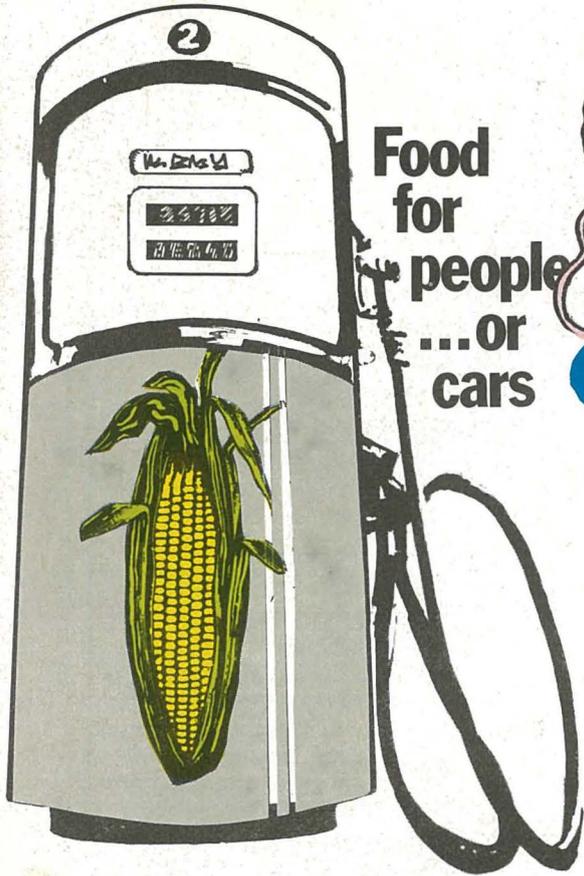


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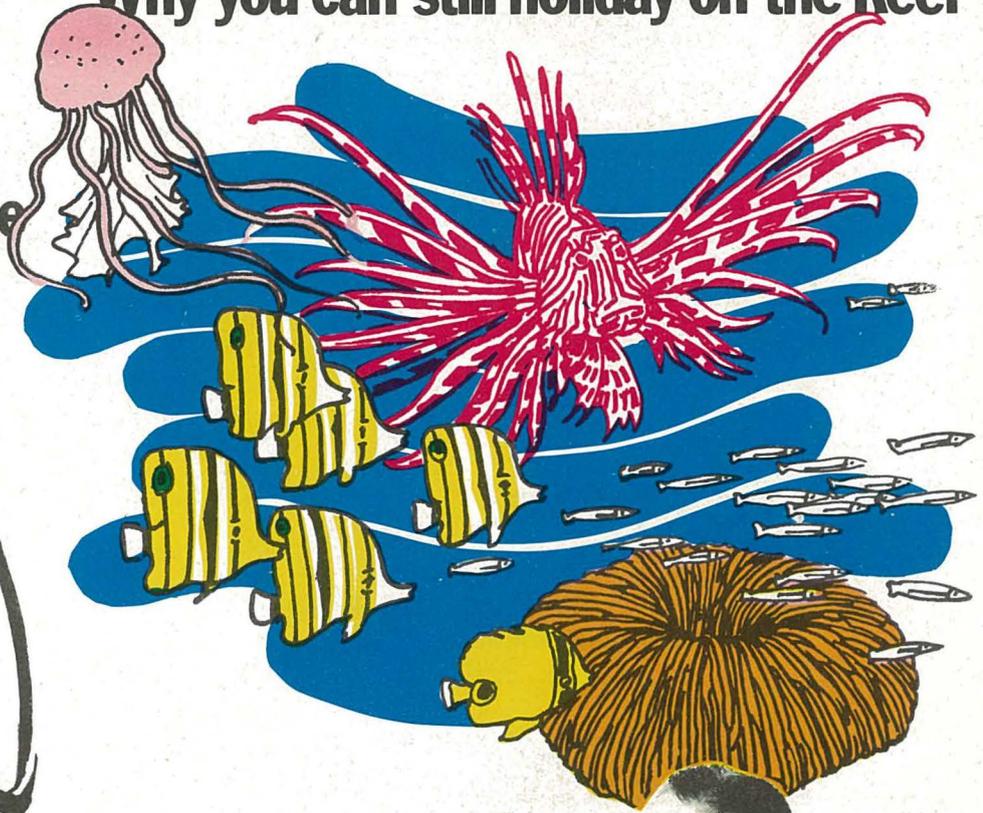
Friends of the Earth Australia

Number 22 Summer 1980-81 \$1.50*



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cars

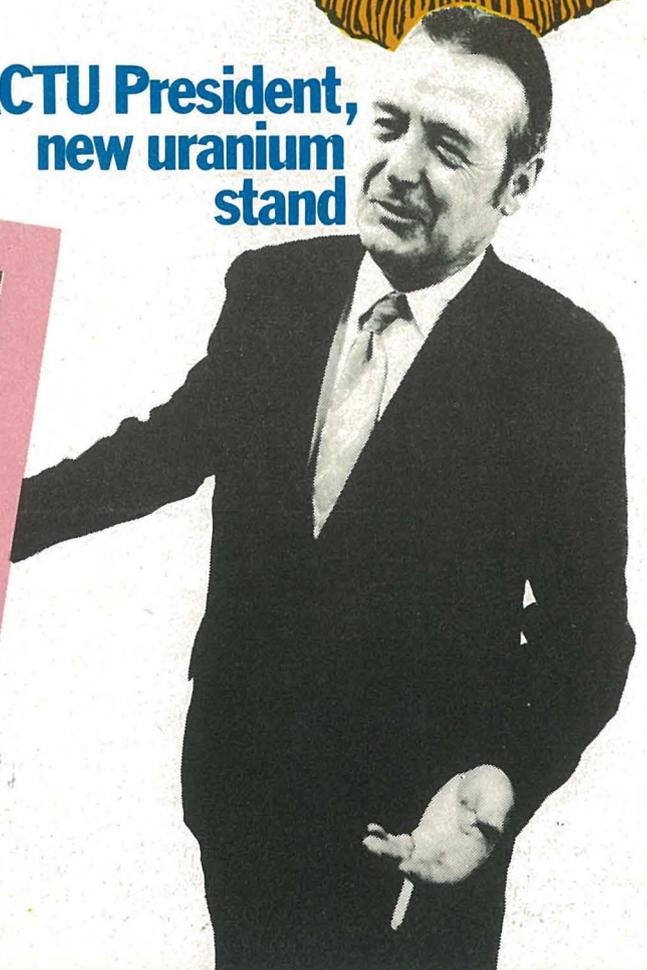
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Chain Reaction

Established in 1975

Number 22

Summer 1980-81

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Contents

WINDS OF CHANGE AT ACTU



Cliff Dolan, the new ACTU President, interviewed.

8

FOOD FOR PEOPLE . . . OR CARS

Now we can make fuel from crops, what are the prospects for food supplies?

11

CHIPPING INTO TASMANIA

What they can't flood, they'll chop down. A local sawmiller is among the critics of the Forestry Commission.

14

WORLD WILDLIFE FUND

Where the money comes from . . . a Who's Who piece for CR

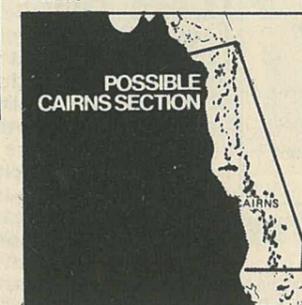
16

HOLIDAYS

What is the result of yours and ours?

17

DEFENDING THE GREAT BARRIER REEF



A review of one of Australia's most important conservation campaigns.

18

WHAT'S A CATSCAN?

Doctors are using them, but should they and when?

25

THE FRI

Plans to set sail for a Nuclear Free Pacific.

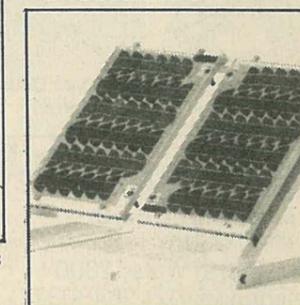
25

STRANGE CUSTOMS

There is big money in trading in endangered species. Customs officers call for their Bureau to be investigated. Meanwhile cheetah skins sell for \$1,000,000.

26

HOW TO USE SOLAR ELECTRICITY



A comprehensive guide for building your own power systems.

29

PULPING VICTORIA

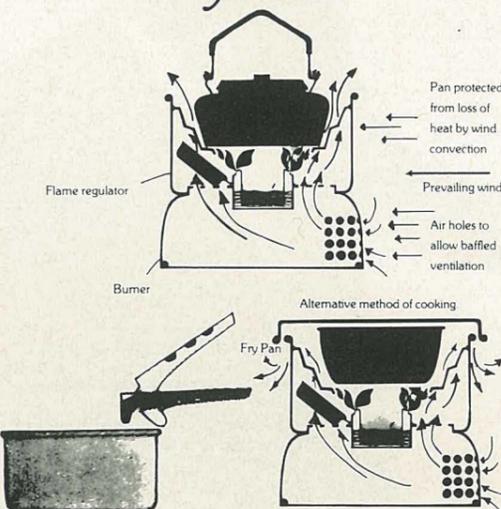
East Gippsland - look out long footed potoroo, leafless; tounge orchid; cabbage fan palm, long club moss, dainty wedge pea . . . here goes your environment.

32

LETTERS	2
EARTH NEWS	3
LEUNIG	3
BACKSTAGE	7
REVIEWS	34
ACTION GUIDE	39
FOE GROUPS	40

TRANGIA

The modern lightweight cooking system



The Trangia is a complete cooking unit made in Sweden from high quality materials. Its unique design makes it suitable for outdoor use even in the worst weather conditions, although it is just as efficient inside the tent.

- It is easy to erect and to light even in outside windy conditions.
- The pans are difficult to knock over because they sit down inside the stove. In case of an accident the stove can be easily extinguished with a bucket of water.
- There is no need for priming etc., and so no fuel contamination of hands, food or clothing. Methylated Spirits can, however, be used to sterilise your hands.
- Methylated Spirits is readily available throughout Australia. After wood it is the next most widely distributed renewable fuel.
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NOTES: There are two Trangia models, reference numbers 25 and 27. The 25 model has the larger capacity. Both models include a good handle designed to:

- Provide maximum strength.
- Obviate utensil damage.
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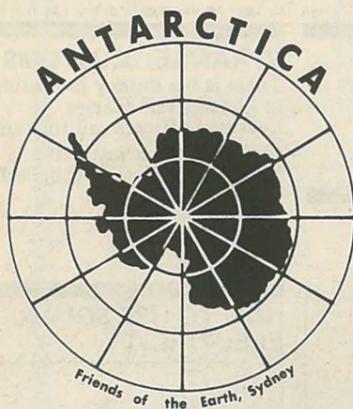
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Contributions to Chain Reaction are invited. Please try to send items typed, on one side of the page, double spaced and with wide margins. Keep a copy for yourself. We do not have sufficient resources and people to return manuscripts. These few guidelines are to help in bringing out the magazine better and faster. The Autumn edition will appear in early March 1981.

Chain Reaction is supplied to all members of Friends of the Earth in Australia (except in NSW) as part of their membership. For lists of state and territory groups and membership details see page 40. FOE (NSW) members are invited to become subscribers. Subscription details are on page 28. Responsibility for electoral comment in this edition is taken by Mark Carter and Leigh Holloway, 366 Smith Street, Collingwood, Victoria, 3066.

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Letters

IN OUR OWN HANDS

While agreeing with the majority of your comments concerning the book *In Our Own Hands*, we would like to point out some inaccuracies in the chapter on abortion. As you have mentioned, the whole book and this chapter in particular, is very Melbourne oriented and would give women a misleading picture of abortion services in other states. For example - Ms Hull states that local anaesthetic is rarely used in Australia - this is not so - over half the abortions performed in NSW are done with local anaesthetic. Also, in Sydney there are two feminist run, non profit abortion clinics offering a very sympathetic and supportive service. We would also disagree with her statements regarding pathology tests, IUD insertions and aftercare instructions in relation to abortion.

The whole tone of the abortion chapter is very negative and we feel it would have been much better if Ms Hull could have included information about the feminist clinics in Sydney. This would have given more correct and widely applicable information and would also have offered a model which Melbourne women could follow to set up similar services there - this would be more in keeping with the title of her book *In Our Own Hands*.

Jeanne Rudd
for the Bessie Collective
The Bessie Smyth Foundation
The Powell Street Clinic
Cnr. Powell Street and
Wentworth Road,
Homebush, NSW, 2140

LEAFLETS AGAINST URANIUM

I think that if we are to stop uranium mining we must consider what are the most effective ways of using our limited resources and energy to get the information flowing to change the minds and sway the hearts.

I believe that one of the most effective and simply organised ways is that of leafleting. Leafletting major work, school, shopping and recreation centres throughout the country.

By this means a small number of people can reach a very large number of people who might otherwise never come into contact with the arguments of our movement.

The pamphlets must be *fact-sheets*, avoiding rhetoric, wordiness and complexity. They must be concise, yet comprehensive.

Obviously it would be more

effectively (but more dauntingly) combined with activities such as energy fairs/displays, street theatre/music, street speaking/rallies, stalls, petitioning on Nuclear Free Zones, etc.

How about it? Out of our MAUM/FOE/CANE offices, branch meeting rooms and back to the streets amongst the people, for what could be our last chance.

John Baker
Friends of the Earth and
Movement Against Uranium
Mining,
Blue Mountains, NSW

TREES AND TAXES

I recently wrote to the Prime Minister regarding the Melbourne *Age* editorial of 21 August "Trees Belong on Farms". The article advocated restoring trees on the land believing that too much clearing has already gone on. I quote from *The Age*, "The job would be easier if the Federal Government abolished the archaic tax concessions for money spent on clearing land." I thought that as a farmer Mr Fraser would be concerned. His senior advisor, operations branch replied that, "as the matter concerned tax concessions it had been brought to the attention of the Treasurer." So I wrote to Mr Howard, "As erosion of much of inland Australia and salinity in many areas are such urgent problems and both are caused by excessive removal of trees, I ask you to do all in your power to prevent more clearing of bushland and perhaps even grant tax concessions for tree planting on farms."

R Fricke
Blairgowrie, Victoria

LETTERS

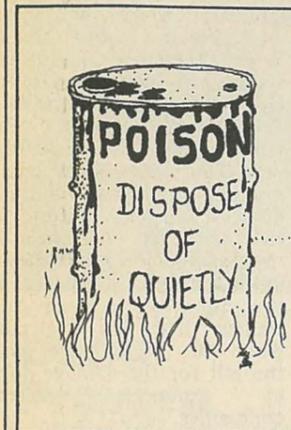
You are invited to write to *Chain Reaction* with your comments and criticisms of articles or on other issues of interest to you. We are more able to publish your letter if it is under 250 words. Write today to the Editors *Chain Reaction*, 366 Smith Street, Collingwood, Victoria, 3066, Australia.

CHAIN REACTION

In *Chain Reaction* No 21 a report on the 1980-81 Budget allocation to environment groups included a mistake. The allocation was \$350,000 not \$35,000. And, in the 'How we can now stop uranium mining' series we placed the wrong by-lines next to two contributions. The piece credited to Noel Wauchope was by Joe Camilleri and vice versa.

Earth News

Hazardous wastes



little has been done in Australia and perhaps because there has been no Love Canal type disaster here industry continues to carelessly dispose of chemical wastes regardless of contamination of rivers and groundwater. For example EZ Industries response to criticism of its dumping of heavy metals in the Derwent River in Tasmania has simply been to take the wastes out to sea a short distance and dump them there.

In Tasmania "There is no specific body that is willing, or has the facilities, to dispose of specific hazardous chemicals. The situation generally is that the persons who use them are responsible for ensuring that they are handled safely and in accord with the laws of the State" according to the Royal Australian Chemical Institute.

A House of Representatives inquiry has been set up to examine the handling of dangerous chemicals.

The Love Canal is an abandoned hydro-electric canal in Niagara Falls USA which was used during the 1950's for dumping of pesticide residues and industrial chemical wastes. A housing estate was built above the dump site. From the mid 1970's serious health problems emerged and the area was finally evacuated. The cost of the clean up is now approaching \$USA300 million.

The human tragedy at the Love Canal has sparked off major concern around the world about hazardous wastes. The USA government has established a \$USA1.2 billion fund to start cleaning up thousands of dangerous toxic waste sites. Money spent will be recovered from companies and individuals held responsible for the pollution. The Senate Finance Committee is also considering a \$USA4.2 billion fund which requires industry to contribute 80% of the fund, regardless of the origin of the toxic sites. Some chemical manufacturers have been fighting this bill vigorously. Both funds cover compensation for persons harmed by the toxic materials. The Environment Protection Agency also is expected to require manufacturers to purchase for the first time non-sudden pollution insurance to cover waste site leaks.

So far however, very



Demonstration to Parliament House by the newly established South East Land Council, Victoria.

South East Land Council

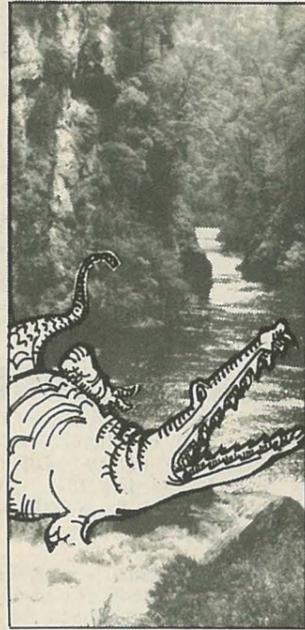
An Aboriginal Land Council has been established in South East Australia. The South East Land Council covers tribal areas in Victoria and crosses into New South Wales and South Australia. An executive committee of fifteen people has been formed with Len Clarke as Chairperson and Reg Blow as Secretary. Meetings will be held in country areas over the next four months at which Aboriginal people will be invited to participate. One of the main tasks will be to acquire funding.

For more information contact the Aboriginal Mining Information Centre, 5 Candy Street, Northcote 3070. Telephone (03) 481 2717.



The discovery of the first supermarket trolley on the summit of Mt Everest, November 1980

Franklin not unique



The following is an extract from Tasmania's Hansard of a speech made by Bob Mather (Liberal, Shadow Minister for Energy).

"Even on the basis of the advertisements that I read in certain newspapers, one can very easily refute the proposition that the Franklin is anything like unique as a wild river to raft down. There is one in Ethiopia where people get an extra bonus of 'hippos' and crocodiles . . . There are rivers in Nepal . . . there are plenty of places besides the Franklin River. Why we should have to pay a couple of hundred million dollars to enable 500 or 1000 people to go down our river on a raft every year when they could do it elsewhere without cost to the general public? I don't know . . . we have people who are subjecting us to 'eco-panic'. They would best be described as 'eco-nuts' who, if they did not have Tasmania to get excited about would be fighting some other issue somewhere else, whether it be fluoridation, 245-T or something else".

Fraser's nuclear spending

Close examination of the Fraser Government's expenditure estimates reveals a proposed allocation of \$50.4 million of public money to the uranium and nuclear industries this financial year.

This includes:

- \$28 million for the Australian Atomic Energy Commission
- \$10 million for infrastructure at the Jabiru township in the Northern Territory
- \$6.9 million for protection of the environment from the effects of uranium mining
- \$2.4 million for the expenses of four Federal departments, heavily involved in

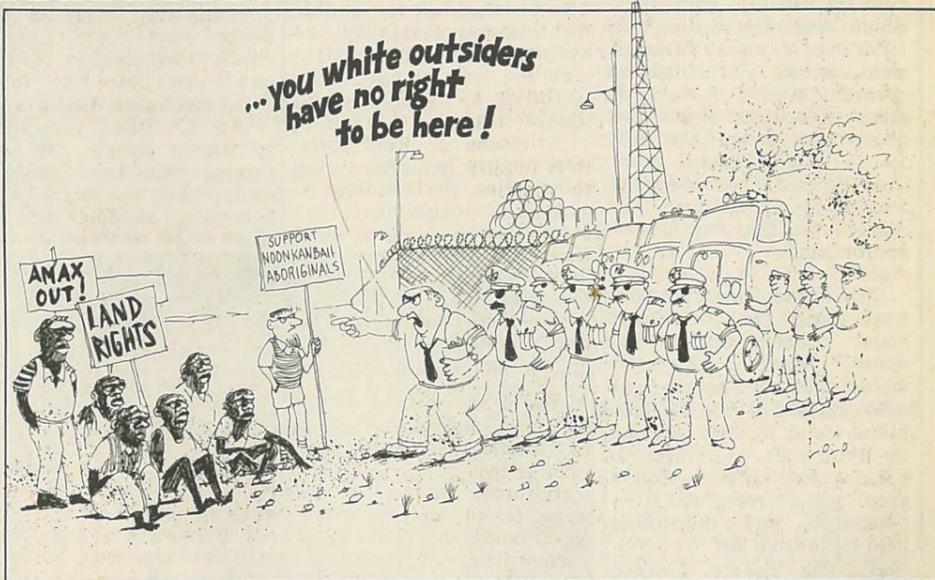
the uranium industry and of three other government bodies.

This figure represents direct uranium and nuclear spending only: there are many other areas of related government activity such as programmes concerned with the social impact of uranium mining on Aboriginal people, for which no cost figures are available.

This expenditure on the nuclear industry is greater than the Government's total spending in energy research and development which is estimated at \$34.5 million in 1980-81. Spending on solar energy and energy

conservation was only about \$4 million last year.

On 7 October 1980, the Labor Spokesperson for Urban and Regional Affairs, Tom Uren, stated that "Environmental protection measures associated with uranium mining account for 80% of all expenditure on environmental protection in this year's budget. Serious environmental problems in the cities, where most Australians live, are neglected while the Government foots the bill for the damage done by uranium mining companies."



