



ENVIRONMENTAL EDUCATION PROJECT

WATTLE PARK TEACHERS CENTRE
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PITCHELL LIBRARY

NEWSLETTER No.4

15 FEB 1984
DECEMBER, 1978
SYDNEY

To prophesy is extremely difficult, especially with respect to the future.

Chinese Proverb

Alvin Toffler's critique of the future linked the acceleration in the rate of accumulation of knowledge with the acceleration in the rate at which physical and social environments change. It suggested there were limits to human adaptability to this rate of change which when exceeded resulted in "Future Shock".

There was a time when a man learned the language of his society and made use of it, with little change, throughout his lifetime. His 'relationship' with each learned word or gesture was durable. Today, to an astonishing degree, it is not.

(p.162)

Prior to 1500, by the most optimistic estimates, Europe was producing books at a rate of 1,000 titles per year. This means, give or take a bit, that it would take a full century to produce a library of 100,000 titles. By 1950, four and a half centuries later, the rate had accelerated so sharply that Europe was producing 120,000 titles a year. What once took a century now took only ten months. By 1960, a single decade later, the rate had made another significant jump, so that a century's work could be completed in seven and a half months. And, by the mid-Sixties, the output of books on a world scale, Europe included, approached the prodigious figure of 1,000 titles per day.

(p.37)

(Pan Paperback)

In *The Green Pages : Directory of non-government environmental groups in Australia*, the Australian Conservation Foundation notes the number has almost doubled since 1974. When collecting environmental materials put out by environmental, governmental and industrial organizations it soon becomes clear that the problem for today's environmental educator is how to select from the vast array of materials available - once he knows of their existence!

But if quantity is one problem what of quality?

A seminar on the "Resources for the Teaching of Environmental Education" held in Victoria in 1976 produced the following comments from teachers.

- : There is an urgent need for a resource directory. Material should be catalogued according to cost, nature and level of target group.
- : Most departmental publications are written for a mythical "general public" rather than directed towards any specific group. It was felt that it might be a more effective strategy for such organisations to concentrate on one major client group.
- : Many environmental issues are controversial and publications are often produced by organisations with vested interests. Publications advocating a particular viewpoint should incorporate the decision-making process which led to this viewpoint.

National Project Director: John H. Smith

- : Materials prepared should revolve around "real life" situations. Many government departments and authorities are reluctant to produce educational material based on "sensitive areas", preferring to present simulated or more remote experiences. The issues must be relevant to students.
- : The language of the majority of publications is inappropriate. It is frequently too sophisticated and makes too much use of jargon terms.
- : The material should try to involve the student - it should incorporate activity.

Some of the organisations described below employ education or information officers to cope with some of these problems. Education Departments have seconded teachers to sift the vast information stores in Museums, Art Galleries, Zoos and Botanic Gardens (but not in Universities) and prepare appropriate materials. Mostly education officers work in isolation from each other. However as school-based curricula develop the onus to find and select appropriate materials falls on the classroom teachers.

One prophecy that could be made with some surety is that the information explosion will continue. If this is so then "educational distilleries" will be essential to ensure teachers' limits of adaptability are not exceeded and children receive today's information for tomorrow's world. Without such, education will not keep up with real world issues - and in David Stokes' terms (Newsletter No.3) could not be Environmental Education.

THE NEED FOR COMMUNITY ENVIRONMENTAL EDUCATION

Marta Hamilton, Education/Extension Officer with the Victorian Ministry for Conservation

Funds and resources available for Environmental Education are limited and unlikely to be increased in the near future. The problems of the environment are often of immediate concern. Yet virtually all of these scarce resources are committed to attempts to influence the thinking of a mere 25% of the community - at present the least influential, the least powerful segment of the population - the children and young adults in formal education. The remainder of the community, the 75% which votes, pays taxes and makes decisions which act most directly on the environment is effectively ignored.

Adults, with their ingrained biases and prejudices, are difficult to reach, but their importance in determining the outcome of current environmental matters, coupled with the vital role that they can play in reinforcing desirable attitudes in children, surely qualifies them as a major target group in any serious attempt at environmental education.

Because of their relative inaccessibility to formal processes, the objectives of environmental education programs aimed at an adult audience must remain modest. Four aims seem appropriate, and equally important, likely to be attainable with the adult section of the community:-

- : Raising consciousness of environmental issues;
- : Raising awareness of individual responsibility for community effects on the environment;
- : Emphasising the importance of environmentally significant decisions for the present as well as the future;
- : Providing the knowledge, understanding and skills necessary to take action on environmental issues.

The problem remains of devising appropriate strategies to achieve these aims. Whatever strategies are adopted, they must recognise one central fact. Adult learners are different from children. They do not respond to overt "teaching" but they will learn rapidly and deeply if they are suitably stimulated and convinced of the importance of the topic of study.

