated and broken open, releasing their deadly contents. Some of that radioactivity must be shielded from the environment for 1,000 years before it is safe. Dr. Donald R. Chadwick, chief of the Division of Radiological Health of the U.S. Public



STER?

Health Service, estimated in 1963 that by 1995 two billion gallons of these wastes can be expected to exist.

But even if a major accident does not occur, and if we could somehow accommodate the gradual nuclear poisoning, we can still expect thermal pollution of Davenport's coastal waters.

Most electric plants require huge amounts of water to condense the steam used to turn the turbines of the generators, and their activities have already changed local marine environments. Nuclear plants have a lower thermal efficiency rating and therefore put out even more heat. PG&E officials have predicted a local rise of 20 degrees in Davenport's waters near the plant.

Ecological data on the effects of thermal pollution are not yet plentiful, but there have been cases of massive fish deaths. To an extent, modifications in the cooling system have helped the fish problem, but it does not take much ecological knowledge to know that any change in the environment as major as 20 degrees can have grave consequences.

For one thing, the oxygen saturation of the ocean water is lowered as temperature rises; for another, species and diseases dormant around the local life can begin to thrive in changed temperature conditions, killing species not usually exposed to such dangers. According to Curtis and Hogan, one case of this kind of disease has already occurred in the Columbia River, where columnaris has killed great numbers of salmon swimming upstream.

In addition to these threats and others too numerous and detailed to be listed here (cf. *Perils of the Peaceful Atom*, released in Ballantine paperback in March, 1970), we are beginning to discover that nuclear power may be considerably more expensive in the long run than fossil fuels or fuel from other sources.

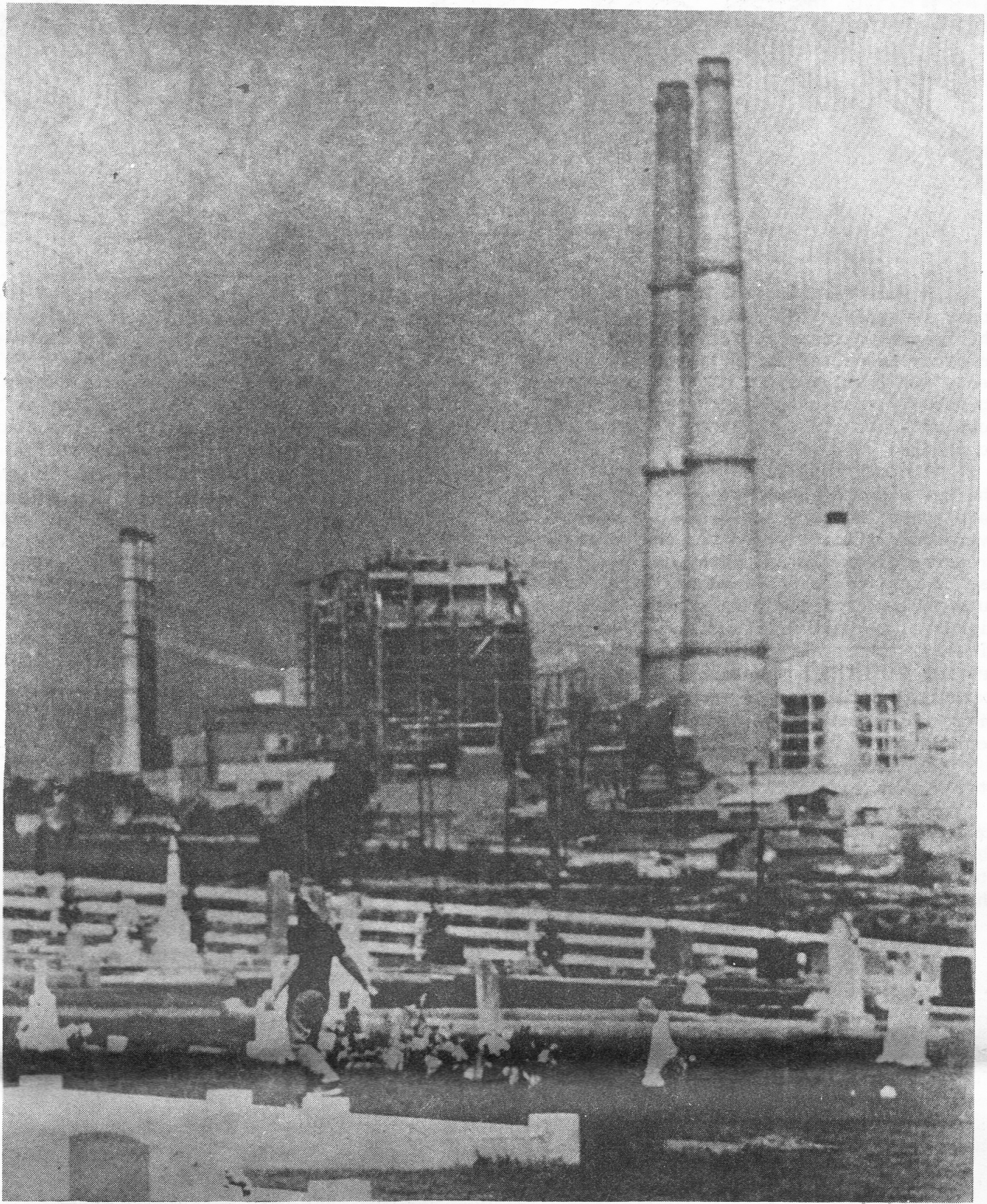
Technical problems with "fast-breeder" reactors have raised doubts that they will be able to produce by-products of fissile plutonium quickly enough to offset the drain on our reserves of uranium 235. We may run out of nuclear fuel centuries before we run out of coal.