Land Councils support Noonkanbah

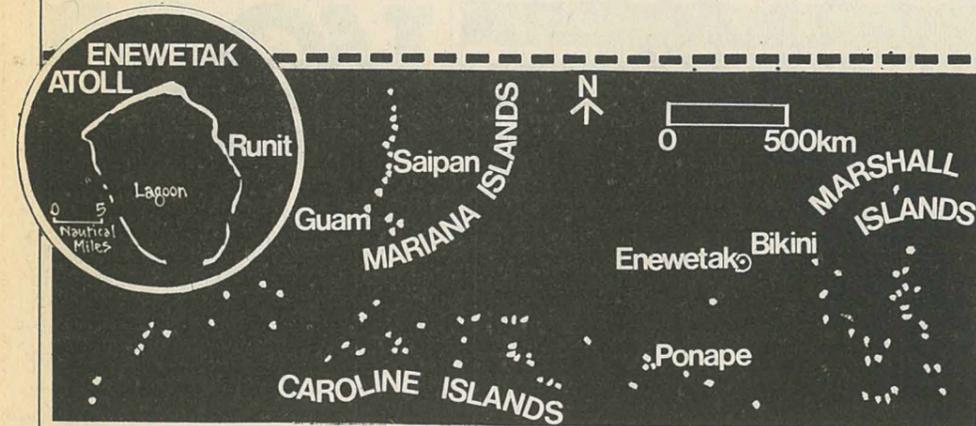
At a meeting of all Aboriginal land councils at Noonkanbah in early September, a motion was passed asking councils to support Noonkanbah people by stopping all negotiations with mining companies until the Noonkanbah situation was settled.

The Central Land Council (CLC) and Pitjantjara Council have voted to support that motion.

The Northern Land Council (NLC) executive dis-

cussed the issue at a meeting in late September and have passed this motion - "That the NLC seeks a statement of the Prime Minister's intentions concerning the protection of the interests of Aboriginal people at Noonkanbah and if no satisfactory reply is received the Executive Committee will recommend to the council on December 6 that it adopt a similar course of action to that taken by the CLC."

The new chairperson of the Northern Land Council is Gerry Blitner of Groote Eylandt and deputy chairperson is Leo Finlay of Borrooloola. The Central Land Council has also elected a new chairperson. He is Stanley Scrutton of McArthur River, who has been working as a field officer for the CLC in Alice Springs.



USA Trust Territory of the Pacific Islands. Inset: Enewetak Atoll

Depo-Provera

Under USA laws products which are not approved for use within the USA may still be exported. This results in a corporate policy of "dumping": the selling of products unfit for human consumption overseas. Depo-Provera, an injectable contraceptive banned in the USA, was administered until recently to women in Ponape and Saipan in the USA Trust Territory of the Pacific Islands.

Manufactured by Upjohn, it has twice been refused approval by the Food and Drug Administration (FDA) for use as a contraceptive in the USA because of possible links to permanent sterility and cervical cancer. Women given Depo-Provera were not warned of the FDA ruling against the drug. Patients complained of breakthrough bleeding and other discomforts but the drug was still used. Doctors involved explained that this was because of the difficulty of supplying the outer islands with contraceptive pills, and because of a "tremendous lack of privacy" that could make women hesitate to use other forms of birth control.

Trust Territory officials have now directed that the drug should no longer be used. Depo-Provera is still available in Australia. It is widely used in institutions and is also administered by some doctors to women outside institutions.

Pacific Island clean-up

Following a three year \$USA100 million nuclear clean-up of Enewetak Atoll the trust Territory of the Pacific Islands, the United States of America government says it is safe for the people to return to certain islands.

During the massive clean-up, thousands of cubic metres of plutonium-saturated soil were removed and, with other radio-active debris, encased in a huge cement dome in an atomic bomb crater on Runit Island. This island is off limits to the Enewetak people for ever. However, islands within three miles of it have been designated safe for "picnic and food gathering".

The USA government has hesitated to allow the people to resettle on the northern islands, where most of the forty-three nuclear devices were tested on the atoll. Nevertheless, on the basis of a scientific study prepared for the Micronesian Legal Service, a government sponsored group representing the Enewetak people, the people have voted to return to all the islands.

The objectivity of this study has been questioned by several organizations and scientists. Dr Rosalie Bertell, a consultant to the New York State and Wisconsin Medical Associations, and to the Division of Standard Setting for the USA Nuclear Regulatory Commission, said of the study: "The population of Enewetak has the right to

know that a value judgement has been made for them, namely that induction of cancer is their only concern. They may, if informed about hypothyroidism, aplastic anemia, premature ageing, benign tumors and other such disorders make a different judgement."



Rosalie Bertell

Dr Bertell added "They 'reduced' the radiation dose of the inhabitants (of the northern islands) by averaging in the population less exposed. This is like telling one member of a family his or her risk of lung cancer is lower if the other non-smoking members of the family are included and an 'average' risk is given. It is a scientifically ridiculous approach to public health!"

The USA government has proclaimed the clean-up a "remarkable success" and appear intent to ignore potentially serious health hazards for the Enewetak people.

Seed tour

In the last week of September, Pat Mooney, author of *Seeds of the Earth - A Public or Private Resource*, spoke at meetings in Sydney, Canberra and Melbourne on the conservation of plant genetic resources, the implications of plant patenting laws for consumers and farmers, and the future direction of agricultural development.

Pat came because of pressure put on the United Nations Food and Agricultural Organisation, based in Rome, to prevent one of its employees, Dr Erna Bennett, speaking out on the issue. Pat said that although FAO gave 'jittery support' to the seed patenting opposition (as seen by the fact that it had asked him to carry out further investigations since publication of his book), it was controlled to some extent by its donor nations. It was these nations, particularly West Germany and Holland, which put pressure on the FAO director to keep Dr Bennett quiet on the issue after she received an invitation to visit Australia.

Results of research carried out by Pat Mooney for FAO show that almost 90% of the world's stored plant genetic resources are now found in the USA and Europe, whilst the centres of genetic diversity in the tropics face extinction. This has aided the major petrochemical corporations in their attempts to use patent regulations to gain ownership rights over new plant varieties and thus move towards a position of dominance in the world seed trade.



Pat and Robin Mooney

Sun right legislation

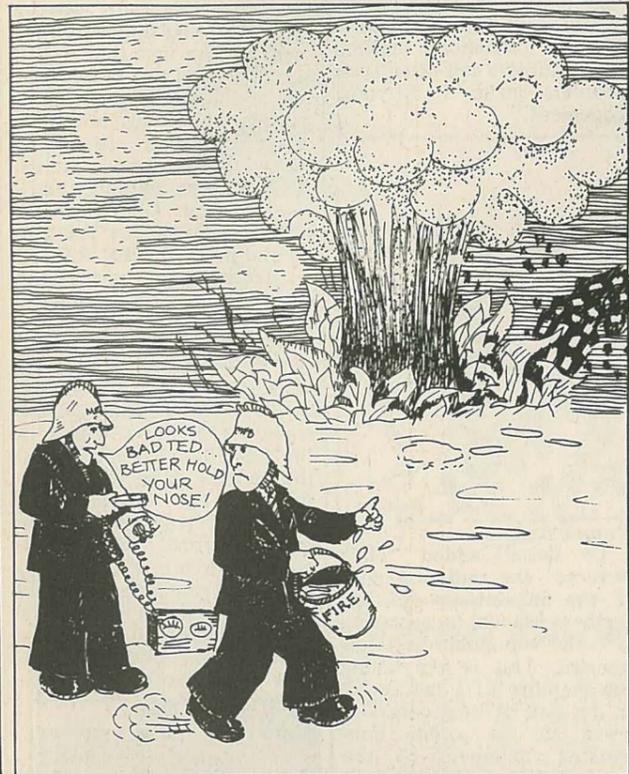
The Total Environment Centre is establishing a project in New South Wales to draft legislation which will protect the citizen's right to sunlight.

Preliminary work was completed in 1978 by the South Australian Law Reform Committee, who suggested ways of framing a sun right:

has a right to an arc of space flowing from the collector.
b) The implementation of solar energy use zones that could be superimposed on existing land use districts. Such legislation would be an important move towards greater implementation of solar energy.

For more information contact the Total Environment Centre, 18 Argyle Street, Sydney, 2000. Telephone (02) 274714.

Geiger counters for Country Fire Service



We have been reliably informed that the Country Fire Service headquarters in South Australia has sent a note (read and burn) to all country fire service units in the state suggesting that they all become equipped with geiger counters — especially for use along highways. Is this because radioactive materials are being transported on South Australian highways (and elsewhere)? Or are the CFS trying to one-up the Health Department? Or are they simply getting prepared for a future nuclear world?

WARNING



A study by Women of all Red Nations (WARN) links high miscarriage and cancer rates at Pine Ridge, South Dakota Indian Reservation with contamination of the water supply by uranium tailings from nearby mines. The WARN study shows that in one month during 1979, 38% of pregnancies at the Public Health Service hospital in Pine Ridge resulted in miscarriages and 60 to 70% of live births were complicated by breathing difficulties or jaundice.

Levels of nineteen and fifteen picocuries per litre have been found in the reservation water supply. The Public Health Service stated that levels of over five picocuries are dangerous.

Environment axe

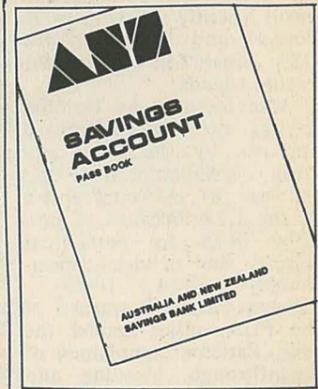
A sub group of the Australian Legal Workers Group is working with Friends of the Earth (Collingwood) to review the effectiveness of Australian environmental legislation. The first report from the group is on the Victorian Environmental Effects Act. It identifies a string of deficiencies in the Act and points to procedures adopted by the Department for Conservation contrary to the Act which result in many projects

Ranger withdrawal

In 1979 the Movement Against Uranium Mining published a dossier attacking the Australia and New Zealand Banking Group for its involvement with uranium companies.

When the Federal Government decided to sell its share of Ranger, the other partners, Peko-Wallsend and EZ Industries, decided to create a new company to buy the share. They naturally approached the ANZ, their major banker, to help raise the \$USA250 million loans the new company would need. But the ANZ declined to enter the banking syndicate which is funding Energy Resources of Australia (ERA). Neither did it open a branch at the Jabiru site.

Apparently as a result, Peko-Wallsend has dropped the ANZ as its banker.



not being assessed. In the two years prior to the Act 35 environmental effects statements were prepared yet in the two years since only fifteen have been done on public works. The group intends to do further work on the legislation federally and is interested in contacting lawyers in other states.

Contact: FOE Collingwood (03) 419 8700

Chain Reaction

COMING SOON

NUCLEAR FREE PACIFIC

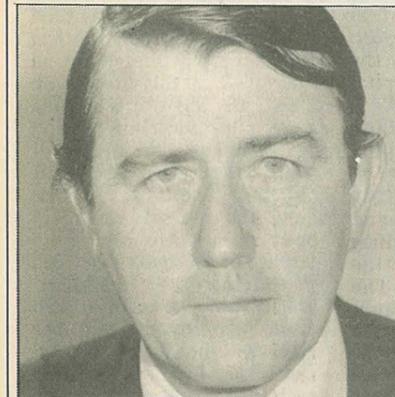


Reports from around the Pacific, including a special study on the role of Australia and New Zealand.

ENVIRONMENT EDUCATION

We have started gathering information for a series on secondary and tertiary environment education. Please, if you know something of what is going on — or ought to be — contact our Sydney (02.2648037) or Melbourne (03.4198700) offices. We will be working on this one for the first few months of 1981.

THE WRAN GOVERNMENT



An assessment of their policies and performance on energy issues — a special *Chain Reaction* report from Sydney.

You can become involved in *Chain Reaction's* research work, editing, soliciting material, checking facts, seeking graphics, helping us chase-up authors, etc. There is so much to do and you do not need special expertise — we can readily suggest ways around problems towards making the magazine even more punchy and accurate. Contact us in Melbourne 03 4198700 or Sydney 02 2648037.

Backstage

It is important that readers understand the thinking behind this magazine's decisions and actions. If you like *Chain Reaction* we want you to be able to work with us for its success. *Backstage* will appear frequently in the magazine. Whatever your thoughts, please give your comments to us — for example, either through the Letters page, or with the questionnaire sent out with this edition.

Luck is not enough on which to base a magazine's plans. For years now Friends of the Earth has been tremendously lucky with its work — people making generous donations, leaking important information, etc. Much of what has been achieved could not have been forecast.

But soliciting some comment on the work of *Chain Reaction*, at a time of change, could — when combined with continued generous support and luck — help get the job done more effectively. So the *Chain Reaction* Collective want to know what you, the readers, think of the magazine.

Dion Ellis, one of the people working on the magazine in Melbourne, will be going through the returned questionnaires to see what you think of *CR*. Some of the questions, which he and others dreamt up, may seem torturous or odd, but please take a few minutes to give us your comments. Even if you think the question is absurd — say so — and that gives some insight.

We would like to know what use the magazine is to people and how you see it, as part of your life and activities. It is important for us to know a little of you — so we can find more people to buy the magazine, and it is a fairly safe bet that it is possible to extend the circulation of the magazine — and so make it more effective — if we know who reads it now.

The major restraint on the magazine now is its limited circulation. If you can help us get *Chain Reaction* to more people that will give a greater income to the magazine and that will boost our abilities to give you, and the new readers, an even better magazine.

Gift subscriptions took off well, with the last edition, and some happy people have been added to our mailing list by the generosity of their friends. You might like to consider giving gift subscriptions to your friends, relatives, library, school, or It is \$5 per year for four editions.

With our last edition a letter went to subscribers and Friends of the Earth members seeking donations to our Special Appeal for two projects: a campaign to gain more subscribers and a new fund for Special Investigations.

The response has been encouraging with \$544 received. Thanks. Once we get another \$150 we will be going ahead with a leaflet about *CR* to be inserted in *Habitat Australia*, the Australian Conservation Foundation magazine. Swap ads are going in other magazines: *New Doctor*, *Freewheeling*, *Grass*



From Us and Them
by Patrick Cook, Fontana

Roots, *Probe*, *Legal Service Bulletin*, *National Parks Association (NSW) Journal* and *Nation Review*. We hope to organise others — offers and suggestions are welcome. We would like to undertake a mail-out to all environment groups in Australia, inviting subscriptions to *Chain Reaction* and stressing the magazine's eagerness to be a forum for expression of such groups' news and views. But that is going to cost a few more hundred dollars.

Special investigations, when developed fully, could cost us a few hundred dollars per edition. The scope there is enormous — covering subjects such as administration of environment legislation in Australia, as controversies loom large in Western Australia, Victoria, and Federally; the effects of the aluminium industry; environment education in Australia; etc.

So we remind people that donations are still sought and welcome.

If you can afford to make some contribution to either of these efforts it would help us a great deal. Write to Candy Strahan, our Accountant, at *Chain Reaction*, 366 Smith Street, Collingwood, Victoria, 3066.

Winds of change at ACTU

The day after Cliff Dolan took over from Bob Hawke as President of the Australian Council of Trade Unions, he called a press conference to discuss the question of uranium. The occasion signalled a change in direction of ACTU policy on uranium and raised once again the question of whether the union movement could take effective action against the development of nuclear power.

Mr Dolan, 60, came to the ACTU from the Electrical Trades Union. He had been senior vice-president of the ACTU since 1973 and played the leading role in maintaining the ACTU's policy against the mining and export of uranium at the 1979 Congress in Melbourne.

From the beginning of his presidency, Mr Dolan said he would operate the ACTU as a team effort and encourage other ACTU officers to be active in presenting the union view to the public. He made it clear that he was not interested in Mr Hawke's LTD and took up part-time residence in Moonee Ponds. During this interview with Michael Gordon, he discusses the new direction in ACTU policy, his ideas on how it can be made to work, his impressions during a recent tour of Northern Territory mines and his thoughts on the anti-uranium movement.

What problems were you able to identify in the area of health and safety of workers when you visited the Northern Territory sites?

We met a number of people, mainly company people. They showed us the various checking devices for monitoring radioactivity which were supposedly set up around the mine sites at Ranger. In discussion with some of the blokes there, they indicated that they'd never seen any of these monitoring devices. But I'm not saying they were correct. They probably didn't appreciate what they were anyway. Talking to a number of people, they weren't aware — and again, I'm not saying they were correct — but they weren't aware of any safety checks being carried out on them. They knew they had to wear this device which measures certain radiation, and that it was checked periodically. They are not advised of the dosage that they've got.

I think one of the greatest dangers is that the people who are employed, say at Ranger at the present time, are being employed on a relatively short term basis. The average employment is about three months, and then they could be anywhere in Australia, and nobody seemed to know about what follow-up there was or could be so far as these people were concerned.

At Nabalek where the processing is going on, with a bit of a smile about it, they pointed out to us that the operators on the plant were required to go through this 'dirty' area and remove their working overalls, which were laundered daily, and then go into the 'clean' area and pick up their own clothes. They made a great feature of this. However we walked all around the plant for more than an hour I suppose through the various sections, and there was no suggestion that we should have a check or that our feet should be washed.

What role does the Federal Government play in supervision of health and safety standards at Ranger and Nabalek?

While they have a senior officer in the area — and I'm not quite clear as to whether there is only one — many of the responsibilities in the area of safety have now been passed over to the Northern Territory Government's Mines and Energy Department. The Commonwealth has left the field to a great extent, and one doesn't know the competence of the Northern Territory people.

How effective is the educative campaign to get workers out of the industry. Is there any evidence that the campaign is working?

I think what really needs to be done is for a completely independent expert to again survey what is going on up there. The Miscellaneous Workers' Union had a chap by the name of Arnold do a survey up there some time ago. People have been critical of his report in that while he is involved in this area to an extent, he was not a mining expert and didn't understand the problems of deep pit mining that took place at Nabalek. There was a case where the ore was mined in about six months and those people, of course, who did the mining have all gone. There's only a total of 90 people employed over the whole of the shifts at Nabalek now, in the processing area.

How effective have the threats of the Electrical Trades Union and other unions like the AMWSU to expel or blacklist members for working in the industry?

Well it hasn't been very effective to date. There was a case in the Queensland court in relation to Mary Kathleen, but I'm not aware as to whether that decision has been given. It was a challenge by the Queensland Government to the rules of the Queensland branch of the union. There's been no actual

threat really to anyone, either by the ETU or by the AMWSU. But it is still very much a matter of education and its not only so far as the people in the mining area are concerned, but the people who go up there from Queensland, New South Wales or even Victoria to seek employment for a short period of time.

The Australian Railways Union has announced that from January next year it will ban the transportation of uranium. What attitude would the ACTU executive take to that action?

The ACTU would be bound to support the ARU in that action.

If non-union labor was used to road transport the uranium could any action be taken?

That would certainly be a situation to consider. A lot of the material for these mines is of course being transported. The Darwin branch of the WWF, perhaps contrary to the policy of the Federal WWF, have placed a ban on the export of uranium. Now Queensland Mines have had yellow cake stored both at Nabalek and somewhere in Darwin. I think one of the significant things is that they have up-dated the air strip at Nabalek.

The November executive meeting of the ACTU considered a strategy of imposing bans away from the mines. What hopes do you have for that action to be effective, given the lack of success so far?

This is going to be up to the unions. There has been some success in Queensland in that equipment that was being manufactured for Ranger was not manufactured at a particular shop up there, but where it went to nobody seems to know. There is a difficulty, but it is going to mean a much greater effort by the unions to trace the source of the equipment. We have a list of the contractors

involved at Ranger at the present time and that list will be circulated to the unions involved.

Is the fact that the policy has failed in the last couple of years a handicap to success this time?

Yes. I think perhaps we are two years behind. And even within the resolution that was carried at the 1977 ACTU Congress, we should have been doing more about the implementation of that.

continued on next page



LAND RIGHTS
 'The ACTU will continue to support Aborigines by industrial action if that is appropriate and necessary'

By Ben Witham

URANIUM 'I think we can win eventually. We've still got a long way to go'

In terms of resources for the educative campaign, do you think they should be increased?

No. The campaign will involve further pamphlets being prepared and distributed.

The budget of \$22,000 for the financial year. Is that sufficient?

I think it can be done within that. The unions who are particularly interested will need to use some of their resources both in manpower and in relation to educative pamphlets.

Given Bob Hawke's argument at the last Congress on the prospect of the ACTU stand against uranium becoming a national "Newport", do you think the union movement can win on this issue?

I think we can win eventually. We've still got a long way to go and, as I said earlier, we're probably a couple of years too late in starting.

How does the election result effect the ACTU position on uranium?

That would have made a complete difference, because the ALP policy is very similar to our own. It calls for a moratorium on mining of uranium until such time as complete safeguards are established in the various areas in regard to waste disposal and the use of uranium.

Having the Fraser Government still there...