To achieve success, a wide range of techniques must be employed including mass media - especially the electronic media (who can fail to be impressed by the impact of the "Life Be in It" campaign?), displays, shows, formal courses developed in response to client demands, and informal but meticulously planned, interpretation work in the field, e.g. National Parks.

Any program based on these principles must be expensive. The problems of educating the adult community are formidable, but the effort must be made now if the overall program in this field is to have any significant impact.

Environmental Organisations

THEIR ROLE IN E.E.

The A.C.F. directory lists 1198 environmental groups around Australia. The Federal Government is supporting 26 of these in 1978-79 with matching grants totalling \$350,000. State Governments also provide some financial assistance from time to time. Most however rely on voluntary work. Below is a selection of some involved in information dissemination - a huge task considering the paucity of environmental information available to "Norm" before about 1972. It is, however, one in which such groups are becoming increasingly adept.

Victorian Environment Centre

1st Floor, 324 William Street, Melbourne, 3000. Phone (03) 329 5377

The Environment Centre is a resource base for community groups and individuals interested in environmental issues. The Centre does not take direct stands on issues but rather acts as a back-up service to bodies that do take stands. At the Centre, groups may publicise their activities to the community at large. On the other hand, people interested in the environment movement can use the Centre to find out about issues and groups, and be introduced to people with similar interests. The management of the Centre is the responsibility of the Conservation Council of Victoria, an organisation of over 100 member bodies concerned with the environment.

In this role the Centre is a potentially important tool in the process of environmental education. Perhaps the most important aspect of the Centre is bringing together under one roof environmental-conservation organisations which constitute an important part of the voluntary environment movement in Victoria.

Nevertheless there are problems which have tended to dampen full utilization of its potential in this area. Firstly, the Centre isn't as well known as it could be and yet it only has a limited capacity to deal with an increase in demand on its resources.

Secondly, the majority of students who contact the Centre are quite unprepared as to how to make best use of the resources available. Often students will contact us requesting information on "conservation", - what does one do? Such enquiries probably reflect a lack of preparation by the teacher concerned. On the other hand, if students (and this may also include teachers) manage to visit the Centre, generally speaking they haven't the time to make use of the reference library and so are only interested in collecting copies of the few information sheets that are available.

As a resource base the Centre has taken a passive role in the field of environmental education and this also applies to many groups at the Centre which provide information on conservation issues. An active role is taken by groups whose primary function is environmental education, i.e. Environment Studies Association, Environment Teachers Association, and to some extent Insect.



QUEENSLAND CONSERVATION COUNCIL

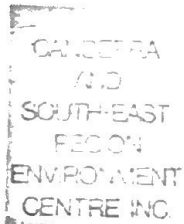
P.O. Box 233, North Quay, Brisbane, Qld., 4000. Ph. 221 133

The Queensland Conservation Council is a non-profit, voluntary organisation which acts as a co-ordinating body for conservation and environmental groups throughout Queensland. As well as our community advocate role on specific issues, we also place a high priority on environmental education to all levels and sectors of the community. One of the major outlets for this is via our Environment Centre at 147 Ann Street, Brisbane, which acts as a resource centre for information and co-ordinated activity. Facilities provided are freely available to the public and include:

- (i) Library resources such as books, journals, newspaper clippings and audio-visual material on a wide range of environmental topics.
- (ii) Information resources and contacts with various Government and non-government bodies and individuals with expertise in particular fields.

These resources are used extensively by students and teachers in the Brisbane area. The Q.C.C. also receives many enquiries for information by letter and phone, and to the best of our limited financial and human resources, we try to meet this demand.

As Queensland does not have a Department of Environment, our Centre tries to make up this discrepancy by providing public access to information and resources that would be otherwise unobtainable. We provide a comprehensive monthly newsletter to associate members (\$8.50 p.a.).



The Canberra and South-East Region Environment Centre (CASEREC) exists to:

- : increase citizen involvement in and awareness of environmental issues;
- : provide greater public access to information about the environment;
- : make available secretarial, physical and informational resources to groups and individuals concerned with the environment thus allowing greater citizen involvement in environmental issues.

The Centre is part of a national network of environmental centres funded by the Federal Government. The grant has varied from year to year and is a matching grant conditional upon the Centre's raising a certain proportion of funds itself. The Centre has also received a grant from the Totalisator Agency Board.

The Centre is for your use and here to allow you to learn about the environment and to help you take an active role in environmental issues.

The Centre provides people, resources and information.

PEOPLE - The Centre has a full-time co-ordinator and a part-time secretary. They are available to help you use the resources in the Centre, and to cater for your particular needs.