Furthermore, almost without exception nuclear plants have ended up costing millions or tens of millions of dollars more than they were estimated to. And the Atomic Energy Commission still classes every reactor for which it issues a permit as "experimental," because it has not yet been able to declare one of sufficient commercial efficiency to be of practical value.

Santa Cruz County residents are already threatened by a 22% rate increase this year, as a result of an 11% statewide increase and the revocation of an 11% discount this area had as a result of previous lower rates of an independent local company PG&E absorbed. One of PG&E's justifications for this increase has been its plans to expand, including building nuclear power plants.

If the Davenport plant cost more than the predicted \$200 million for each of the six units, it would be logical to assume our rates would go higher still, thus offsetting any individual gains from PG&E property tax revenues.

Santa Cruz has one important objection to a nuclear plant's being located locally, in addition to all the other reasons--earthquake. In 1961, citizens living near Bodega Head, north of San Francisco, successfully resisted



PRESENT MOSS LANDING PLANT

PG&E's attempts to locate a nuclear plant there. In spite of the fact that the proposed plant was situated within one quarter-mile of the San Andreas Fault, PG&E went ahead. Only when another fault was discovered right in a PG&E excavation were the plans dropped.

Although we are not right on the San Andreas--the fault responsible for the 1906 San Francisco earthquake--we are near, and the area near Davenport can be expected to be crisscrossed with minor faults.

Indeed, we may face disaster from an earthquake at the already approved Moss Landing nuclear site, when the plant goes in. According to PG&E's tour pamphlet of the Moss Landing plant, "The earthquake that brought San Francisco to its knees in 1906 delivered a near-fatal blow to Moss Landing. The tremblor altered the course of the Salinas River so it flowed into the ocean miles south of its previous course to the bay. The empty riverbed at Moss Landing now became a slough that filled and drained with the tides."

Finally, we already have reason to believe that PG&E has resorted to news management in an attempt to avoid opposition to the Davenport atom plant.

PG&E first publically revealed their plans for the plant on April 9, at a press conference called by John McCallie, a member of the Santa Cruz County Board of Supervisors and chairman of the Monterey-Santa Cruz Unified Air Pollution Control District. One week prior to the press conference, McCallie voted against an interim zoning ordinance for the North Coastal area which would have prevented

the type of development PG&E plans and maintained the area as a greenbelt. At the PG&E press conference, McCallie stated that at the time of the voting he had no knowledge of the PG&E plan.

On Friday, April 17, Santa Cruz County Supervisor Henry Mello told the *San Jose Mercury* that last November PG&E officials talked to him and McCallie about their plans for Davenport, asking that it be kept confidential because of the proposal's preliminary nature.

But real double-dealing between PG&E and elected county officials may not be involved. According to N. Manfred Shaffer, Associate Professor of Geography at UCSC and a member of the Monterey-Santa Cruz UAPCD's Advisory Committee, "It's practically impossible to get a straight answer from PG&E. When Supervisor McCallie asked PG&E if they were considering the Davenport site, they said they were, along with sites all up and down the Pacific Coast," giving the impression that they had no special interest in Davenport.

The Santa Cruz area is famous for its beauty. It's a place where people can find a spot in the sun and some peace of mind. Now that peace may be threatened by constant danger of nuclear disaster, and our ecology may be disrupted. On Friday night, April 24, at the Civic Auditorium, Philip Berry, national president of the Sierra Club, will debate Leslie E. Carbert from PG&E. The meeting starts at 8:00 PM. Hopefully, we can get some straight answers out of PG&E then.