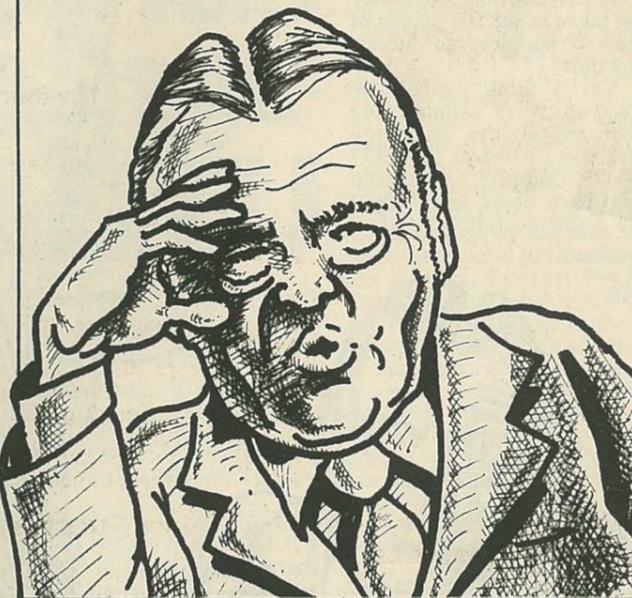
Well their policy is just mine it and to hell with everyone.

What are your impressions of the anti-uranium movement and its role?

I think the problem of the people who are involved in the anti-uranium movement is that they are inhibited by lack of funds. That's the main problem.

Do you think the trade union movement has a reasonable working relationship with organisations such as MAUM?

Oh yes. I have fairly close contact with them. I'm prepared to assist them as much



as I possibly can and I think they are us.

Do you see a role for organisations like MAUM in developing attitudes in the workplace, and if so, do you think this should have happened earlier?

I do see a role. I think they've been restricted because of finance from doing all the things they would like to have done.

In the past there has been antagonism between sections of the trade union movement and environmentalists. Do you think this has been broken down?

Yes. I don't think - well, except for some unions - I don't think that is a real problem in regard to uranium. It still is in a number of other areas and it will be something that will continue to some extent into the future. It's a very difficult position to get this balance between development and conservation - in other areas of mining, sand mining for instance.

What attitude does the

trade union movement have to the resources boom which has been emphasised by Mr Fraser?

It's nonsense to say that many of these developments are real employment creating projects. They are very short term and of course the eventual employment opportunities are minimal. I referred to Narbalek. Now that the mining has been done there's only six people per shift and a total of just over 90 people, and that includes staff, management and so forth employed at that project. I think the figure so far as operational people at Ranger, which is much bigger, will be something about 850.

On the question of land rights. Given what has happened at Noonkanbah, do you think the ACTU can still play a role to protect interests of Aboriginal communities?

The ACTU will continue to support the Aborigines by industrial action if that is appropriate and necessary. In most cases we accept that

their rights were being ridden roughshod over, as they certainly were at Ranger.

The problem of aluminium developments and plans for coal-oil conversion schemes in Queensland and Victoria is that they may result in the development of nuclear power to meet energy needs in Australia. Does this pose any dilemma for the ACTU?

That could be. I know there's talk about a nuclear power station at Portland for Alcoa's expansion. In New South Wales its a complimentary development to use Hunter Valley coal for the aluminium smelters there. And there's plenty of coal in Queensland for power generation. There's just not the necessity for nuclear power in Australia. It is still much more expensive to build a nuclear power station than a coal burning thermal station.

You wouldn't see the problem arising for some time?

No. But if it does, well then we'd be opposed to building nuclear power stations here in Australia.

Would you be more confident that that opposition would be able to be more effective than opposition to uranium mining and export?

Yeah, it could be because you would have real community involvement. If it was decided to build a nuclear power station at Portland, for instance, then I imagine the people of Portland would be most concerned about it.

On the question of nuclear waste dumping in the Pacific. Would you see any role for the ACTU in the international arena?

Yes. I think we will need to be getting involved in that in conferring with our international colleagues. The New Zealand Federation of Labor has a very strong anti-nuclear policy and we certainly cooperate with them. But it also means cooperation with people from the new Pacific nations who are also opposed to it.

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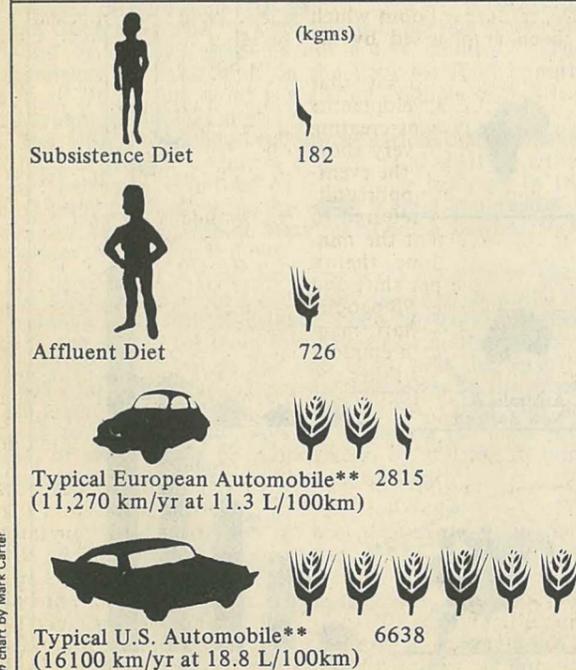
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FOOD for people or cars?



Chart 1
GRAIN REQUIREMENTS FOR PEOPLE AND CARS



*Based on average world grain yields in 1978, according to the U.S. Department of Agriculture.

**Fuel use converted at 380 litres of alcohol per metric ton of grain.

Source: Worldwatch Institute.

A disturbing new vision has recently been raised of people starving to death in Third World city streets as automobiles, fed on crops that could have been used for human consumption, drive past.

In a March publication of the Worldwatch Institute¹ of Washington, director Lester R Brown details the rapid and increasing commitment by several governments to production of ethanol (ethyl alcohol) from food crops for use in motor vehicles.

"The possibility exists for the first time of a major shift of food production capacity to non food purposes" writes Brown. "Most of the worlds 315 million automobile owners have the purchasing power to drive the price of corn, sugar, and other fermentables far above current levels."

The Story So Far

As we enter the eighties, world oil production is levelling off. There is also a growing uncertainty of supply and a world oil price that is climbing continually with no apparent limit in sight.

The coming demise of oil has prompted an intensive search by governments, bureaucracies and private corporations for alternative sources of energy.

Not surprisingly, they have given low priority to conservation technologies and the role of public transport systems.

Prominence has been given to liquid fuel alternatives: liquified coal, oil from tar sands and oil shale, and alcohol that can be produced from plant material.

A number of countries are turning to, or at least investigating, alcohol distilled from farm commodities as one source of fuel for automobiles.

Some Attractions of Crop Alcohol

- Automobile engines can readily burn a petrol-chemical mixture containing up to 10% alcohol without any adjustment.
- The commercial production of alcohol for industrial purposes is already a well established industry and the technology for converting plant materials into alcohol is widely dispersed throughout the world.
- There is a relatively short construction period for distilleries - 6 to 24 months.
- It is significantly less polluting than other automobile fuels of fossil origin and is a renewable resource.
- Energy crop production and alcohol distillation are far more labour-intensive than are oil production and refining.

Brazil and the United States of America (the world's largest grain exporter) have announced major programmes to convert crops into alcohol. Other food exporting countries such as Australia, New Zealand and South Africa are considering the conversion of crops into fuel alcohol on a commercial scale. Countries with practical, pilot programmes for energy crop potential include Kenya, Sudan, Thailand and the Philippines. Feasibility studies are underway in the Dominican Republic, Guyana and Jamaica.

Says Lester Brown "Even without the competition from energy crops, the world will be hard pressed to avoid a decline in per capita food production during the 80's." It is against this backdrop that the emergence of rational energy crops initiatives must be evaluated.

Brazil

On October 1980 the Brazilian Trade and Industry Ministry announced suspension of the signing of all new sugar export contracts. The move was designed to increase the potential availability of sugar for the country's fuel alcohol programme.

Brazil currently imports 85% of its oil requirements, 55% from Iran and Iraq. The current Iran/Iraq war has

forced Brazil into looking to increase its own production of fuel from crops.

This follows on from the alcohol fuel programme launched in 1975.

The Brazilian programme is based largely on sugarcane, the most efficient of all energy crops. Although only 2% of Brazil's total land area would need to be planted with sugarcane to achieve the goal of automotive fuel self-sufficiency, this would equal half the total land area currently planted to all crops. That equals 16.9 million hectares of sugarcane — more than is planted in the 65 other countries that grow the crop.

The Brazilian decision to turn to energy crops, Brown says is "certain to drive food prices upward thus leading to more severe malnutrition among the poor. In effect, the more affluent one-fifth of the population who own most of the automobiles will dramatically increase their individual claims on cropland from roughly 0.5 to at least 1.5 hectares, further squeezing the millions who are at the low end of the Brazilian economic ladder."

An article by German development issues writer Dieter Brauer in the German development magazine *Development and Co-operation*² this year, draws similar conclusions. Brauer maintains that ever larger land areas are bought up and used for alcohol production resulting in small farmers being driven from the soil and the neglect of foodstuffs production. The social implications were likewise acknowledged by a group of Brazilian scientists and technicians in a confidential 1978 study subsequently suppressed by the government.

In Brazil, the price for maintaining the automobile society is paid by:

- the small farmer whose land is bought up
- the rural worker whose wages remain low (necessary for feasible production)
- the environment, damaged by the promotion of giant monoculture (exclusive single crop development)
- 70% of the population (ie: the poor) as food production decreases and food prices rise.

United States of America

The USA's alcohol fuel programme is corn based. Their government's goal is to produce 2,250 million litres of ethanol for fuel in 1981 — at least 6 times the amount produced in 1979. For the mid-eighties the goal is 9 billion litres. This would require 20 million tonnes of corn or its equivalent — one fifth of the USA's current exportable grain surplus³.

"Over the past generation" says Brown, "the entire world has come to depend heavily on North American grain exports, with just over four fifths of the total being from the USA. All but a handful of countries now import grain, most of it from North America."

As the USA energy crop programme moves to its official 1985 goal, the exportable surplus of grain will be reduced accordingly: "In addition to the traditional buyers in the North American market — the flour millers, the feedlot operators, and the grain importing countries — there will be a fourth, potentially large, group: the distillers".

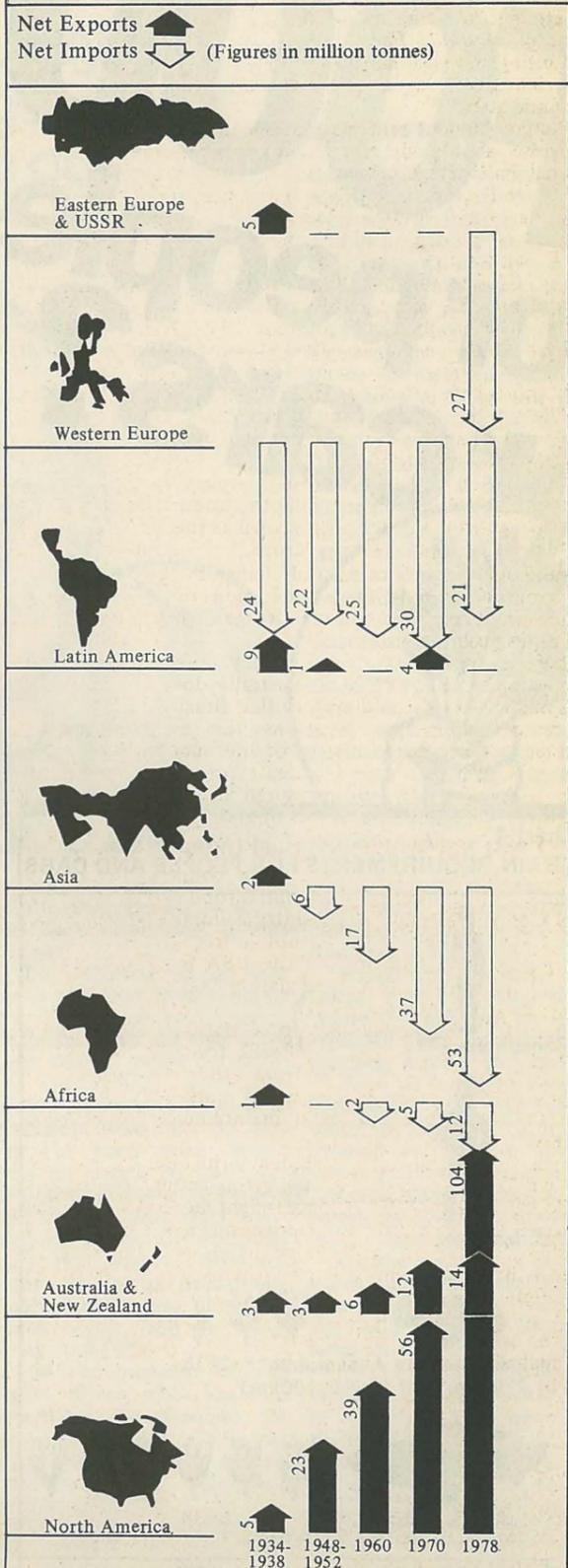
In the absence of governmental limitations on the conversion of agricultural commodities, the world price of grain will be driven steadily upward. Only when the price of grain-produced alcohol reaches equilibrium with the price of gasoline produced from petroleum will the growing conversion of agricultural commodities into alcohol come to a halt.

Energy Crops in Australia

The Australian Government has been relatively non-committal towards ethanol and so far National Energy Research and Development Council grants for ethanol research have totalled \$2.32 million — less than a thousandth of what the Government has obtained from its well-head tax on our oil.

In February 1980, following a federal government sponsored workshop on farm fuel ethanol (ie: ethanol

Chart 2
CHANGING PATTERN OF WORLD GRAIN TRADE



Source: Food and Agriculture Organization, U.S. Department of Agriculture, and Worldwatch Institute.

Chart Reaction by Mark Carter

production on farms, for farm usage) *National Farmer* ran an article on crop fuel⁴. In Australia, debate centres around whether the industry should and could be on-farm only or extended to large national scale industry. Julian Cribb, editor of *National Farmer* wrote of the problem of supplementing the national fuel supply to farmers. "Given the right incentive, ie: a tax cut, farm fuel could be an economic goer."

The government remains guarded and argues that private enterprise should do the basic proving research for a national industry. Big business including Ampol, the AMP society and TNT, in a joint venture are doing just that. They have \$60 million invested in a plant in Sydney designed to produce 2 million kilolitres of fuel from grain a year within five years. This amounts to around fifteen percent of Australian motor fuel requirements. And in Queensland CSR and Shell have announced plans to begin selling an ethanol/petrol blend in the Mackay area for ordinary motor vehicles. The ethanol will come from sugar⁵.

Of immediate relevance is the CSIRO research that has indicated that Australian agriculture could, if needed, produce more than 60% of our national fuel needs without affecting food production.

Published in 1979, this report⁶ argues that production of alcohol could be based on both residues from existing crop production and on crops grown as fuel crops on lands that are not currently used for crops.

Could such factors as a rapid change in the oil situation and/or new environmental considerations relating to carbon dioxide produce a Government change of heart and a large scale rapid push for crop fuel?

There is not the food dependency upon Australia that there is upon the USA, and Australia does not have the levels of socio-economic disparity that Brazil does.

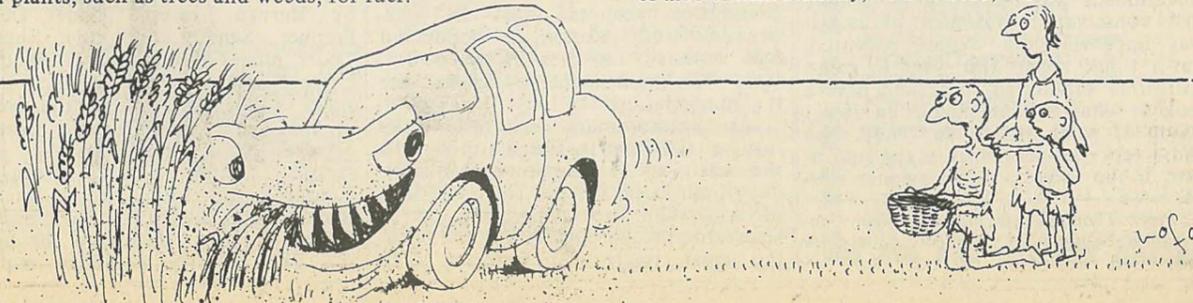
Yet in emergency situations the contribution by Australia could mean a matter of life and death for hundreds of thousands of people at least, for in such short term crises food needs can be measured in a relatively small amount of several million tonnes of grain.

Food Independence, Fuel Independence

But again the whole issue of a country being food dependent on another is raised and as food and power critic Susan George has said "if a country is importing more than a third of its food then it's not a free country."⁷ The dependency of Bangladesh on the USA for food imports (80% of its consumption) is a glaring example of political and economic vulnerability.

The USA programme will force national governments in food dependant countries to seek food security, either from their own countries or from other markets. In the short term food prices on the world market could soar. A case can be made for at least maintaining current food surpluses to keep prices down.

In the context of food dependency the question is raised as to whether the major grain exporting countries would be wondering what sort of balance might be struck between the power gained for them by possessing a number of food dependent countries on the one hand, and the security gained from fuel independence for themselves on the other. This might be particularly so of the USA. Could they attempt to have it both ways by extending the crop land base, or what might be more likely, by shifting to non-food plants, such as trees and weeds, for fuel?



Fuel From Non-Food Crops

A rather different scenario from the food versus fuel conflict might be offered by the potential of non-food plants.

Recently Julian Cribb wrote of the potential for oil extracted directly from plants⁸. He detailed the work of USA plant energy researchers Gene and Melvin Calvin, who have found that there are well over 2,000 species of plant in the world which can produce an oil almost identical to that which is drilled from the ground. These ranged from creepers to shrubs, trees, weeds ground covers, cacti and succulents. If the Calvins' research and calculations are correct "we may be totally ignoring the answer to our future energy problems" said Cribb. "We could produce our entire oil requirements from an area less than a third of what we now use to grow wheat and at a fraction of the current price for oil".

Some research and production proposals already exist in Australia for fuel from non-food plants including a study of a variety of creeper in northern Queensland and a proposal by a company called Unibeeff Australia to establish a gigantic mono-culture of a plant called "coffee-bush" in the Northern Territory to produce methanol⁹.

Could the food versus fuel debate be significantly altered by the promotion of non-food plant fuel potential? This is presently unclear and will be the subject of further research. On oil from plants Brown is not overly optimistic. He feels that they may have long term potential but that they are "not likely to exert a significant claim on cropland before the early nineties, if ever". He does not however explain why this might be so.

For the present the question to keep in mind is not whether there should be an alcohol fuel industry. It is one of in whose interests it is developed, its environmental consequences and whether it can avoid competing directly with food production.

1. *Food or Fuel: New Competition for the World's Cropland*, Worldwatch Paper 35 by Lester R Brown, March 1980. [The Worldwatch Institute describes itself as "... an independent non profit research organization" and produces some excellent research. However the conclusions and analysis in their work are sometimes politically dubious, this being not unrelated to the fact that they receive funding from The Rockefeller Foundation. (See Susan George, *How The Other Half Dies* Penguin 1976 pp. 115-120.)
2. 'Fuel from Alcohol; Blessings and Curses of a New Technology' by Dieter Brauer, *Development and Co-operation* Number One, 1980, pp 11-13.
3. It is worth noting that ethanol could not become the dominant fuel source for automobiles in the USA if produced from grain. Converting the entire USA grain harvest into alcohol would yield more than 135 billion litres, or 30% of USA annual petrol consumption.
4. *The Farm Fuel Revolution* by Julian Cribb *National Farmer* Feb 21st 1980, p4, 6.
5. *National Farmer* 2 October, 1980.
6. *The Potential for Liquid Fuels from Agriculture and Forestry in Australia*, G A Steward et al, CSIRO, 1979.
7. Susan George quoted in Learning Exchange Issue 89, 1980, p 5.
8. "Green Power: Energy From Trunk to Tank" by Julian Cribb *National Farmer*, 18 September 1980, page 16.
9. Unibeeff information obtained from the Environment Council of the Northern Territory, PO Box 2120, Darwin.

Chipping into Tasmania

By Peter Thompson

Oscar Wilde wrote that a cynic is one who knows the price of everything and the value of nothing. So it is in Tasmania's forest industry where an eye for quick profits has led to the widespread destruction of wilderness and a giveaway of resources by the state government.

The threat to Tasmania's forests is pervasive. Only National Parks are safe from clear-felling (and recently even part of the Hartz Mountains National Park was revoked to allow timber operations). The woodchip is the symbol of the age.

The Tasmanian government has demonstrated its near contempt for the conservation of forests. The cavalier attitude of government was illustrated at a recent meeting of the Australian Forestry Council in Hobart when the Tasmanian Minister, Neil Batt (now resigned) put his views on the potential of expanding logging in Australia to make up for the shortfall in planned operations in the United States of America as a result of environmental concern.

The confidential record of the meeting quotes Mr Batt:

"On the basis of the experience we had on the west coast (USA), the opportunities are there in particular because of the impact of the environmentalist movement, particularly in California where it may even be necessary to obtain the approval of up to 20 different departments before one can cut forests on one's own private land. I remarked to a group of business people there that the Tasmanian Government was interested in funding their conservation movement because it was improving our export potential, but I think those who want to go to California should go there and have a look at what is happening as an object lesson of what not to do. They even had a very nice gentleman as the equivalent of the forestry commissioner who

Peter Thompson is the Australian Conservation Foundation project officer in Tasmania.

had been appointed because he was one of the leading conservationists."

SOUTH-WEST TASMANIA

In a national context, the most serious problem is the forest activities in the South-West. If the Tasmanian government fails to revise existing agreements with industry, then 30% of the South-West wilderness will be lost. Thus, forestry represents as great a threat to the South-West as hydro-electric development.

Within ten years, walkers to the Western Arthurs, Federation Peak, Precipitous Bluff and Mount Anne may look down upon coups of cleared timber and a network of logging roads.