The Centre provides access to groups and individuals active in various environmental issues. Employees of the Australian Conservation Foundation and the Movement Against Uranium Mining are based at the Centre and members of Friends of the Earth, Pedal Power and the National Parks Association, etc. are present on a regular basis.

Interstate and national groups use the Centre when involved in specific projects in Canberra.

INFORMATION - Newspapers are clipped each day and filed. The library stocks major environmental periodicals as well as books covering a range of issues. The State and Federal Governments have a policy of placing environmental impact statements with the Centre for use by the public.

The Centre attempts to maintain a collection of material which cannot easily be found elsewhere, as well as knowing the location of further material through contact with a wide range of experts.

Information relating to the programs of State, Territory and Federal authorities is maintained.

The Total Environment Centre was established in 1971 as an office of environmental action and information. Since that time many hundreds of individuals and community groups have been assisted (campaign organisation, press releases, dodgers, etc.) in their efforts to protect the environment, whether it be local bushland, an urban river or major wilderness area. This is the action aspect of our activities.

Equally important is the information/education side. A quite unusual library has been built up over the years and includes unpublished government reports, speeches and issue files. One of the main strengths of the library is its concentration on current issues. In the last few years requests for assistance in the field of environmental education have grown immensely. We are now attempting to find funds to employ a full-time library/information officer.

The Centre's involvement takes a number of forms, including

1. Information for essays and projects (in person requests)

2. Information for essay and projects (by mail or telephone)

These requests are more difficult to satisfy. Often little detail is given in the letter, which may cover a general request for information on, for example, "conservation", "pesticides", "forestry", or "man and his environment".

Due to our lack of resources (but not motivation) not enough information sheets are available. If a particular article in a publication is suitable for the student, photocopies can be made.

One of the most urgent needs of our information services is the production of more information sheets and bibliographies.

3. Teacher Resources

Requests from teachers and school librarians generally cover the need for a complete picture of an issue or topic.

The Centre does sell environment publications, posters and a few periodicals (e.g. "Forest Ecosystems: their future in NSW", "Wilderness in Australia", "Habitat").

4. School Visits

In a relatively few cases, classes or project groups have visited the Centre by appointment. Short discussions have been held on a particular environmental issue, the library, or the role of the Centre.

5. Teacher Training

Due to the greater freedom given to course development, a growing interest in local environmental problems, and the Centre's study of major regional problems, we have participated in the production of teacher training/seminar materials.

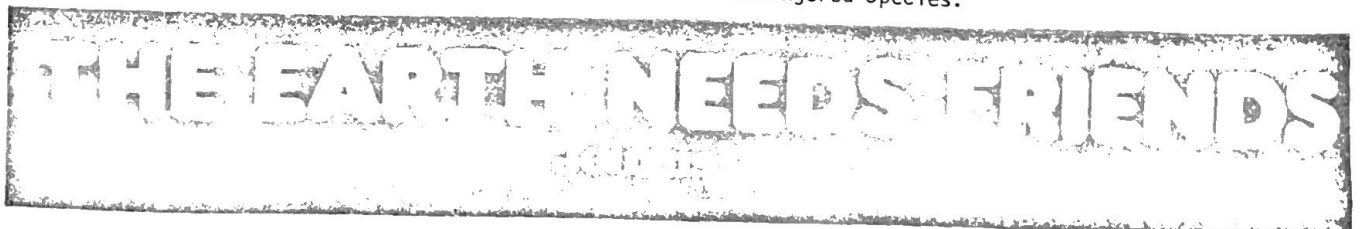
The best example is our study of the Cooks River, which formed the basis of seminar material compiled by the NSW Department of Education. Other examples are the Boyd Plateau and St. George Community Health Centre teachers' seminar.

6. Studies

Some original studies have been completed or are still continuing, for example:

"Forest Ecosystems: their future in NSW"
"Macquarie Marshes"

The Centre's research committees are also of assistance. These include - Animal Liberation, Energy, and Endangered Species.



Conservation Council of South Australia Inc.

CONSERVATION COUNCIL OF SOUTH AUSTRALIA INC.

BOX 2403 G.P.O., ADELAIDE SOUTH AUSTRALIA 5001

The Council, as the representative for seven conservation groups aims to educate by all means possible all sections of the community in understanding the principles of conservation.

Those with expertise visit schools, contribute regular information to the newspaper, publish books and maps of Fraser Island and Cooloola, invite public participation in monthly outings to become familiar with flora and fauna.

Each year, three educational camps (safaris) are held on Fraser Island, one at Cooloola and one sea-going safari to islands of the Barrier Reef. A marine workshop has been held on Heron Island.

Those who cannot claim the same expertise regard themselves as agents of environmental information. They offer to the press, to radio and television, to Councils, to Clubs, to magazines, and to members of Parliament specific information proffered by concerned people.