The work is already well advanced. Timber trucks rumble along the Upper Huon Valley each day as the march into the South-West proceeds. Roads cut south along the Picton Valley and will soon be pushed north along the Weld River to below Mount Anne. Plans have been made for an extension of the Huon Road beyond Blakes Opening and into the Craycroft Valley, immediately below the Arthur Ranges and Federation Peak.

Recently, the Tasmanian Parliament agreed to a Forestry Amendment Bill which rescinds the rights of the National Parks and Wildlife Service to draw up plans for forestry activities in the South-West and hands control over to the Forestry Commission. The new law follows rejection of a recommendation by a Committee of Inquiry into the South-West which suggested a continuation of National Parks Service management of Conservation Areas. In another recommendation, the Inquiry Committee proposed that an independent study should be conducted into forestry activities in the South-West. The government has ignored the recommendation.

An extraordinary feature of the logging activities in the South-West is the waste of vast commercial quantities of rainforest species. The operations of Australian Paper Manufacturers at Geeveston involve clear-felling and burning great tracts of rainforest. The



Daryl Brown, sawmiller, critical of Tasmania's Forestry Commission

cleared areas are then resown with eucalypt species. A local sawmiller, Daryl Brown has voiced scathing criticism of the Forestry Commission for allowing the destruction of celery-top pine, sassafras, myrtle and many other rainforest species. The rapid momentum of the clear-felling and burning operations leaves the sawmillers with little time to clear out the valuable timber. Daryl Brown says the annual burn-off of quality timber would more than satisfy his mill requirements for life.

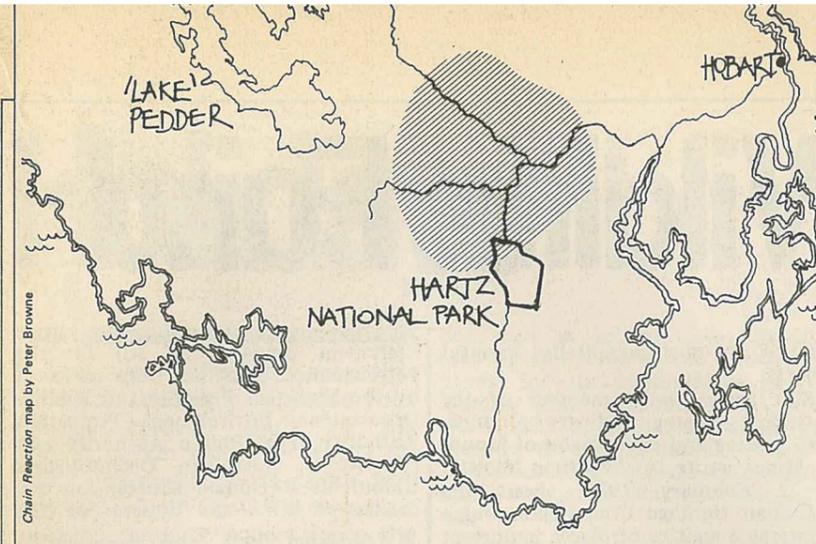
It is a tragedy that all of these activities, the roading, clear-felling and waste are taking part in the heart of the South-West, an area which is included in its entirety on Australia's National Estate Register.

ROYALTIES

Sadly, mismanagement of Tasmania's forests goes well beyond the destruction of resources in the South-West. A paper produced by the Forestry Commission on the level of royalty payments to the State government from the export woodchip company, Tasmanian Pulp and Forest Holdings has shown that Tasmanians are actually paying for their forests to be taken away.

The report states that royalty payments fall short of meeting the necessary regeneration, management and administration costs of woodchipping incurred by the Forestry Commission. The loss, according to the Commission, amounts to millions of dollars.

It was the revelation of highly embarrassing information such as the royalty fiasco which persuaded the Tasmanian government that a major inquiry into forestry being conducted by Mervyn Everett (former Deputy Premier, Senator and now Supreme Court judge) should be abolished. Mr Everett was involved in the second stage of his inquiry when the axe fell in mid-1978. On returning from an overseas trip, Premier Doug Lowe sacked Andrew Lohrey from the Resources portfolio (which includes forestry and hydro) and canned the Everett Inquiry, stating to the public that the industry would be required



WILDERNESS FORESTS THREATENED BY WOODCHIP OPERATIONS

to submit their own assessment of the issues which Everett would be inquiring into.

LOW RETURNS

Inadequate royalties represent only part of the story. Tasmania's wood production yields the lowest financial return of any Australian state. Although Tasmania contributes over 30% to national wood production, its return is only 22% of total sales.

The reason for this anomaly is Tasmania's large-scale commitment to export woodchips. The financially profitable, labour-intensive and value-added sawmilling industry is falling into a tail-spin decline as woodchip exports reach record levels.

Although the sawmilling industry has been in a state of long-term decline as its resource of high quality, easily accessible timber is cut-out, nevertheless, the woodchip industry's arrival has greatly hastened the process.

The Tasmanian government appears to have little sympathy for the sawmillers. Former Forests Minister, Neil Batt justified a government decision to reduce sawmill quotas (at the same time as increasing woodchip quotas) in the following terms:-

"These reductions are regretted by the Forestry Commission and must inevitably lead to the demise of many existing mills. However, this process of amalgamation of quotas and consolidation of cutting, into better equipped mills has been going on for some years and is a fact of life that cannot be escaped. It will be accelerated by the forthcoming quota reductions"

WOOD SKILLS

If Tasmania is to gain worthwhile returns from its timber industry then the state government must encourage labour-intensive processing of wood products. In line with this need, a detailed proposal for establishing a Tasmanian Wood Skills Corporation has been advanced by consultant, Ronald Sinclair. The Corporation would train people in design and craft skills and

assist them in the early stages of marketing their work.

The Sinclair Report's invigorating proposals to encourage government support for design-based industry has so far met with little enthusiasm from the Tasmanian Government. The Report had been commissioned in January 1978 and completed in February 1979 but was not released until mid 1980. Sinclair was not in Tasmania when the report was released, so very little 'selling' of the concept he was arguing for took place.

It would be a great pity if the scheme was dropped. A Wood Skills Corporation could offer people the opportunity to acquire a practical and creative craft. In economic terms, Tasmania's timber would provide far greater returns than through a continuation of the practice of chip exports. Socially, design and craft jobs provide stimulating work in a healthy environment. Tasmania's Wood Skills Corporation may become a by-word in quality design, like the renowned names of Kosta Boda, Wedgwood, Limoge and Liberty.

FORESTRY CAMPAIGN

The expansion of Tasmania's forest industries in the past decade has caused enormous damage to the island's environment. The problem has many dimensions and to date, has received inadequate attention from conservationists who have been preoccupied with the battle to prevent more dams in the south-west.

But the focus is shifting. The next few years will see a major campaign by conservationists against Tasmania's reckless forest policies.

Opinion polls have shown that the majority of the Tasmanian community support the efforts to stop flooding in the south-west. Time will show that there is even greater support for moves to safeguard our forests.

Contacts: Tasmanian Wilderness Society, 129 Bathurst Street, Hobart, Tasmania, telephone (002) 34 3970; Ian Penna, Forests Project Officer, 672B Glenferrie Road, Hawthorn, Victoria, telephone (03) 819 2888.

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World Wildlife Fund

By David Allworth

Corporate chiefs and conservationists have combined to form the World Wildlife Fund Australia. What sort of conservation organization is WWF?

In his introduction to the WWF, its president Sir Noel Foley, stated:

"In formulating its policy our Board of Trustees is conscious of the need to avoid the debilitating effects of the actions adopted by certain conservation pressure groups which have caused what our American friends call the 'environmental backlash'. WWF Australia will always be ready to speak up in matters of public concern, but what is said must always maintain the spirit of constructive balance which emanates from research-established knowledge rather than from emotional enthusiasm."

The WWF programme of conservation study is admirable. To date near one million dollars has been committed via the WWF to wildlife projects. This should greatly increase our knowledge of many rare and endangered plants and animals.

But will the WWF speak up on critical issues, or will it be an old Australian Conservation Foundation? A foundation set up by mining and establishment interests - a foundation that failed to act decisively in favour of the Great Barrier Reef and Lake Pedder, until membership pressure made substantial changes in 1973.

A sponsoring organization of WWF, Conzinc Riotinto of Australia (donor of \$3,000 to WWF) has had a close watching brief on conservation organizations, particularly the Australian Conservation Foundation. Leaked documents several years ago showed that CRA was concerned that the "ACF as a national body of stature is about to collapse." The CRA officer Ian Hore-Lacy went on, "this will create a vacuum and I think only FOE and similar organizations will benefit in the short term if this happens. Taking the broader view, it may signify that some other organization should be formed to fill the gap, but this will take time."

Is WWF such an organization? In their day to day work many of the WWF donors and trustees are

involved in environmentally harmful projects.

Sir James Foots, member of the Australian Mining Industry Council, WWF trustee and chairperson of Mount Isa Mines wrote to the Prime Minister on 2 February 1979 about the Australian Heritage Commission which maintains a register of places important to the National Estate.

He wrote: "... approval to proceed with development could only be granted after going through a prolonged period of investigations while there is a distinct possibility that approval would not be granted at all. This is an impossible situation for a mining company to be placed in after it has spent millions of dollars in investigating the mineralization of an area."

In effect he was saying that investment considerations should override environmental considerations.

In the WWF 1980 review corporations are shown to have contributed two thirds of WWF income. It is difficult to know whether WWF policy is influenced through its dependence on these corporations. Let us look at some of these corporations' activities:

Broken Hill Proprietary Co Ltd (\$49,300) is the largest donor to the WWF - it has interests in the Ok Tedi copper mine in Papua New Guinea, the North West Shelf gas project and coal and steel milling in Western Australia and New South Wales. BHP has interests in the Worsley aluminium/bauxite project in WA. This project has been approved by the West Australian government against the advice of their Environment Protection Authority. The Premier, Sir Charles Court stated that if the EPA's recommendations were to be followed the project could not go ahead. The project threatens the great Jarrah forests of WA. Bauxite mining in the Jarrah forests has been criticised by many sections of the community including the WA Institute of Foresters. Sir Robert Law-Smith and Mr L Gordon Darling directors of BHP are both trustees of WWF.

ICI Australia Ltd (\$13,000) proposes to build a petrochemical plant near Geelong in Victoria. Its construction threatens the habitat of the rare orange bellied parrot. ICI has contributed heavily to the WWF project to study the parrot. The Environmental Effects

Statement prepared by ICI for the petrochemical plant has been criticised by the Victorian Fisheries and Wildlife Department, Environment Protection Authority, Port Phillip Authority and the Royal Australian Ornithologists Union. Mr R Donald Malcolmson is a trustee of WWF and director of ICI.

Associated Pulp and Paper Mills (\$2,000) has forest concessions throughout Tasmania (see pages 14-15). APPM is planning to move into extensive rainforest areas in the north-western corner of Tasmania.

Electrolytic Zinc Industries (\$2,000) have been responsible for heavy metal poisoning of fish in the Derwent River in Tasmania. The company is a partner in uranium mines in the Northern Territory. The mines are situated in the middle of Kakadu National Park, a World Heritage area.

Peko-Wallsend (\$5,000) is a partner in uranium mining with EZI. Mr John Broinowski is a director of Peko-Wallsend and trustee of WWF.

BMI (\$4,000) is the owner of Allen Taylor and Co Pty Ltd a company which has several sawmills along the NSW coast, and is heavily involved in the NSW North Coast woodchip scheme which threatens wildlife habitat.

CSR (\$3,000) owns Pyneboard at Tumut in NSW. The pine plantations around Tumut have caused the clearing of large areas of native forest and loss of wildlife habitat. Sir Noel Foley, president of WWF is a director of CSR.

Private Eye, a British magazine, has explained how the international secretariat of WWF is run. It is primarily sponsored by the 1001 Club which includes major business interests from around the world. A list of members of the 1001 Club two years ago was recently received by Private Eye. Among the list of establishment interests not renowned for their respect for the environment were Harry Oppenheimer, of Anglo-American Corporation of South Africa Ltd, a mining conglomerate; the late Sir Val Duncan of Rio Tinto Zinc; American multi-millionaire, Daniel Ludwig, who is currently clearing large areas of Brazilian forest for woodpulp and cattle grazing; and Lord Leverhulme of Unilever.

Holidays

If you are reading this magazine sitting on the beach or beside your holiday caravan think of the impact which you are having on your surroundings. Is there any way in which your presence is working toward undermining the very quality which you seek in leaving your daily life to holiday in such a place: its naturalness?

Jenny Skempton, who undertook a project on the impact of tourism in the Australian Capital Territory and the south-east region of New South Wales, puts forward some comment.

In our affluent society many (though not all) of us have money and leisure to move out into the bush and to the coast. Each year as the sale of four wheel drive vehicles and trail bikes increases further in roads are made into the areas where previously trees and ferns and bushes and flowers have flourished. As the sale of holiday homes continues the country side is carved up for human habitation and as relatively untouched land becomes a scarcer commodity the property developers stand to make more money out of its sale.

Tourism is a growing industry in this country, and like other indus-

tries such as mining and logging it uses up the resource on which it depends for its continuance. As one Monaro shire councillor said to me when we were talking about the pressure to expand the ski resorts in Kosciusko Park "We are in danger of killing the goose that lays the golden egg."

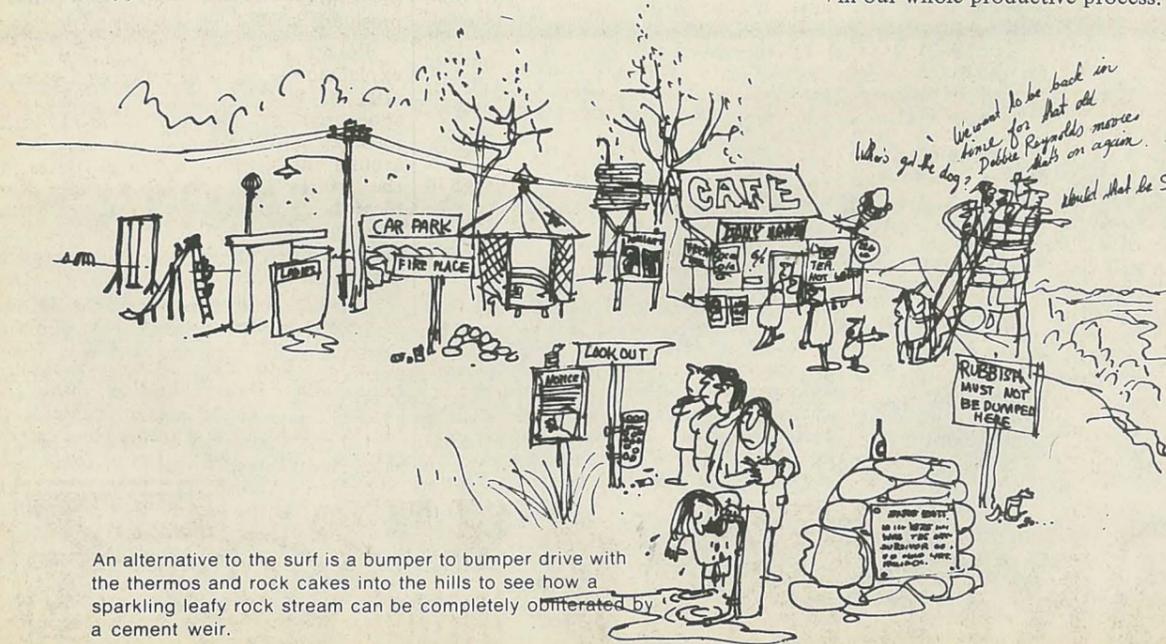
The Oxford English dictionary defines recreation as the 'action of re-creating (oneself or another) or act of being re-created, by some pleasant occupation, pastime or amusement. Comfort or consolation affecting the senses or body or mind'. Human beings have a need for play. At present the work that many people are obliged to do 'is boring and unfulfilling. Work and play are two distinct activities, and whilst people are confined to jobs which sap their creative energies they often look to play a means of dulling the senses rather than as a re-creative activity. In such a mood recreation all too often becomes an activity which is destructive rather than creative.

Restlessly moving out of the cities for relief from the daily pressures of life, alienated and out of tune with their natural environment, holiday makers demand the means to maintain a high level of consumption, and at the same time think nothing of casting their rubbish around them even whilst they are enjoying the contrasts of sea and beach and bush.

Let me give an example: The South Coast of New South Wales must be one of the most beautiful in the world. It is estimated that this coastline is within a reasonable day's drive for 6.9 million people, which is nearly half the Australian population. As increasing numbers of people come to the coast they have to be provided with water and sewerage, roads, accommodation, food, and services like entertainment, medical care and garbage disposal. As one employee of the Eurobodalla Shire Council told me "It all makes the Shire a bigger place. Its what we seem to consider progress."

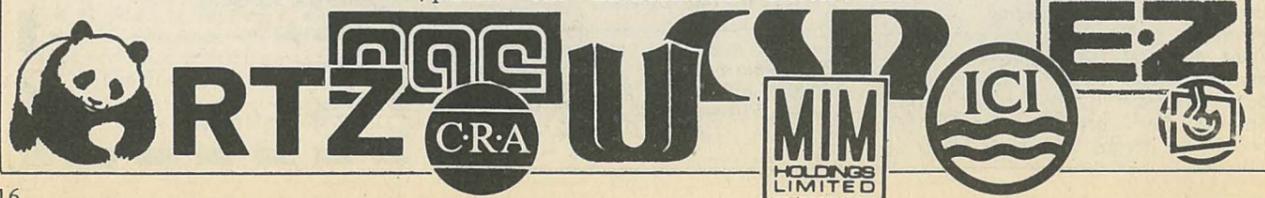
You can see them all along the coastline: the advertisements for real estate developers. Land is subdivided for the purpose of setting up caravan sites or motels or providing for the market in holiday homes, and in the midst of such development how can the sweet special rural scene of the South Coast be prevented from being irrevocably intruded upon and spoilt?

There is to take an example, a Coastal Protection Act in NSW which sets out to guard against the exploitation of the coastal strip by those who only have profit making in mind. But planning mechanisms alone are insufficient to stop the tide of our resource hungry recreation industry. The resolution of the conflict between recreational use of the land and its conservation can only happen as part of an overall and more fundamental change in our whole productive process.



An alternative to the surf is a bumper to bumper drive with the thermos and rock cakes into the hills to see how a sparkling leafy rock stream can be completely obliterated by a cement weir.

From Petty's Australia - and how it works, The Australian



How will the Great Barrier Reef be saved? Why should it be? How do those campaigning to save it work? What success have they had? Pauline Taylor from the Save the Barrier Reef Campaign discusses the campaign's history, goals, strategy and tactics.

For thousands of years the Great Barrier Reef existed without interference from people. It is the largest, most diverse and most complex reef system on the face of the Earth, being made up of about 2,500 individual coral reefs. On the Reef scientists are still discovering many new plant and marine animal species.

How can we hope to ever understand the complicated web of life existing in this area, when we don't yet know its full extent and when it is under threat from

- oil and mineral exploration and mining and oil spills from tanks and other vessels
- over-fishing of the marine life population
- damage from mainland water run-off which contains pollutants from "civilization" and siltation from land development
- damage from concentrated tourist use of the Reef?

It is from people that the threat to the Reef Region comes. Environmentalists, however, do not believe that humans must therefore be excluded from the area. On the contrary, they believe it is

It is from people that the threat to the Reef Region comes. Environmentalists, however, do not believe that humans must therefore be excluded from the area. On the contrary, they believe it is vital that we at last learn how to become a part of the ecological world and stop putting ourselves apart from it.

The natural value of this biological wonder far outweighs any economic gain we may be able to exploit from it. The Reef should be saved and from what is clear.

GOALS

The goals of the campaign to save the Reef are to have

- the entire region declared a Marine Park, thus ensuring proper management. The declaration of a Marine Park is the *only legally binding* mechanism available for saving the Reef from the dangers outlined above.
- the entire Reef region listed on the World Heritage List. Although not legally binding in any way, such a listing would provide strong international pressure, should the Reef be blatantly threatened.

Chain Reaction acknowledges the assistance of Eddie Hegerl of the Australian Littoral Society in Brisbane and Alan Catford of Reef Action in Sydney in the production of this article. CR plans to examine other national environment campaigns in forthcoming issues.

Reef drilling not popular



Report:

ATTITUDES TO OIL EXPLORATION ON THE BARRIER REEF

	Total (2000)	Male (908)	Female (1092)	Age 17-24 (178)	Age 25-44 (1264)	Age 45 and over (558)
On the Great Barrier Reef:						
Oil exploration should be permitted even if there is some danger to the Reef	31	36	27	20	32	31
No drilling on or near the Reef should be allowed	66	62	70	80	65	67
Don't know	3	2	4	0	3	2

Note: Percentages rounded to nearest whole number.

There is strong public opposition to drilling for oil on or near the Great Barrier Reef, the latest AGE POLL shows.

Sixty-six per cent of people of various ages said no drilling should be allowed on or near the reef, compared with 31 per cent who thought oil exploration should be permitted even if there was some danger to the reef.

Opposition to drilling for oil was stronger among women than men and among the young than the middle-aged and elderly.

It was also stronger among Labor and Australian Democrat voters than among other voters or NCP voters.

Even so, there was not a major political, occupational or educational group in the community with a majority favoring reef exploration.

AGE POLL interviewed 2000 people of voting age in all States and the Australian Capital Territory. The sample includes several federal electorates except the Northern Territory.

Interviewing was held on the weekend of April 21-22 — well before the recent Parliamentary discussion on the subject.

People were asked: "There has been talk recently about whether oil exploration should be allowed on the Great Barrier Reef."

"Which of these two statements comes closest to your view? Be-

66% oppose

coral oil search

Bjelke defies Reef bans

From MARK BAKER

BRISBANE — The Queensland Government is defying Canberra and actively supporting oil exploration within the Great Barrier Reef region.

Both the Premier, Mr. Bjelke-Petersen, and the Minister for Mines, Mr. Camm, are refusing to revoke a permit for the US-based Geophysical Service International to conduct seismic tests in Reef waters.

This is despite the June 4 announcement by the Prime Minister, Mr. Fraser, that there would be no further testing near the Reef, and at least two subsequent orders by him to abandon the GSI project.

Investigations by 'The Age' over the past week indicate that GSI is concerned primarily with establishing the potential for oil drilling along an extensive stretch of the North Queensland coast.

Employees of GSI who are manning a seismic land station near Townsville have told locals they are interested only in the area's oil prospects.

Corporate Affairs Officer records in Brisbane list oil drilling and testing among the principal interests of GSI, which is incorporated in Delaware and has its

head office in Dallas, Texas. The company — which originally gained support from the Federal Department of National Development to extend survey lines into the Reef region — suspended testing in the Halifax basin, off Townsville, about June 23.

But Mr. Camm yesterday said GSI still had permission to work the north coast and he would welcome back the survey ship, Eugene McDermott, believed to have withdrawn on the North West Shelf, as soon as possible.

"You can't stop anyone — the whole world's short of oil," said Mr. Camm, deputy leader of the Queensland National Party.

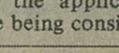
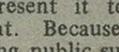
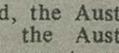
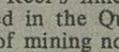
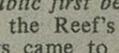
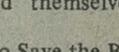
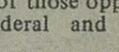
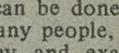
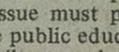
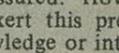
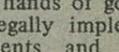
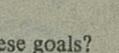
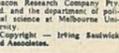
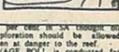
"If you can tell me that 13 million people are going to tell the rest of the world that you're not going to look for oil here, there or anywhere else, it's just no stupor."

Earlier this week 'The Age' interviewed two weekend fishermen who spoke with GSI technicians at their coastal base station near Cape Uffley, about 80 kilometres south of Townsville.

The two, who were interviewed by the three-member GSI team around the Queen's Birthday weekend, were told that the company was interested only in checking the possibilities for future oil drilling.

Copyright — Irving Sautwick and Associates.

WHO'S RUNNING THE COUNTRY?



The Age, 18 June 1979

The Age, 17 May 1979

STRATEGIES

What strategies will achieve these goals?

Legislative power lies in the hands of governments, but to establish and legally implement binding mechanisms, governments and other political groups must be pressured. However, the public does not always exert this pressure often because of a lack of knowledge or interest, or due to misconceptions. In this situation people who are vitally involved in an issue must pursue a strategy that involves a massive public education programme, so the pressure is built up and effective. The extent to which this can be done tests the group's ability to involve many people, make use of the media, raise money and examine, analyse and expose the motives of those opposing them, which can include federal and state governments.

THE CAMPAIGN

How have people, organised themselves to save the Great Barrier Reef?

1967. Active campaigning to Save the Barrier Reef began in 1967 when the public first became aware of intentions to exploit the Reef's limestone reserves. Environmentalists came to know of an application to mine the Reef's limestone from an advertisement published in the Queensland press, in the ordinary run of mining notices. The course of action taken by the Wildlife Preservation Society of Queensland, the Australian Conservation Foundation and the Australian Littoral Society in Queensland, was to prepare a case against mining and present it to the Queensland Mines Department. Because the environmentalists had such strong public support a decision was made rejecting the application. Simultaneously applications were being considered

POSSIBLE CAIRNS SECTION

for oil exploration, but because these were not advertised, the public remained ignorant of this danger.

This episode illustrated two points. The campaign began as a reaction to a threat to an area for which many people had a deep concern. It also illustrated the fact that when the public is denied information it cannot express concern. At this stage the environmentalists were alerted to the threats of oil exploration, and the initiative was taken to carry out campaign research. The environmentalists set to work to research the possible and probable effects of spills and pollution on the Reef's marine life and to publicize what they had discovered. The campaign was starting to take the initiative in terms of research and public education.

1969. When money, labour and media coverage are limited, public education programmes can be very slow. Often the immediacy of critical problems can mean that such education is too slow. In February 1969 a disaster struck which was to prove the most effective catalyst for gaining public support — a huge oil well blow-out off Santa Barbara in California.

The effects on Santa Barbara's beaches, sea birds, fish and tourist industry of the flood of oil that came ashore in those months were spectacularly illustrated in newspapers all over the world. They effectively aroused Australians to join the campaign against oil drilling on the Reef. Thousands of letters to the Press and politicians followed.

Later that year, in October, the next drill holes were due to go down off the Queensland coast. The then Gorton federal government was extremely reticent, and in fact took no overt action, to prevent the Queensland Government allowing this exploration. This was because the other States already had offshore oil industries and to act against one particular State government would have presented many legal and political problems.

At this point the environmentalists took action where the government had failed to do so. On its own initiative the Wildlife Preservation Society of

DEFENDING THE GREAT BARRIER REEF

CAIRNS

TOWNSVILLE

MACKAY

CAPRICORNIA SECTION

Qld conducted an opinion poll, through its branches in Brisbane and country centres now swelled by concern for the Reef's future. Of 5,000 replies, 90% (for the State as a whole) opposed any oil industry on the Reef or in its waters! By publicizing these results the campaign was able to make both the Queensland and Federal governments aware that they would lose massive support

if they considered endangering the Reef.

1970. In January 1970 environmentalists took another initiative in order to pressure the governments of the day. They approached Queensland trade unions, asking them to totally black ban any activity related to oil drilling in the Reef region. This was looked upon favourably and resolutions to that effect were passed (The Australian Council of Trade Unions also supported such measures and in 1979 declared black bans on oil exploration and mining in the region.)

The Queensland bans had an immediate effect. When faced with the prospect of having to confront industrial action, the company involved, offered \$5,000 towards the cost of a public inquiry into the issue. Because the Queensland government could do nothing to prevent the black ban coming into operation, it was forced to consent to such an inquiry. Prime Minister Gorton, personally opposed to oil drilling, used this opportunity to turn the public inquiry into a Royal Commission. The black ban was therefore a threefold success.

In July 1970 the Royal Commission began taking evidence from scientists, oil companies, geologists, environmentalists and the general public. Its final inconclusive report did not appear until November 1974. Two commissioners considered *some* drilling *might* be allowed in specific parts of the Region, while the chairman contended that both long and short term research was necessary before any permits should be issued.

1974 saw the Whitlam government in power. It used the Royal Commission findings as the basis for drawing up legislation to protect the Reef.

In 1975 the Great Barrier Reef Marine Park Act was declared, but before the Park was declared the Labor government was removed from office (but not for its stand over the Reef issue!).

The legislation was welcomed by the environmental movement because it provided a mechanism and established a government agency, the Great

Barrier Reef Marine Park Authority, for the protection of the *whole* Reef Region (see box page 22). Any park declared under this act was to be automatically protected from mineral and oil exploration and drilling, and have provisions made for its proper management. The Act *has the scope* to declare the whole region a Marine Park and this was promised by Prime Minister Whitlam. From the outset this has been a demand of the campaign — the Act must be used to its fullest extent.

After 1975 the battle to save the Reef continued with the Queensland government urging Reef drilling and the Federal Liberal government unwilling to commit itself either way. For the next three years maintenance of public interest and continued public education on a large scale were quite difficult. There were no overt signs of oil exploration continuing on the Reef, nor on the other Land, was any direct action taken to enforce the legislation. Mass media coverage therefore became very difficult, as the media is not very willing to report on things that *aren't* happening.

This meant the onus then fell on environmentalists in two ways. The campaign had to take up tactics which would force the issue upon the Federal government and thus into the media's eye (as with the black bans), and it had to be ready at all times with a current analysis of the situation in case a response was needed (for example to any government decision). If the avenues for using the first choice were exhausted and if the second situation did not present itself, then the campaign was left with a third alternative — public education at whatever level could be afforded. This included publication production and distribution, speaking to groups, film screenings, street stalls, paraphernalia (badges, stickers, T-shirts) distribution, displays, letters to newspapers and so on. To attain this, internal structure had to be developed which financed these projects as well as full time organisers and researchers. For effective campaigning this was and is *essential*.

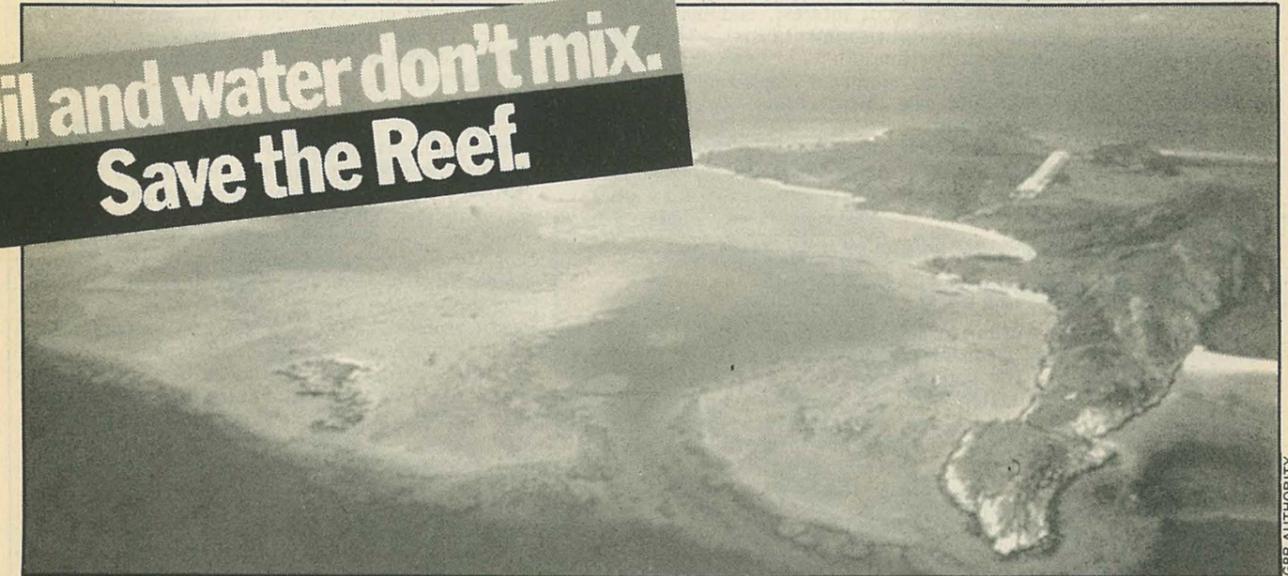
By mid 1978 it again became apparent that the oil companies were pressuring the Queensland and Federal governments to allow oil exploration and mining. Evidence of this pressure came from statements by politicians and oil industry spokespeople and later with the extension of State rights to the territorial sea within three miles of the mainland coast and around Reef islands. The energy crisis was used as an excuse for the possibility of oil drilling when the Queensland Minister for Mines went on record as saying that the Queensland government would allow drilling on the Reef. The Queensland government also wanted *exclusive* control over the declaration of Marine Parks within areas under its jurisdiction. Fortunately the Great Barrier Reef Marine Park Act which defined control in terms of the Federal government already existed. The hue and cry that would have resulted had the Federal government tried to transfer power to the Queensland government via a change in the Act would have created an incredible embarrassment. The certainty that environment groups could mobilize massive public support prevented the Queensland government from gaining exclusive control over any part of the Reef Region.

1979. The Environmental "watchdogs" now could not rest easy as it was obvious that the Queensland government was gearing up for oil exploration to resume. When documented evidence was released on 9 May 1979 which proved that the Queensland government was prepared to allow oil companies to define Marine Park boundaries the Australian Conservation

Foundation immediately initiated an action committee in New South Wales called Reef Action. The Australian Littoral Society (Queensland) contacted Environment Alert, a Melbourne group, and the Save the Barrier Reef Campaign was organised. A massive campaign along the east coast began.

The campaign was in a position to take the offensive and demand that both the Federal and Queensland State governments explain themselves.

**Oil and water don't mix.
Save the Reef.**



Lizard Island — on one of the 2,466 reefs still unprotected.

Press releases outlined the environmentalists' interpretations of events, their demands and their accusations. Because the issue was "alive" in the eyes of the media, these releases were reported and groups were contacted for comment. Questions were asked in federal parliament by members sympathetic to the campaign; contradictory and confusing answers were given, embarrassing the federal government and again receiving press coverage. More campaign materials were produced and distributed, newsletters and booklets providing background information as well as current events analysis also appeared. Simultaneous public meetings were held in Melbourne, Sydney and Brisbane. A petition campaign was launched as well as a postcard campaign. Slogans such as "Don't spoil the Reef!", "Save the Barrier Reef" and "A GREAT Barrier Reef Marine Park now!" were thought up. These activities caught the media's attention, educated the public, enlisted further help on the campaign, and pressured the government.

During this time a national opinion poll was taken by Irving Saulwick and Associates. This poll, published on 17 May 1979 found that 66% of Australians totally opposed any oil drilling activity in the Reef Region. Publication of these results gave the campaign a great moral boost, and probably caused the government great concern. The disclosure of the fact that the Queensland government was actually permitting seismic studies to be carried out on the Reef, certainly embarrassed the Federal government. This meant the Federal government had to find, in its own words, "a resolution to the Great Barrier Reef and seas and submerged lands policy issues with Queensland."

The Federal government had to find, a method of transferring power to the Queensland

government without changing the Great Barrier Reef Marine Park Act. By this stage the media were following events closely and public campaigns were mounting. To stave off this pressure Prime Minister Fraser declared an *indefinite* moratorium on oil drilling and exploration in the Reef Region. Environmentalists knew that, if the government seriously wanted to protect the Reef, all it had to do was to declare a Marine Park over the whole region. The mora-

torium effectively gave the Federal government more time in which to find a solution to its transfer of power problem. A solution was found and in June 1979 a joint Ministerial Council was formed between the Queensland and Federal governments (See box page 21). Two short weeks after the Council was formed, the agreement to transfer power of the sea bed to the States was ratified. This legislation — the Coastal Waters (State Powers) Act and the Coastal Waters (State Title) Act, along with amendments to a number of existing Acts — delegates power and title over the territorial sea and seabed from the Commonwealth to the States, with the Commonwealth retaining final control. This appears to give Queensland the power to permit oil drilling within these waters which extend three miles out from all Queensland owned islands — some hundreds as well as from the mainland, unless a marine park is proclaimed over the relevant parts.

Four months later, (October 1979) the first part of the Marine Park known as the Capricornia Section was declared — a mere 2.4 per cent of the total Reef Region! The combination of this declaration and the indefinite moratorium (not ten years as reported by the media) on oil drilling and exploration, quelled the issue in the media's eyes. So while the movement to save the Reef had achieved many successes and was certainly not defeated it had not achieved its primary goal — the achievement of a whole Marine Park.

1980. With the World Heritage listing issue, Prime Minister Fraser has successfully turned the Reef issue into a positive one for himself. In June 1980 he announced that the Federal Government would nominate the Reef for listing in January 1981. That the whole Reef Region would be nominated was not made clear until October. Yet how many people realize that if accepted to the

Information

For information on the Great Barrier Reef campaign contact:

Queensland

Australian Littoral Society (Queensland Division), P.O. Box 498, Toowong, 4066. Telephone (07) 378 6077.

Queensland Conservation Council — Environment Centre, 147 Ann Street, Brisbane, P.O. Box 238, North Quay, 4000. Telephone (07) 221 0188.

Townsville Regional Conservation Council, 819 Flinders Street, P.O. Box 364, Townsville, 4810. Telephone (077) 71 6226.

New South Wales

Reef Action, 3rd Floor, North Wing, 18 Argyle Street, Sydney, 2000. Telephone (02) 27 1497.

Greenpeace, 399 Pitt Street, Sydney, 2000. Telephone (02) 233 5388.

Victoria

Save the Barrier Reef Campaign, 118 Errol Street, North Melbourne, 3051. Telephone (03) 329 5519.

National

Australian Conservation Foundation, 672 B Glenferrie Road, Hawthorn, Victoria, 3122. Telephone (03) 819 2888.

There are many other conservation groups who actively support the Reef campaign. This is only a list of primary contacts — the people in these groups will be happy to give you more detailed and local contacts.

World Heritage List, this carries no *legally binding* commitment?

On 8 July the Reef Region, excepting islands which are not national parks, was listed on the Register of the National Estate. Such a listing confers a legal responsibility, under the Australian Heritage Commission Act, not to allow any project which could have a significant environmental impact, unless there is "no prudent and feasible alternative". However, as this is an extremely loose provision, dependent upon ministerial judgement, degree of interest, and bias, it is not regarded by environmentalists as providing adequate protection.

How has the campaign organized its finances, offices, and the distribution of information?

Queensland

The Reef campaign is one of the major issues pursued by the Australian Littoral Society in Brisbane. The ALS is a national association for

Great Barrier Reef Marine Park Authority

The three-member Authority, established by the Marine Park Act, comprises a full-time Chairman, Graeme Kelleher, a part-time member nominated by the Federal Government, Dr Joe Baker and a part-time member nominated by the Queensland Government, Mr Sid Schubert. The principal function of the Authority is to make recommendations to the Commonwealth Minister for Science and the Environment in relation to the care and development of the Marine Park within the Great Barrier Reef region. The Authority recommends sections of the region which should be declared as part of the Marine Park, prepares zoning plans and plans of management, arranges research and investigation relevant to the Marine Park, and makes recommendations as to the regulations to apply to the sea, seabed and coral reefs, as well as the airspace above, within the Marine Park. The paramount aim of the Authority in setting aside zones in the Marine Park for such purposes as preservation, research, recreation, fishing and shipping, is to allow reasonable human activities to continue in ways which conserve and protect the Great Barrier Reef.

Joint Ministerial Council

The Council consists of four members, two from the Federal government and two from the Queensland government. Its function is to oversee the Great Barrier Reef Marine Park Authority. Obviously in this situation a deadlock situation over critical decisions can easily result; there being no member with a deciding vote. Normal procedural practice in this situation is for the negative votes to carry the decision. *In this way the Queensland government is given the opportunity of veto power over the Federal government where no such power existed previously.* This is a deliberate and direct action to dilute the power of the Federal government to protect the Great Barrier Reef.

the study and conservation of aquatic life. The group employs two full-time staff members. It is totally self-supporting, deriving its finances from membership, donations, plant and book sales.

The Littoral Society provides analysis of political events and researches the potential effects of dangers to the Reef. This work is utilized extensively by the Southern groups. It is often published in the Society's regular *Bulletin* and booklets. The work also serves as the basis for detailed submissions to the Federal government and Marine Park Authority. The Queensland Conservation Council and branches of the Wildlife Preservation Society are also active on the Reef issue — helping develop public understanding and action.

New South Wales

Reef Action, in Sydney was initiated in March 1979 by the Australian Conservation Foundation's

full-time NSW Liaison Officer. It is an independent group, raising money through the sale of paintings and publications and has held a theatre night. It campaigns solely around the Reef issue and maintains good political contacts with Barry Cohen, Labor Federal Member of Parliament and Senator Colin Mason, of the Australian Democrats. The group has also distributed information overseas and attempted to enlist overseas support. It recently produced, and to the major extent funded, a nationwide mailout to over 1,300 environment groups asking their members to write to the Prime Minister about the Reef. The Australian Littoral Society (NSW division) assists Reef Action.

Victoria

The Save the Barrier Reef Campaign in Melbourne was initiated at the same time as Reef Action, but was set up by the Littoral Society. A sustenance wage was solicited from the ACF and in this way a full-time co-ordinator was employed for 3 months. Since that time the group has been run entirely by volunteers. It generates its own funds from memberships, donations, street stalls, film hire, and speakers' fees. It relies heavily on credit from the Littoral Society. The main thrust of the Victorian campaign is public education and encouragement of activities within local communities. It has produced introductory information, leaflets and a broadsheet, and has procured resource material (video tapes, badges, stickers and postcards) for the whole campaign. It also initiated the Reef postcard 'Send A Fish To Fraser' campaign.

National Campaign

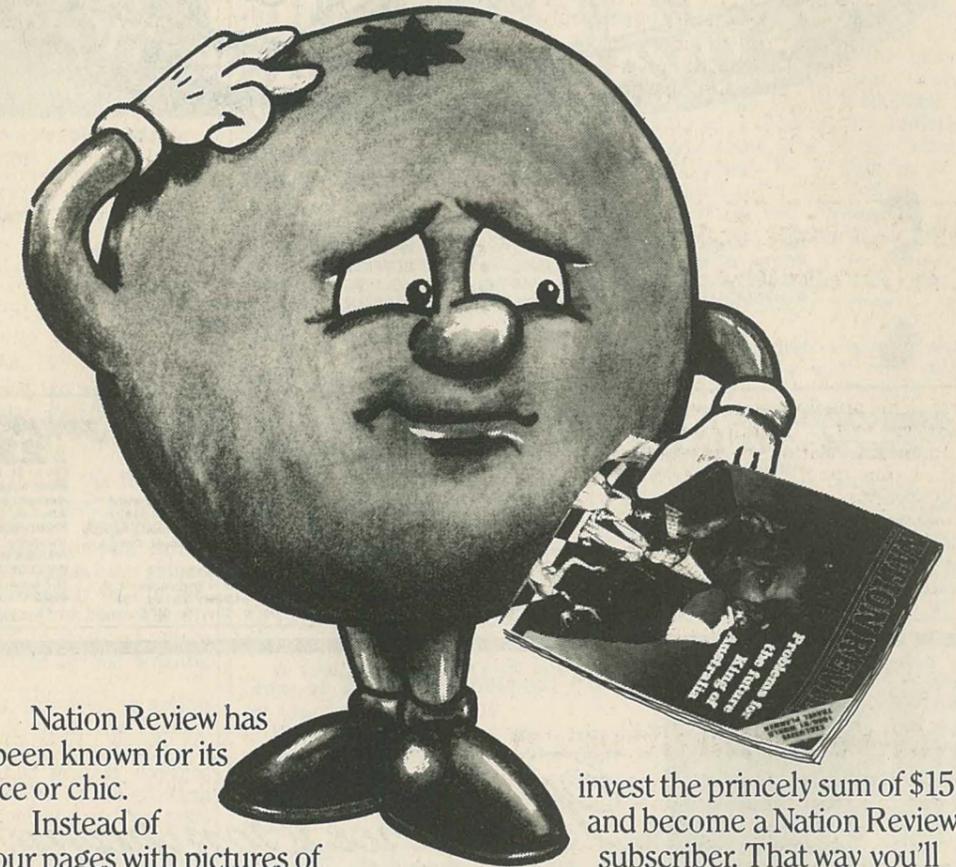
The Australian Littoral Society — see Queensland section (above) — works nationally for defence of the Great Barrier Reef. As well, the Australian Conservation Foundation is now campaigning for the Reef's protection. The ACF campaigns around many issues and has the most secure financial situation of all the groups. Therefore it has been able to produce occasional community service television advertisements to educate the public about certain issues, but only with valuable specialist volunteer help. It can also afford to produce quality publications for sale and pay full-time award wages. It receives its funding from Federal government grants, memberships, various donations, and publications sales. From its *Save the Reef Appeal* funds it was able to produce, in large quantities, an illustrated colour booklet explaining the Reef issue to the public.

Communication between the groups is aided by holding occasional interstate meetings. The most recent national meeting was held in March 1980 in Sydney. A popular misconception about campaigning is that to be involved one has to be a full-time activist or an expert. Of course, some full-time organisers are necessary and expertise in some fields is essential. However, most work is carried out by people who previously thought they could never be part of a campaign.

The Victorian group is comprised of several housewives, horticulturalist (with a child!), an environmentalist (who once worked for a multinational oil company!), a marine science Ph.D. student, office workers, teachers, students and a social worker.

The countless tasks which make up the campaign include office work, typing, writing, artwork, research, speaking to groups, organising meetings, distributing information, holding street stalls, mailouts and media liaison. The Reef campaign will not be won until those people who want to see the Great Barrier Reef protected make their commitment concrete.

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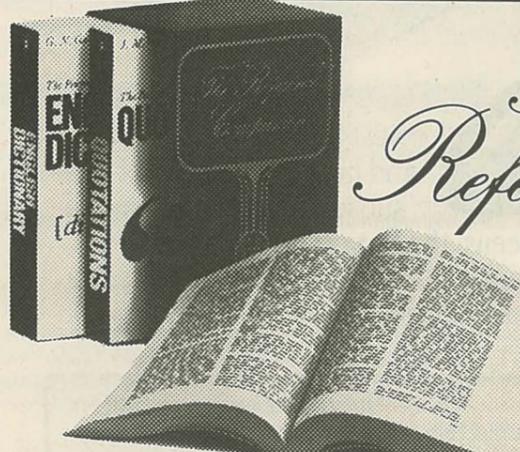
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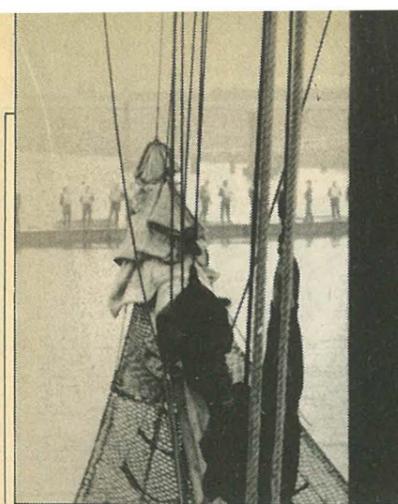
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The Fri meets a police blockade in the Netherlands, 1980.

Fri

Plans are underway to again sail an 'action ship' in the Pacific for the Nuclear Free Pacific Movement's campaign.

In Europe the *Fri* and the *Rainbow Warrior*, a Greenpeace ship, have been and are still actively engaged in opposing nuclear waste dumping in the Atlantic Ocean. Both vessels have gained wide publicity and support in Europe. On 13 November the *Rainbow Warrior* escaped from 'arrest' in Portugal where it has been intervening against whaling boats.

There is not now, however, an action ship to do similar work in the Pacific. It is important to now raise funds for such a ship. Previous protest voyages in the Pacific have added to the growing public campaign against nuclear tests and the dumping of radioactive waste into the ocean or on some of the region's islands and atolls. The *Fri*, currently still in action, with Greenpeace III, made a protest voyage to the French nuclear bomb test site at Mururoa (Polynesia) in 1973.

Failing the necessary funds to buy a vessel, the Nuclear Free Pacific Movement proposes to investigate the possibility of leasing a vessel for a period of at least six months.

The Nuclear Free Pacific Movement (NPPM) asks your support for their appeal to raise funds for the acquisition and employment of an action ship. This motorship, to be operating by 1981, is to be used for non-violent patrol of the Pacific region. In Australia several groups have already pledged their active support.

Please send any donations for the NPP action ship to:

The *Fri* Collective, C/- Environment Centre of W.A., 537 Wellington Street, Perth, Western Australia, 6000. Telephone: (09) 321 5942, 321 2269.

Rien Achterberg
for S/V Fri

Catscan

This is the first in a series by the Friends of the Earth/Doctors Reform Society Radiation Working Group. This series aims to highlight and explain issues around x-rays and radiation which are pertinent to our everyday lives, and ultimately to our health and well-being.

Computerized Axial Tomography (Cat) is the process of taking x-rays at different angles through the body, in order to obtain a focussed picture of the organ in question.

These pictures can be likened to "slices" of the organ. The Catscan, by taking pictures from numerous radii, builds up a picture of what is inside a "slice". A catscan is ultimately capable of taking a 360° axial through an organ.

The first experimental Catscan pictures were taken in 1971 by researchers who later won a Nobel Prize for their work. EMI (U.K.) was the first company to manufacture the Catscan; EMI has since been taken over by General Electric (USA) and Siemens Industries (West Germany).

A head Catscan machine costs in the order of \$350,000; a full-body Catscan sells for around \$900,000.

Catscans are mainly used for disorders inside the skull, because there is supposedly no other "completely safe" means of visualizing the interior of the skull.

Catscans are believed to be a "non-invasive" technique. That is, non-invasive compared to other techniques such as air ventriculography, where air is injected into the ventricles of the brain, and an ordinary x-ray is taken. Air ventriculography causes very bad headaches in patients, and is held to be all-round an undesirable technique.

A skull Catscan delivers approximately five rems of radiation. The International Committee for Radiation Protection Standards (ICRPS)* recommends five rems as the maximum whole body exposure over twelve months. Although this is a standard for occupational exposures to radiation, it does give some idea of the radiation "blast" delivered by a Catscan to a concentrated area of the body.

It is also important to recognize that the carcinogenic effects of X-radiation are more critical for young people than for old. This is because there is more time to develop such effects.

A normal chest x-ray delivers from 500 millirems to one rem, approximately 20% as much as a Catscan.

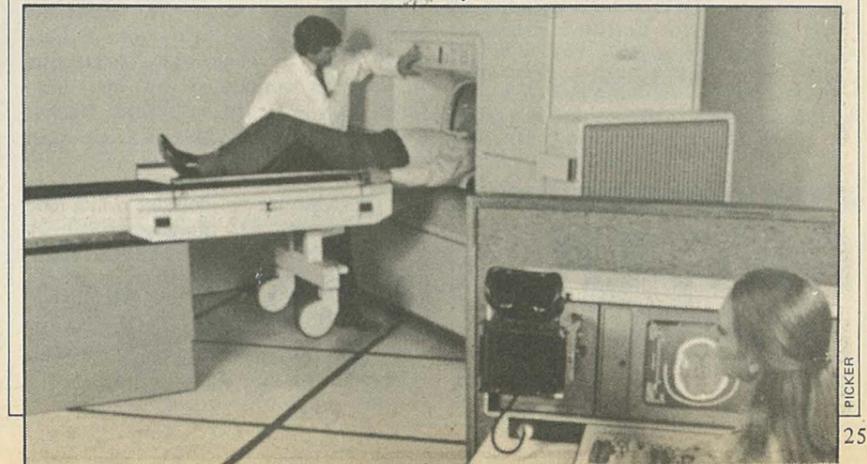
Are Catscans overused? The answer is both yes and no. Catscans give such good pictures of the inside of the skull, that there is a tendency for doctors to insist on a Catscan for nearly every intracranial problem they're faced with. The results of the scan may often have no bearing on the treatment given, rendering the scan a purely academic exercise. The medical profession is paranoid about being sued for malpractice, and doctors feel they have a very large incentive to use the most thorough investigation possible, whether really warranted or not. And there is always the financial incentive.

Yet Catscans have led to dramatic advances in the treatment of strokes, and compared to other techniques are less traumatic for the patient... ignoring of course the massive doses of radiation involved.

Judy Wilks
FOE/DRS Radiation Working Group,
C/- 366 Smith Street, Collingwood, Vic. 3066.

*The spurious workings of ICRPS will be the subject of further columns.

A Catscan machine in use. When should they be used?



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For information contact Mike and Trish Barnes, 81 Chatsworth Road, Prahran, 3181. Telephone (03) 514020.

WILDLIFE

Strange customs

By Michael Kennedy

It has been more than seven years since the Convention on International Trade in Endangered Species of Flora and Fauna (CITES) was signed in Washington DC. It is more than five years since CITES came into force internationally, and fully four years since Australia ratified CITES via the Customs (Endangered Species) Regulations.

Despite a membership of over 60 nations, all is not well with the implementation of the convention, either within Australia or overseas, and the consequences of this fact may in the long run prove catastrophic for all wildlife populations. Here in Australia there have been at least 1,500 confiscations under the regulations, and yet not one prosecution has taken place. One has to ask the question - why not?

It could be said that the convention is still too young for any judgements to be made on its effectiveness. But how long do we wait? For how long can wildlife populations sustain great losses while the convention finds its feet?

The convention depends upon the co-operation and goodwill of government bureaucracies to take on the job. Co-operation not only between departments within governments, but also between those of one nation and another is absolutely essential. Species are dealt with in three categories; appendix 1: highly endangered, no trade permitted; appendix 2: vulnerable, licensed trade; appendix 3: species which individual states protect at home. The whole convention revolves around a system of licencing for import and export of species products and live specimens, and it is the enforcement of this system and the poor record of detection that is currently giving great cause for concern.

The Australian National Parks and Wildlife Service and the Bureau of Customs jointly take responsibility for



the implementation. How have they fared in their duties? The answer, at least with respect to Customs, is that they have failed dismally. As was mentioned earlier, no prosecution has taken place during the four year life span of the Customs (Endangered Species) Regulations. Investigations by Friends of the Earth have turned up some very disturbing facts about the lack of enforcement, and these investigations are continuing until FOE can present a case with damning evidence to the Federal Government. It is hoped that this can be done before the end of January 1981. It is believed that the Australian National Parks and Wildlife Service have carried out an indepth study of the implementation and administration of CITES, and has produced a report that is fairly sweeping in its recommended changes, and this is currently before the Prime Minister and Cabinet.

What is evident from our investigations, and from recent press reports of unrest within the Bureau of Customs is that the people on the floor, the rank and file officers at airports and docks, are doing the best that they can under trying circumstances. It is the apparent lack of action and apathy in the Customs hierarchy that is proving the root of the problem. The higher echelons seem to be oblivious to the requirements of the law. Not only endangered species products, but all manner of illegal items, particularly narcotics, are passing into Australia with apparent ease. Customs officers have become so frustrated at the situation that they are now calling for an inquiry into corruption within their own department. FOE fully supports such an inquiry.

Getting around the system is no problem for those who mean business. The trade in wildlife products is a lucrative one, and inextricably linked to the narcotics trade, both in terms of the amount of money involved and the individuals and organisations concerned.

One shipment of cheetah skins recently confiscated in Hong Kong was worth \$1,000,000, and represented 10% of the world cheetah population (319 skins). An ocelot coat in West Germany sells for \$40,000. A single Amazonian parrot can fetch \$5,000. Rhinoceros horn is worth more than its weight in gold. Shipments of Australian parrots (particularly the highly endangered Golden Shouldered Parrot from Northern Queensland) worth millions of dollars each, regularly leave unknown exit points in the far north, bound for eager customers in the USA. The stakes are high and the penalties low. What's easier, pushing drugs or pushing wildlife products? Admittedly, trying to stop shipments of parrots from leaving the vast wilderness of the north is no easy job, but efforts must be stepped up if these species and others are to survive.

During the last eighteen months, the following species products have been sighted in Sydney shops and newspaper advertisements, and some can still be seen: tiger, ocelot, leopard, wolf, beaver, lynx, snakes, lizards, crocodiles, seals, elephants (ivory), armadillo, turtle, otter, lion, zebra, and the list goes on.

In many cases the retailers claim that they were imported before the ban of 1976, or that they have authentic licences. It is impossible for FOE to prove otherwise.

In the main, species products involved in the trade emanate from South America, South East Asia, Africa, and to a lesser extent Australia. The main markets are in the United States of America, Japan, France, Belgium, United Kingdom, West Germany and Italy. The question must also be asked of course - who buys these products? Despite an assumed awareness on the part of the public at large, a short walk through Australia's cooler capital cities, on a cold, windy winters day, will reveal a vast array of fur coats representing many different species,

particularly the spotted cats. Australia is perhaps also importing a significant amount of turtle products, to a point where the National Parks and Wildlife Service in Canberra have instructed Customs to remove all turtle products from Australian tourists who continue to bring these items in oblivious to the law (quite clearly stated in a Customs handout booklet). Snake skin and lizard skin handbags and wallets are common in Sydney shops. Australian parrots are subject to the desires and whims of well-to-do collectors in the USA and Europe. Business circles gladly oblige and serve the demand. Big business and public ignorance are equally to blame.

Under recent scrutiny, Australia seems to be improving slightly in certain areas, particularly in respect to further import restrictions, instigated by the Australian National Parks and Wildlife Service. The scope for improvement is vast, however, for no matter how tough our laws on paper, without full enforcement they mean little. FOE has instigated many investigations by Customs into possible breaches of the regulations, some successful, but the majority not. We have also been lobbying extensively for new and enforceable legislation, as well as investigating the role of the Bureau of Customs itself.

Public awareness and help is essential if in the long run we are to win. If you see what you think is the product of an endangered species on sale in shops or advertised in newspapers, immediately contact your nearest Customs office and tell us at the same time, or if you prefer call us and we will take appropriate action.

A list of species can be obtained from FOE, Customs or the National Parks and Wildlife Service.

A final somewhat provocative action is to verbally abuse those people who wear such articles. Crude but effective, sad but necessary, and commonly practised in the USA and UK.

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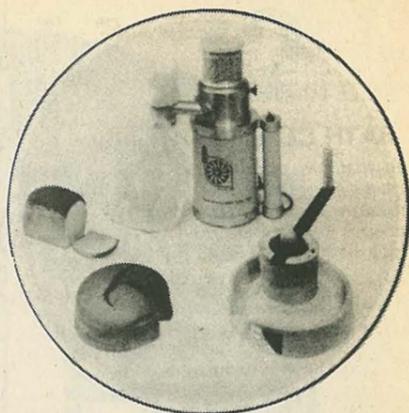
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How to use solar electricity

By Jim Kuswadi

The idea of getting something for free has always appealed to people. Getting free electricity from the sun is no exception. Add to it the fact that the sun is a source of non-exhaustible energy, that the process is non-polluting, silent, has no moving parts to wear out and does not consume any raw material, and you have a truly attractive source of energy.

This article concentrates on the practical aspects and tries to assist the first time user of solar electricity.

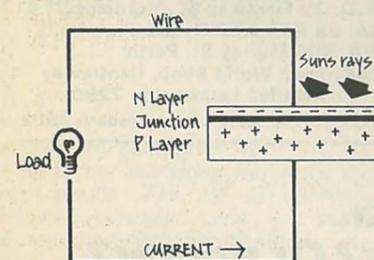


Figure 1.

THE SOLAR CELL

Basically, a photovoltaic (solar) cell is a thin wafer of silicon to which has been added a controlled amount of boron during the crystal formation. This material is called a P-type silicon wafer. On top of this wafer, a thin layer of N-type material is formed by adding phosphorous instead of boron.

The N-type material now becomes the negative pole and the P-type material now becomes the positive pole of the solar cell. Sunlight falling on the solar cell will cause current to flow through a load. (See Figure 1).

The voltage of each solar cell is always between 0.4 to 0.45V, which is the voltage of a silicon P-N junction. Increased cell size or greater light intensity will give greater current output.

The output of solar cells and panels are measured at a standardised light intensity of 1 Sun which is 100mW/cm.

The solar cell will continue to function on a hazy, overcast day, but at a reduced output.

Quite unlike solar hot water systems,

high temperatures affect the power output adversely.

SOLAR PANELS

To be of any practical use, solar cells have to be connected in series to get a higher output voltage. 12V rechargeable lead acid batteries as used in cars are the most common form of energy storage used with solar panels. When fully charged, the terminal voltage is around 13.5V. The output of the solar panel has to be sufficiently high to overcome this voltage. 36 cells are usually connected in series to produce between 14.4 and 16 volts.

The exception is the new, large solar cells of 100mm diameter. These cells have a higher voltage output and 34 or 33 of these in series is still adequate.

Battery manufacturers have different battery types for different applications—consult them before you buy new ones.

Since the voltage output of a cell panel is determined by the number of cells connected in series, the output power is determined by the current output of each cell. As a rule of thumb, a 50mm diameter cell will produce about 500 mA, a 75mm diameter cell 1 Amp and a 100mm diameter cell 2Amp or more.

WHAT TO LOOK FOR WHEN BUYING A SOLAR PANEL

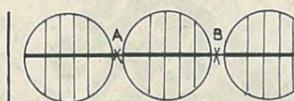
Electrical Considerations

How many cells does it have connected in series? Since solar cells are the most expensive component of a solar panel, some manufacturers try to cut cost by using only 34 or even 30 cells.

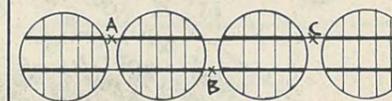
If a solar panel is required to operate in hot climates, 40 or even 44 cells in series would be required. This naturally increases its price.

How are the cells interconnected? Solar cells of 50mm diameter upwards should ideally have two interconnections between each cell for extra reliability.

Remember, the solar cells are connected in series like links in a chain; cut one link and the whole chain is useless.



One bad joint anywhere would render the panel useless.



Panel would still function even if there were bad joints at A, B and C simultaneously. Figure 2.

Blocking Diodes

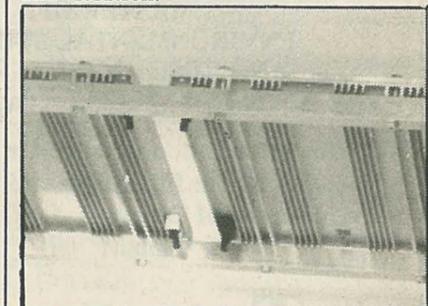
In smaller panels, a blocking diode is usually built in. It acts as a one-way valve and prevents the battery discharging through the panel at night time.

In larger panels, diodes are usually not built in but have to be added externally.

Two diodes can be used in parallel for extra reliability.

Mechanical Considerations

Solar cells are very fragile and need to be protected. Most solar panels these days have the cells completely encapsulated in a clear silicone rubber. This prevents moisture, dust and salt water from getting near the cell. It also acts as a cushion against shock and vibration.



Note the fins on this aluminium extrusion. Do not mount solar panels directly on top of hot objects but allow air to circulate and cool these fins.

Continued page 31

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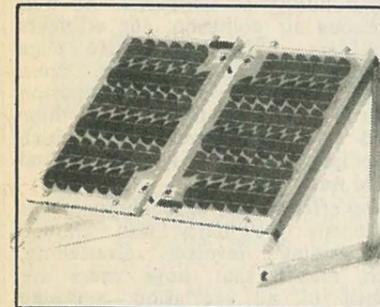
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How to use solar electricity

Next comes the 'container' to hold the solar cells. Since high temperatures adversely affect solar cell performance, a heat dissipating base is the best. Anodised aluminium extrusion with fins is ideal. It also gives a very rigid, solid structure which is easy to mount and group into arrays.

The final component is the top cover. The requirement here is for a tough, strong, durable cover which still allows the maximum amount of solar energy through. Low-iron oxide, tempered glass fulfills all these requirements; it transmits up to 91.6% of solar energy for a thickness of 3mm. To determine if the glass has a low iron oxide content, look at it edgewise; it should be clear, not green.



Standard aluminium section is used to make the mounting frame for these solar panels. The use of aluminium prevents corrosion due to contact between two dissimilar metals.

Environmental Considerations

Depending on your application, check the performance of the panel in the environment you want to use it in. e.g.: What wind loading will it stand? Will it stand hail storms? What maximum or minimum temperature will it cope with? Are the terminals rust-proof? How easy is it to mount at the angle you need?

CALCULATING THE REQUIRED SIZE OF YOUR SOLAR INSTALLATION

This guide will give you a rule of thumb which is adequate for most installations.

STEP 1 What is your load requirement each day? Assume you want a solar installation to run the following:

- 2 Fluorescent lights @ 8 Watts, 3 hours each = 48 Watt hours
- 1 Transistor radio @ 1 Watt, 5 hours = 5 Watt hours
- 1 Portable Television @ 25 Watts, 3 hours = 75 Watt hours
- Total = 128 Watt hours**

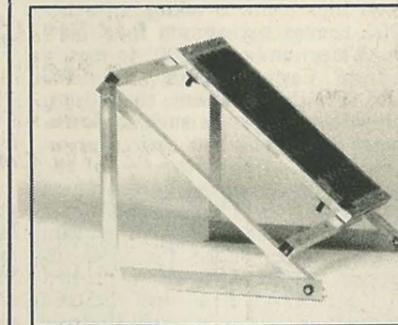
STEP 2 Convert your power requirement to Amp hours per day. Assume you use a 12Y lead acid battery. The Amp hour required per day is: $128 \div 12 = 10.7$ Amp hours per day.

This gives a total of 12.8 Amp hours per day, which has to be recouped in one day from the solar installation. Using a rule of thumb again, one can expect an equivalent of 5 hours of sunshine each day which has an intensity of 1 Sun, along the Eastern and Southern seaboard of Australia.

The solar installation then has to produce $12.8 \div 5 = 2.6$ Amps. An 80 Amp. hour battery would be suitable for this installation.

What you now have is an installation with an abundance of power during the summer, but insufficient to cope during winter months. There are several ways of overcoming this winter-summer discrepancy:

- a. add more solar panels to cope in winter
- b. add more batteries to store the summer excess
- c. Add a small wind generator to the system, as these give highest output during winter.
- d. Cut your power consumption during the lean months.



Extra holes can be drilled in the upright angle to allow for different angles of inclination to suit different locations or different seasons. Nylon washers for household taps are ideal for the pivoting bolts.

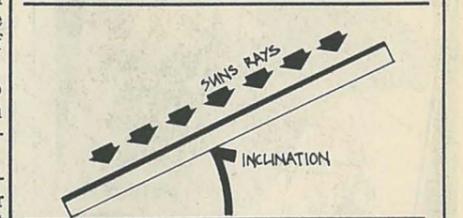
STEP 3 The next question is whether to buy a few large panels or several smaller ones.

The larger the panel, the lower is the cost-per-watt. There is also less work involved in joining them together on a mounting frame, and less electrical interconnections which reduces the potential trouble spots.

The smaller panels, on the other hand, are more modular and should one get damaged, the replacement cost would be lower.

INSTALLATION AND MAINTENANCE

To get the maximum output, solar panels have to face the Sun directly. Since there is usually an abundance of sunshine in summer but a shortage in winter, incline the panels for maximum output in winter. We suggest the following inclination angles relative to horizontal:



OPTIMUM INCLINATION FOR SOLAR PANELS

Darwin	27°
Cairns, Broome	32°
Rockhampton, Townsville	34°
Mt Isa, Mackay	36°
Alice Springs	38°
Brisbane, Geraldton	42°
Broken Hill, Perth	47°
Newcastle	48°
Sydney	49°
Canberra, Adelaide	50°
Melbourne	53°
Hobart	58°

Figure 3.

Fix the installation to face true North on a bracket arrangement to obtain the desired angle of inclination. (See photographs). If desired, the brackets could be made adjustable to allow for a winter and summer position. This would increase the installation output noticeably provided there is sufficient battery capacity to store the excess summer output, and reduce the risk of overcharging and damaging a lead acid battery.

Do not mount the solar panels directly on top of hot objects like roofs, etc. Allow space for air to circulate and cool the panel fins.

Design the installation so that the cable from solar panel to battery is as short as possible to reduce losses. Connect the solar panels to the batteries using mains electrical cable with a current rating of at least twice the output of the solar installation.

Recent breakthroughs in metal-vapour depositing of P/N layers could drastically reduce the cost and increase the ease of manufacture of solar cells. Eds.

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Pulping Victoria

Five million tonnes of Australian forests are woodchipped and exported every year. There are applications before the Federal Government to export a further two million tonnes per annum - and these trees are to come from the Northern Territory and all States (except South Australia). This is aside from domestic wood production. East Gippsland in Victoria is one of the centres of expansion of the industry. Linda Parlane and Michael Lockwood report:

The Harris-Diashowa company operates the Eden woodchip scheme in southern New South Wales and now threatens to extend its dragnet into East Gippsland in Victoria. The company's application to increase its export of woodchips includes taking a further 200,000 tonnes per annum from New South Wales and 400,000 tonnes a year from East Gippsland - a 70% increase of their present operations.

Pulpwood companies such as Harris-Diashowa have long had their eyes on East Gippsland. Until now one of the major factors which has saved these forests, as well as public opposition to woodchipping, has been competition between rival companies for access to the forest. Along with the Victorian Alps, East Gippsland forms the last major tract of forest land in Victoria not covered by legislated pulpwood agreement. For the forestry industry it is a last frontier.

Since its settlement East Gippsland has been the source of high quality sawn timber, but not for much longer. Overcutting of forests has meant that short rotation times (the time between two consecutive fellings) are necessary, ostensibly to maintain a forest based industry in the area. In fact the short rotation times allow the conversion of the forests to a pulpwood resource.

That is to say, conventional economics dictates that sawmilling of eucalypts is uneconomic in the long term. Harvest all you can now, even to the point of exhausting the mature resource and your economic return will be greater than for a long term sustained yield.

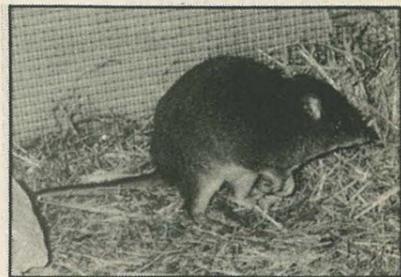
So what do you do when left with whole forests full of young eucalypts which won't be mature for another 40, 60, or even 80 years? Pulp the lot! And this is precisely what Harris-Diashowa plans to do with the East Gippsland forests.

In industrialised countries pulp-mills are recognised to be amongst the most polluting of industries. As well as serious air pollution, the effluents which are discharged include huge quantities of cellulose fibre, lignin (which causes severe discolouration of water) and mercury. Each of these would poison the river beside which the pulpmill is built, its estuary and coastal waters.

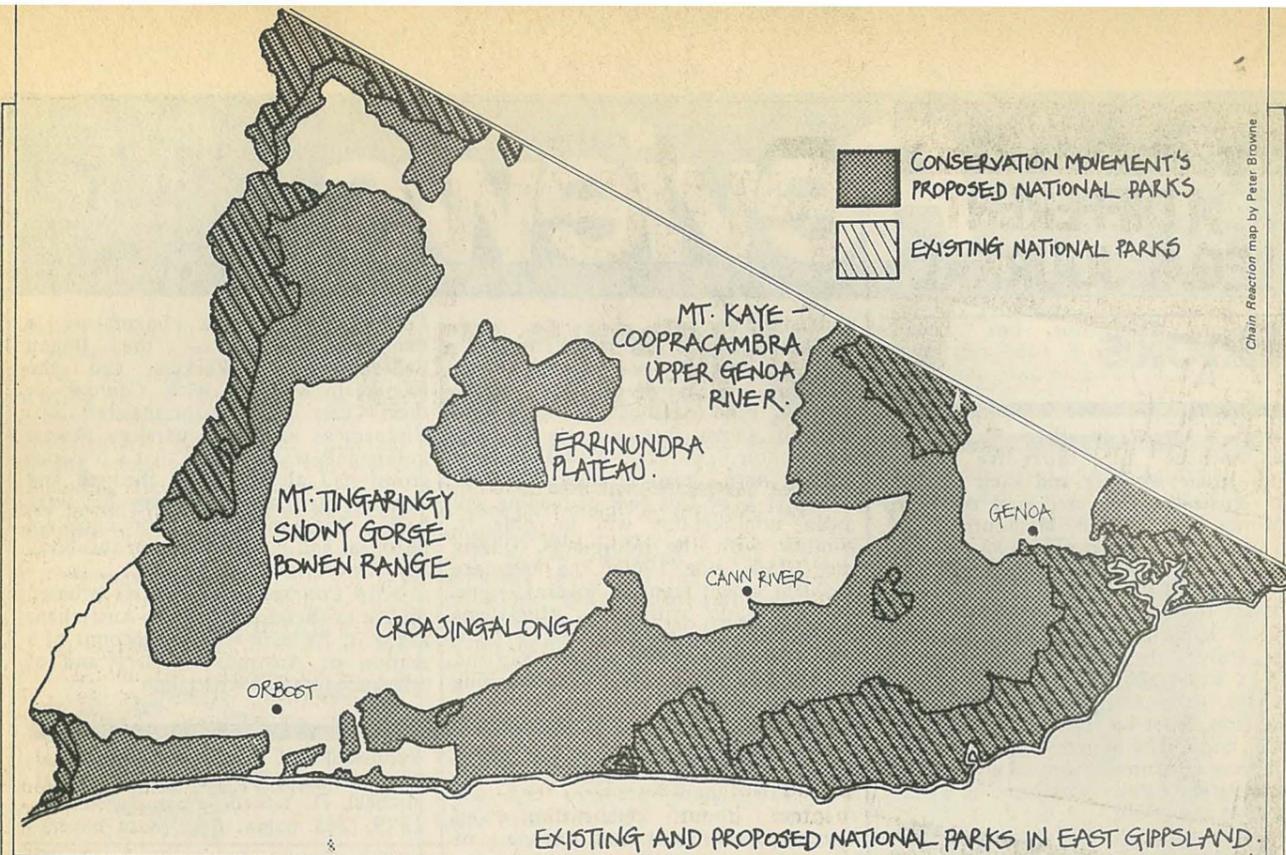
The effects that woodchipping has on forests are fairly well known. Woodchipping involves clearfelling, which means that huge areas are stripped of all vegetation, exposing soil to wind and rain. Soil washes away, silting rivers, and nutrients are lost after the wholesale removal of vegetation. Animals and birds die through lack of normal shelter.

National parks are needed to preserve the forests. Victoria's three existing National Parks in the areas allow logging, grazing and mineral exploration.

Four National Parks have been proposed. The first in the Errinundra Plateau - Mt Ellery area, will protect magnificent eucalypt forests of Shining Gum, Alpine Ash and Mountain Ash, themselves rich in associated plants and animals, and will also provide shelter for the high elevation "jungles" (sassafras forests) which grow underneath and alongside them.



Long footed potoroo - endemic to East Gippsland and only recently discovered



EXISTING AND PROPOSED NATIONAL PARKS IN EAST GIPPSLAND

The second, Croajingalong National Park, will ensure the protection of such features as Ewing Marsh and Lake Curlip, both particularly valuable breeding and feeding areas for wetland bird species. As well as rare plant species such as the cabbage fan-palms at Cabbage Tree Creek over 300km from its nearest other known occurrence, the leafless tongue orchid and many others. The heaths and associated woodlands west of Bemm River provide habitat for the smokey mouse, long-nosed bandicoot and the potoroo.

In the north-east of East Gippsland is the Mt Kaye - Cooperacambra - Upper Genoa River proposed National Park designed to protect the magnificent scenery of the Mt Kaye - Upper Thurra River Region as well as many important plant species including the long club moss, club rush, dainty wedge pea and the lowland rainforest of the Mt. Drummer area.

The fourth proposed park is that in the Mt Tingaringy - Snowy Gorge - Bowen Range area. The Bowen Range - Yalmy River area, east of the existing Snowy River National Park, with its rugged mountains and relatively undisturbed forest eco-system remains virtually unaltered since the time of European settlement. It is essential that this and areas further south, including the Mottle Range where the only known stand of spotted gum in Victoria occurs, be immediately included in the National Park.

Proposals for a fifth National Park to protect the recently discovered long footed potoroo, endemic to East Gippsland, are currently being prepared by the Native Forests Action Council (Victoria).

As well as being crucial for nature conservation, the parks have an important tactical function; by removing the availability of a potential pulpwood resource, the planned pulpwood scheme would become economically unviable. The pressure to use areas outside the parks for woodchipping is therefore reduced.

However the woodchip industry is a threat not only to the natural systems of East Gippsland but also to the small locally based sawmilling industry.

Sawmilling should continue, with the forests managed on a very long rotation time, restricted to those areas outside

national parks where its operations do not constitute a threat to the plants and animals in the area.

The only real future for East Gippsland is in extending the National Parks and keeping the small labour-intensive sawmills - a future that reflects East Gippsland beauty, not big business destructiveness.

People interested in the campaign to save East Gippsland should contact the Native Forests Action Council (Victoria) c/- Environment Action Centre, 118 Errol Street, North Melbourne, Victoria 3051. Telephone (03) 329 5519.



Clearfelling in Victoria's Alpine region. There are plans for massive expansion of the pulpwood industry in East Gippsland.

Reviews

Books

With Courage in their Cases: The experiences of thirty-five Italian immigrant workers and their families, in Australia. Collected and edited by Morag Loh. FILEF, Melbourne 1980, 140 pages, \$5.95 (paper back).

I came from Italy to Australia when I was five years old and grew up in an inner suburb of Melbourne, returning to Italy only after I had left school. As I was reading *With Courage in their Cases*, particularly the last and longest section, 'Post-War', I felt I was part of the book. The experiences described in it were common to almost every Italian immigrant I know who came here in the 1950s and 1960s.

Like life itself, the experiences described had variety, light and shade. They covered work, school, social and family life as seen through the eyes not just of men but of women and children as well. Some were hilarious, as when Nick and Franco, unable to speak English, mimed their way home from St Kilda to Northcote; others were movingly sad, as when Anna, alone in a hospital where no-one spoke Italian, waited for Nick's whistle outside the window, and hearing it come every five minutes, knew she was not completely alone. One of my own vivid childhood memories is of my mother's frustration and fear about going to a hospital where she had to rely on a friend to interpret initially then spend long hours alone where no-one could

understand her.

The book is easy to read. The everyday language it uses means almost everyone can tackle it. The various sections run together well and you are not aware that some have been taken down in Italo-Australian and others have been translated from Italian. I hope this ease of reading will mean non-migrants will be able to identify with the informants. During the 1950s and 1960s the language problem meant many immigrants could not mix easily with other Australians and explain their point of view to them. This book should help fill in a gap and so help create greater understanding between various sections of the Australian community.

The book opened up new frontiers for me. I knew little about the Italians who came here pre-war, and the chapters about cane-cutting and farming, internment and prisoners of war widened my horizons.

The regional governments of Tuscany and Umbria have undertaken to translate this book into Italian. An Italian version is necessary, not only to enable people in Italy to understand something of the Italo-Australian experience, but so that older immigrants in Australia who still have difficulty with English can read a book of great relevance to them. Many are looking forward to the Italian edition.

Things are much easier now for migrants than when we arrived twenty years ago. There are more interpreters, better English courses, foreigners are more accepted. Yet an official from the Indo-Chinese Refugees' Association, in Victoria asked the publishers, the

Federazione Italiana Lavoratori e Famiglie (FILEF - the Italian Federation of Workers and the Families), whether *With Courage in their Cases* could be translated into Vietnamese so that Australia's newest immigrants would know that a previous group had already gone through and survived the same experiences they were having. Some immigrant experiences are universal and it says much for this book that it expresses them so well.

With Courage in their Cases is based on life as thousands of Italo-Australians know it. As such it is an account of a section of Australian society and of relevance to every Australian.

Patricia Corso

Yellowcake, The International Uranium Cartel by June H Taylor and Michael D Yokell, Pergamon Press, 1979, 245 pages, \$45 (hard cover).

Documents, which in August 1976 just happened to arrive in the mail at Friends of the Earth's Melbourne office, went back to their owners - Mary Kathleen Uranium and the Conzinc Riotinto mining group - via FOE, a heavy session on a photocopier, the Ranger Uranium Environmental Inquiry and the police. They were released by FOE in Sydney, through *The National Times*, and in San Francisco.

This simple process was the first stage in a chain of events which has led to a multi-billion dollar battle between a host of nuclear multi-nationals.

The documents from MKU/CRA contained highly classified information. While senior executives at those companies were absolutely appalled at the leak, their counterparts at Westinghouse in the United States of America were delighted. For the surfacing of the documents offered a chance for Westinghouse to extricate itself from a very embarrassing and very costly muddle.

Back in the late 1960's and early 1970's, Westinghouse offered electric utilities package deals on both reactors and uranium. Contracts were signed in which Westinghouse agreed to supply uranium at around \$8 per pound once the reactor was due to start up. Westinghouse intended to buy the uranium when it was needed and as it believed that uranium prices were going to fall below \$8, a tidy profit on the uranium deals was expected.

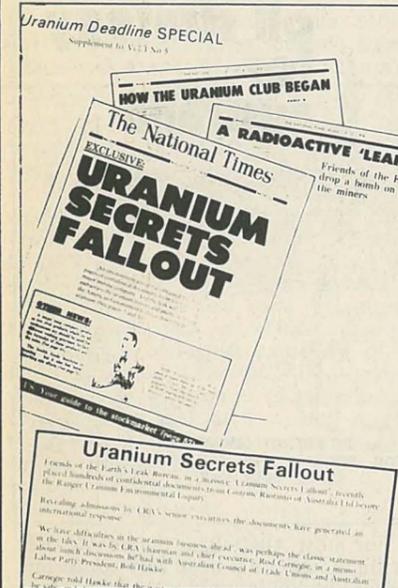
Instead, the price of uranium rocketed from around \$8 in 1972 to around \$30 in 1975. Faced with losses of over a billion dollars, Westinghouse decided to renege on the contracts



Four generations - from *With Courage in their Cases*

and try its luck in the courts.

Almost a year later, in August 1976, as legal proceedings were starting to get underway, the leak occurred. Here for the first time was documentary proof that uranium mining companies around the world (including the USA company, Gulf) had operated a cartel aimed at raising the price of uranium.



Westinghouse then promptly issued writs against the cartel members for damages believed to be in the multi-billion dollar category.

The book by Taylor and Yokell provides a clear, readable account of the events up to early 1979. Along the way a few myths are abolished. One of these is that the cartel was the only factor in the increasing price of uranium. (The truth is that there were about ten factors involved, including the decision by the USA government in 1973 to change its policy on uranium enrichment contracting.)

Westinghouse is still in there fighting. It is reported to be spending \$25 million each year on outside legal advice alone. So far, it has paid out at least half a billion dollars in damages to the utilities who still wanted uranium for \$8 per pound. But it was only in September 1980 the formal proceedings for its suits against the uranium giants got underway; the result may not be known for a year or so.

The overall significance of it all? Apart from stopping Sir Roderick Carnegie and co. from visiting the USA for fear of being arrested, the main benefit seems to have been to Westing-

house. As things turned out, the benefits for the anti-uranium movement were rather trifling: the pleasure of feeling that we had thrown a spanner in some very big works, even though the works did seem to go on much as usual. In retrospect we could have handled release of the documents much better, but that's another story.

If you're interested in the inner workings of cartels run by greedy, suspicious, devious corporate executives and/or in the corporate aspect of the uranium struggle, this book is worthwhile reading.

Neil Barrett

Friends of the Earth Cookbook by Veronica Sekules. Penguin, Middlesex (England), 1980, 192 pages, \$4.95 (paperback).

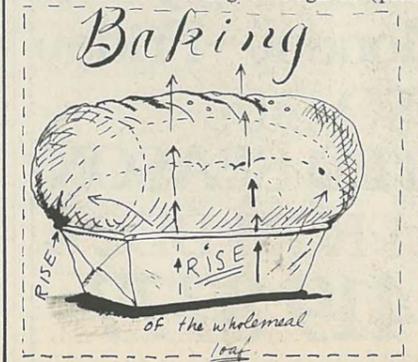
My reaction to this book could perhaps be best summed up by saying it contains *great* recipes for delicious and environmentally sound eating but a doubtful recipe for helping solve world hunger.

Sekules' suggestion that by eating less meat we can free up land, and grain that is currently fed to livestock, ignores the fundamental political context of who owns the land, controls the financial institutions, the markets, technology, etc. No one is going to freely give away land on grain.

Her recipes for ecologically principled eating however, come out tops.

The book is expressive in its comprehensive treatment covering such things as conservation in the kitchen supermarkets and energy wastage, reduction of vegetable varieties and how to fight back, factory farming, energy saving kitchen utensils such as thermos flask cooking, metal poisoning, cooking with wild foods, storage and preserving, brewing and growing your own.

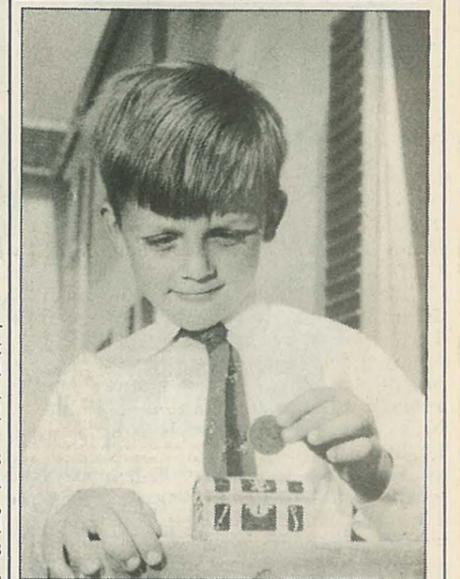
With an informative conservation based theme running through it (plus



delicious and sometimes unusual recipes) this book is much more than just another cookbook full of vegetable recipes.

Ben Witham

The Wealthy by Counter Information Services, London, Australian distributor is AllBooks, 28 pages, \$2.55 (booklet).



The Duke of Wellington counts his money. At the last count the Duke, now 26, owned over 55,000 hectares in the United Kingdom (including a plot in Mayfair, London, valued at £1,000 million) and over 88,000 ha in Canada, Hawaii and Australia ... all through an accident of birth.

The Wealthy is a booklet which basically details what we all know already - that is that the rich get richer and the poor get poorer. It outlines the way in which the top one per cent of the moneyed class in Britain enjoy not only material comforts but also wield enormous political and economic power which allows them to protect and consolidate their own interests at the expense of the other 99 per cent.

While Lord Vestey and the Duke of Westminster make millions on the stock market, the cost of living rises, health and welfare services are cut and the majority of the British are in the grip of a severe depression. Although *The Wealthy* is about the situation in Britain it is still relevant to Australians as we watch unemployment and inflation rates rise at the same time as the multi-nationals rake in record profits.

Angela Pugsley

Australian Premiere



NO NUKES

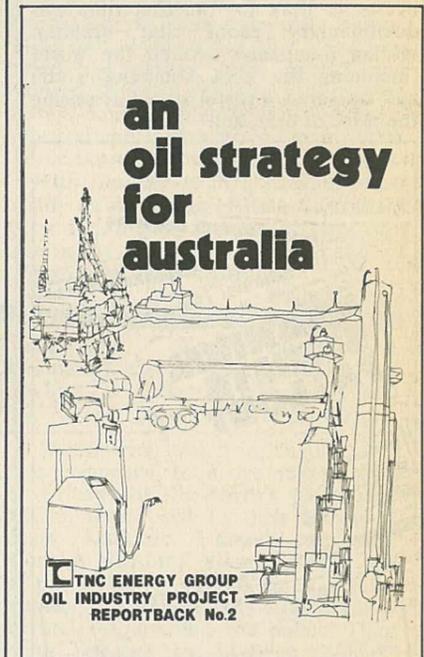
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An oil strategy for Australia, Trans-National Co-operative Energy Group, oil industry project reportback No. 2, 1980, 88 pages, \$4.00 (paperback).



For most Australians the debate over the oil industry has been very confusing. Terms like crude oil levy, resource rent tax and oil discount adjustments to the Consumer have cluttered up the arguments and concealed the basic issues. The latest report from the Sydney-based TransNational Co-operative is a fairly successful attempt to clear the muddled waters.

The book logically progresses through exploration, pricing and marketing explaining the issues and presenting the Government and Opposition policies. In addition it presents a clear analysis of the role of the multinational companies in dominating not only the oil industry but also much of the energy and mining sectors.

Apart from being a very readable explanation of the state of the industry this report makes a major contribution by putting forward an oil strategy for Australia from the perspective of the labour movement. It includes such considerations as integration in an overall energy policy, proper sharing of economic benefits, environmental protection, planned marketing and consumer protection and a greater role for state intervention to challenge the power of the big oil corporations - in some ways similar to Labor policy, in others very different.

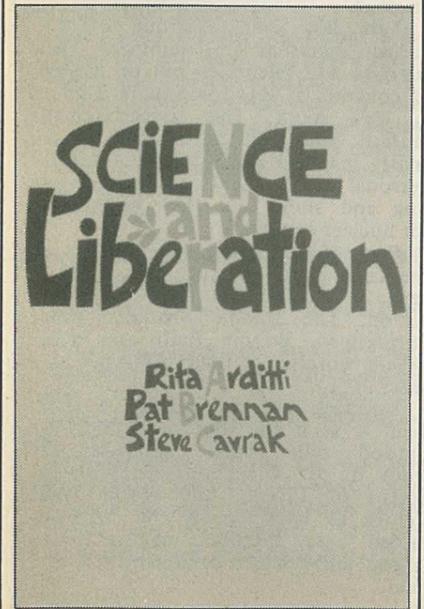
Whilst the book is a lot more acces-

sible than any similar Government publication I suspect many people will not read it because it sounds such a dry subject. This is a pity as the control of oil is clearly the central theme for the energy debate. It is also a pity the book was not printed in a cheaper format to make it easier to get the wide distribution it deserves.

Andrew Herington.

Science and Liberation edited by Rita Arditti, Pat Brennan and Steve Cavrak. South End Press, Boston, USA, 1980, 398 pages, \$10.95 (paperback).

Science and Liberation attacks the myth of science being neutral and "value-free", and able to solve all problems. It is a collection of articles almost all of which have been published previously by the USA *Science for the People* magazine or in various feminist journals or books. The first group of articles examines how some so called scientific theories are used to propagate political aims (eg: socio-biological theories for biological causation of a range of human behaviours like aggression and sex differences in behaviour). Other articles look at how most scientific research conducted both inside and outside of universities is financed by big business and governmental interests in military technology, often funded undercover of titles which hide the fact that it is primarily military research (eg: "High Power Broadly Tunable Laser Action in Ultra Violet Spectrum" for development of weaponry-lasers with increased damage effectiveness.) There are some interesting accounts of what it is like to work as a scientist



(particularly if you are a woman), and finally there are suggestions for ways of liberating science so that it becomes a thing benefitting people and not the military and big business. It should be noted that the articles were on average published in the mid-70's, and I would have preferred to see the original publication dates printed clearly at the beginning of each article rather than somewhat obscurely in a list at the beginning of the book. However, the issues that the book covers certainly have not dated, and I recommend it to both the scientist and non-scientist. It is essential for people to be informed about these crucial issues and not reject science in general by retreating into ignorance and mysticism.

Lesley Rogers

About Looking by John Berger. Writers and Readers Publishing Co-operative, Australian distributor: Second Back Row Press, 1980, 198 pages, \$9.95 (paperback).

This latest publication of Berger's work brings together twenty-three essays that have already appeared in magazines and journals. It has three sections: *Why Look at Animals*, a major essay and a section on its own; *The Uses of Photography*, four short articles; and *Moments Lived*, eighteen works in the best tradition of Berger art analysis/criticism.

Berger's past published works are very broad in range. *Permanent Red* and *Art & Revolution* as art criticism are classics, *G* and *A Painter of His Time*, are novels, the latter being confiscated from bookshops at the height of the 'cold war'. His works of social analysis, by focussing on specific examples of human experience, illustrate the changes wrought in human and social relations by the relentless oppression of capitalism. These include *A Seventh Man*, and *Pig Earth*, the more recently released study of peasants in the Algarve Portugal, and the first book of a trilogy *Into Their Labours*.

Berger is currently living with the peasants of whom he writes and one feels that his close relationship with their lives and labours inspired what is to me the most illuminating and original essay in this collection - *Why Look at Animals*. This is an incredibly dense analysis of the altered relationship between humans and animals. Once animals were absolutely central to people and their engagement with the natural world. Berger argues that animals were the first metaphors of language and had sacred as well as functional significance, facts well attested to by anthropology and clearly illustrated by the mythology of Aust-

ralian aboriginals. However over the centuries, with the advent of the industrial revolution and concomitant changes in theories about man, animals were either likened to machines (in the mines) or, with increasing mechanization, marginalized completely.

John Berger About Looking



Banished from cities as beasts of burden or transport, they re-enter as pet or spectacle (circus-zoo). In both cases this leads to a trivialization of our relation to those in nature most like, while unlike, us. We can no longer approach an understanding of our indebtedness and responsibility to the natural world when our most interactive experience of it, and thereby our own dualism, is so distorted.

Berger uses philosophy, anthropology, linguistics, art and history to analyse the loss of the wisdom of the duality at the very origin of the relation between humans and animals and now only retained by the disappearing peasant. This is encapsulated in the statement "A peasant becomes fond of his pig and is glad to salt away its pork." We however are loathe to admit the connection between the spectacle of frisky pretty lambs in the fields, and their function in the butcher shop window.

The essays on photography and art very carefully analyse the implicit depictions of social relations in the works of a variety of painters eg. La Tour, Roualt, Magritte, Gaicometti. In each essay Berger continues to explore the distortions to our view of, and role in the world; the distortions that flow from the falsified lifestyles that come to appear 'natural' in a consumer society. Ultimately Berger is on about our increasing loss of vision of our real human and social possibilities.

These are rich and informative essays to be delved into again and again to develop and keep alive an awareness of the both brutal and delicate ways in which our cities, lifestyles and media are walls around our *seeing* revolutionary possibilities.

Noirin Malone.

IN DEFENCE OF LIVING THINGS

In Defence of Living Things by Christine Townend. Wentworth Books Pty Ltd, Sydney, 1980, 125 pages, \$5.75 (paperback).

In Defence of Living Things is a passionate indictment of exploitation of non-human animals. Through extensive research Christine Townend exposes the institutionalised atrocities of the Australian meat industry. The laming of cattle in transport, the forced feeding and de-beaking of chickens and the rearing of pigs in complete disregard for their behavioural needs are but a few instances. In her view vegetarianism is a political as much as a moral responsibility. The meat industry deprives South Africa and South America of fish and soya beans to fatten 'pork'. Finally Townend relates indifference to animals with environmental delinquency. To treat them as a source of amusement, gratification and experiment nurtures the moral and social injustice apparent in mining uranium or wood-chipping the wilderness.

Bruce Scates.

For further information contact Animal Liberation, PO Box 199, Glen Iris, Vic. 3145, PO Box 1, Gordon, NSW, 2072.

Race Against the Dying by Elizabeth Sigmund, Campaign against Chemical and Biological Warfare, Pluto Press, London. (Australian distributor: Allbooks), 1980, 128 pages, \$5.95 (paperback).

Before reading this book, I had only a vague idea of chemical and biological warfare (CBW). Visions of warded land with sparse vegetation came immediately to mind - populated by a few anonymous figures clad in "space-suits", the only ones with the technology to survive CBW. This idea isn't too far from the truth. But it's only part of the whole picture.

Elizabeth Sigmund's book documents some of the struggles in the United Kingdom to stop CBW research into such things as biological weapons, "harassing" agents, "incapacitators" and nerve gases. Biological weapons include such "cosy" diseases as bubonic plague, pulmonary anthrax, botulism, encephalitis (infection of brain) and cholera.

The "harassing" agents (an innocent enough name) include tear gas such as CS. However, these agents do more than just "harass". CS causes extremely painful eyes, nose and throat, profuse tears and salivation, constriction of the chest and difficulty breathing, vomiting and diarrhea, and, in humid conditions, can cause severe burns. A graphic example of the effects of such agents was the appalling misuse of CS by the Royal Ulster Constabulary in the Bogside area of Londonderry, Northern Ireland, in 1969. Hospitals were full of the "harassed" victims. Incapacitators, such as psychochemicals BZ, LSD, etc., basically affect the mind causing temporary mental derangement.

One of the scandals in CBW is the record of poisoned workers in the research laboratories and the use of human guinea pigs to test new chemicals. However, compensation for these victims appears impossible in the UK. Victims cannot tell their treating doctors what chemicals they are in contact with; doctors cannot publicly testify; scientific literature on toxic effects is censored - all gagged because of the Official Secrets Act covering these CBW Defence establishments.

But perhaps the most disturbing section of this book dealt with the suggestion that Australia was also involved in CBW research. Our role appears unclear but we do receive research results from Britain, as do the USA and Canada. Also there is an official CBW test site of Innisfail, Queensland.

George Nossar

Other books received:

Home Made Houses by David Liddle and Ann Taylor, Second Back Row Press, 96 pages of colour photographs, \$10.95 (paperback).

Crisis in Abundance, by Peter Sheehan, Penguin, 1980 (264 pages, \$4.50 (paperback).

From under the rug, a list of nuclear accidents, by Nick Thieberger, Friends of the Earth, Melbourne, 1980, 52 pages, \$1.20 (paperback).

Film



No Nukes, a Musicians United for Safe Energy film, Warner Bros, Australian distributor: Roadshow, opening on 4 December 1980 at the Universal Cinema, Melbourne and elsewhere soon.

In *No Nukes* the music is more than a backdrop: the music is the message.

Late last year, a group of well known musicians combined their energies and talents to put on a series of concerts at Madison Square Gardens in New York. The concerts made musical and political history as the artists involved came together not for personal profit but to collectively sing and shout out their abhorrence for nuclear energy.

One of the incredible features of the film is to see such superstars as Jackson Browne, James Taylor, Carly Simon, The Doobie Brothers, Bruce Springsteen, Bonnie Raitt and many others working on and off stage as a team.

Inspiring and entertaining stuff indeed - as is the footage of the huge outdoor rally which culminated the week of *No Nuke* concerts. With the Status of Liberty and World Trade Centre as back drops, the rally attracted over 250,000, making it the largest anti-nuclear demonstration ever held.

Gib Wettenhall



DOWN TO EARTH

confest '81

It's on again! Down To Earth (Vic) is holding another Festival. This year's Festival will be held on the Glenlyon Reserve near Daylesford from 23 to 26 January 1981.

Confests are playful gatherings, where amongst beautiful surroundings, people come together to explore alternatives to our society.

There will be laid back acoustic music, a bush band for dancing, food-stalls, market stalls, workshops on alternative medicine, Tai Chi, massage and body-mind healing, organic gardening and many, many more.

The Theme for this year's Confest is: "Celebrating and Exploring a New Age". Come and share your vision!

Come totally self-sufficient in your accommodation and food and eating utensils. There won't be any throw-away stuff available. Some vegetarian food will be sold.

Please: No Pets!

For early registration, contact:
Down to Earth (Vic) Co-operative Society

13-43 Victoria Street, Fitzroy, 3065.
Telephone: (03) 419 3510 noon to night.

(between Brunswick & Nicholson Streets).

Pre-registration closes on the 9th January 1981, cost \$10 per person over 16 years of age. Registration after 9-1-1981 and at the gate: \$12 per person or \$20 incl. membership in DTE.

ActionGuide

Newcastle Ecology Centre

Newcastle Ecology Centre
Room 6 Trades Hall
Union Street
Newcastle
New South Wales 2300
Telephone (049) 2 5641



Greenpeace Australia
399 Pitt Street
Sydney, New South Wales, 2000
Telephone (02) 267 7722.
Telex AA24041

310 Angas Street
Adelaide, South Australia, 5000
Telephone (08) 223 5155.

Current objectives

The Centre seeks to promote the joint activity of environmental groups and individuals, to conduct joint displays, seminars etc., designed to inform and involve the general public. Groups which meet at the Trades Hall are the Uranium Moratorium, Environmentalists for Full Employment, Project Jonah, Newcastle Trades Hall Council Ecology sub-committee and the Hunter Transport Consultative Association.

Methods

Meetings, consultations, displays, seminars, lobbying, protest marches.

Future plans

Groups from the Centre intend to complete the following projects: examination of the Pechiney aluminium smelter Environmental Impact Study for the Hunter region; attending a study tour of Alumax aluminium smelters in the USA, proposing a list of specific demands regarding environmentally and socially useful job-creating projects, assisting in the organization of a mass protest rally in Newcastle to halt construction of the Pechiney and Alumax smelters; negotiation with councils of the Hunter Regions for the area to be declared a Nuclear Free Zone; examining power costs to water supply problems related to the massive industrial expansion for the Hunter region.

All visitors and observers are welcome to attend meetings and join these groups; membership is inexpensive.

Current Objectives

Nuclear: Build up publicity and encourage responsibility with action toward a nuclear free Pacific, including Muroroa testing, waste dumping, proliferation of military installations particularly with nuclear capabilities.

Marine resources: to increase awareness and action in the inter-relationships within and between marine eco-systems with specific reference to exploitation of Antarctic resources.

Methods

Nuclear: building up of broad based contact network where information can be transferred quickly and efficiently around Australia

Marine resources: developing proposals and lobbying in conjunction with other groups, particularly Friends of the Earth in Sydney. With regard to marine mammals - an aim to produce federal-state Marine Mammal Protection Acts.

Future Plans

Nuclear: to work with other groups in gaining nuclear free zones around Australia.

To organise an Australia wide Peace Squadron such as that in New Zealand.

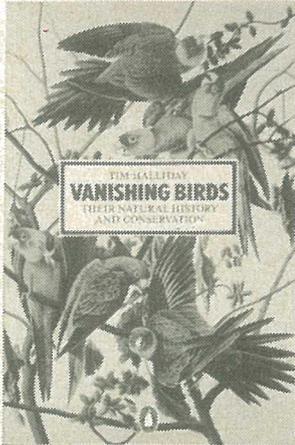
Marine resources: to develop legislation for the control of import and export of endangered species and products. To campaign for a 10 year moratorium on whaling worldwide.

Generally to inform public of their personal responsibilities to the species and to ensure endangered species import bans are enforced by the Australian Government bodies concerned.

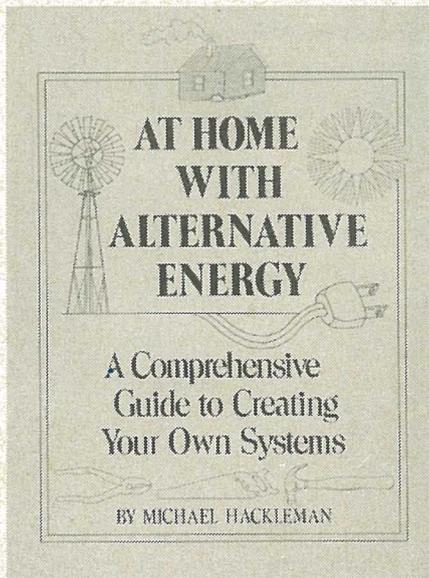
Help Needed

More volunteers in Sydney, especially to help with the office, merchandise, administration and co-ordination of particular campaign areas as above.

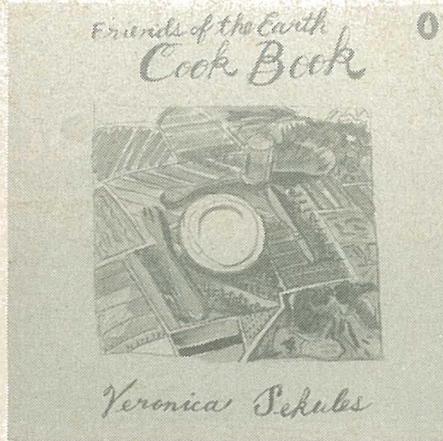
NEW BOOKS FOR A NEW YEAR



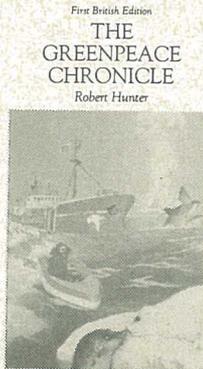
Vanishing Birds — Tim Halliday.
Examines both extinct and threatened birds, including those of Australia. \$7.95 — Penguin.



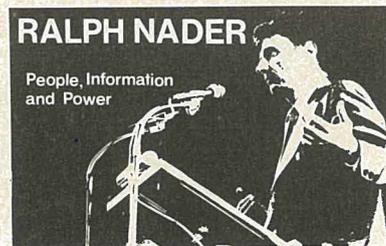
At Home With Alternative Energy — Michael Hackleman.
Comprehensive guide to creating your own systems. \$10.95 Peace Press.



Friends Of The Earth Cookbook — Veronica Sekules.
A cookery book to help all friends of the earth make the best use of our plentiful and not so plentiful resources. \$5.95 — Penguin.

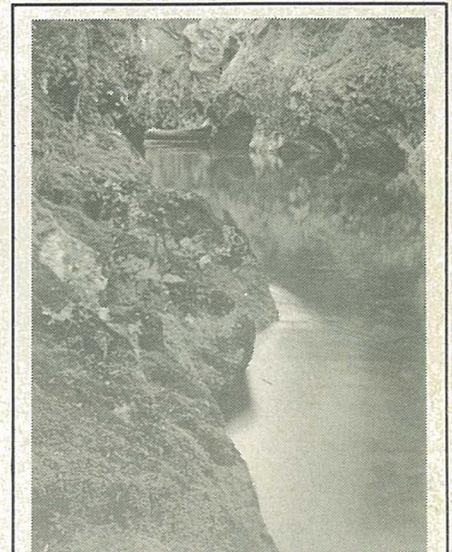


The Greenpeace Chronicle — Robert Hunter.
Story of the first 7 years of the famous movement which fought against nuclear tests, whalers, oil consortiums, pesticide manufacturers and politicians. \$8.95 — Picador.



Ralph Nader — Citizen's Kit
Detailed guide to citizen action groups in the United States of America. Only from FOE — \$15.00

Calendars for 1981



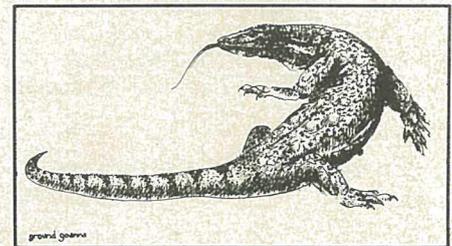
TASMANIAN
Wilderness Calendar 1981

- Tasmanian Wilderness** — \$4.95
- Wilderness Flight Calendars** — \$4.50
- Victoria's National Parks** — \$5.00
- Victorian Alpine** — \$4.70
- Wildlife of arid Australia** — \$2.50

Greeting Cards



Peace to all —
Produced by FOE Perth.
\$1.00 set of 10 cards.



Native animals —
Line drawings — set of 5 \$1.00.
Produced by Conservation Centre (SA).

Posters

- Gould League birds of Victoria** — \$1.00
- Franklin River** — (TWS) \$3.00

AVAILABLE FROM FRIENDS OF THE EARTH BOOKSHOP
366 Smith Street, Collingwood, Victoria 3066.
Telephone: (03) 419 8700.