Displays of posters, literature and pamphlets are sometimes prepared. Through them awareness of specific environmental problems, National Parks, pollution, sand-mining, land utilisation or special occasions (World Environment Day), is achieved.

The public are invited to attend when officers from Government departments involved in environmental care address meetings.

However the main effort in E.E. has been directed towards Fraser Island. Why? Fraser Island has been a landmark in many facets of conservation history of Australia and it is a favourite subject for school, college and even university projects.

Since the conflict began in 1971 over sandmining, there has been a great volume of material produced, mainly by the Fraser Island Defenders Organisation Ltd. (F.I.D.O. the Watchdog of Fraser Island). F.I.D.O. began its strategy for an education kit first in 1975, when it produced its first Educational Supplement. It had this printed in the free weekly local newspaper. This illustrated broadsheet in simple language described the geomorphic features in "Building the Greatest Sand Island". Then followed a succession of other educational supplements: "Priceless Pearl", described both the compatible and incompatible land uses of Fraser Island as seen by conservationists; "F.I.D.O.'s Management Plan" expanded on the history and background to the Island as well as detailing how management should proceed; "High Court Judgement" described the legal battles; then a "History of Land Use Conflict" attempted to put the conservation history in perspective.

Other educational supplements include broadsheets of photographs of before and after mining, significant quotes from the Fraser Island Environmental Inquiry and Fraser Island in History and Art, as well as an updated F.I.D.O. Management Strategy.

F.I.D.O. puts all of these information sheets together with some of the latest issues of the quarterly Watches (now up to Issue 38), in what it terms an Education Kit, to assist students in projects/assignments. F.I.D.O. handles over 500 requests per annum for project material. The charge is \$2.00 without the colour issue of "Habitat", and \$3.00 with "Habitat", from P.O.Box 420, Maryborough, Queensland, 4650.

The Conservation Centre at 310 Angas Street, Adelaide, 5000, telephone (08) 223.5155, collects information for a wide range of environmental topics and makes it available for anyone.

The Centre collects and makes available in ordered form, subject to limits of finance and resources, all information which can help people make rational decisions on environmental matters based on more complete information than they might previously have had available. It provides a base from which people or groups of people can operate. It provides information for the researcher and student.

There has been a change in the direction of conservation movements in the past few years. People concerned about preservation of part of their natural environment began to realise that decisions which affected the bush were often affecting other parts of the environment too and such decisions were generally made without proper appreciation of the total ramifications. Hence conservation issues touch on technology, on economics, on national parks, on better farming methods, on public transport, on food additives and a whole host of other issues which affect our environment, but which a few years ago were not considered to be Conservation in nature.

The library, therefore, has a large range of papers, books, pamphlets as well as newsclips and maps which most students find have been compiled in an order most suitable for quick reference. The Advanced Colleges as well as the secondary schools produce a steady stream of researchers. Included among them are a number of teachers who are keen to teach Conservation but, beyond such things as saving the gum tree and helping the kangaroo, are unsure of what conservation means.

There is no easy solution or a provision of ready-made answers to these teachers. They will have to research the subject themselves and decide what conservation issues involve, what they can themselves learn and what they can teach.

The Centre arranges displays of posters and publications at shows, fairs and libraries. The aim is to make the public more aware of issues which in many cases are only dealt with superficially by the press. The aim is to have the viewers ask themselves questions and seek solutions, not just to accept a ready-made solution.

The Centre is administered by the Conservation Council of S.A.(Inc.) which receives grants from the Commonwealth and State Governments which meet less than half the costs. The large part of the cost is met by donations, sales of publications and the work of volunteers. The Conservation Council of S.A. (Inc.) is an umbrella organisation of societies and associations which number 34 and which all have conservation as an aim in their constitution. The Council was formed in 1971 but it was not until 1974 that the Centre, which also acts as headquarters of the Council, was set up with a Government grant. Thus the Centre can also put enquirers and researchers into contact not only with most State Conservation bodies, but also with national and international bodies.

CONSERVATION

creates jobs



Fraser Island

our beautiful heritage

Department of Environment, Housing & Community Development, Canberra, A.C.T.

ENVIRONMENT CENTRE

The Launceston Environment Centre is funded through State and Federal Grants, donations and the profits of the Centre which is operated by the Centre. Restriction by a reliance on voluntary labour has meant that the Centre's involvement in environmental education has been limited.

The environmental library at the Centre is used by students and the general public. The environmental reorganisation of this library is seen as a project for the near future. The role of the Centre is mainly in terms of providing teachers, other organisations and the general public with environmental information which is not available elsewhere.

The Centre has involved many schools in the Launceston area in attempts to reactivate the INSPECT organisation. Two schools active groups have been established, and one has initiated a recycling project. The Centre has been involved in activities such as these as essential to the development of an awareness of environmental issues and their complexity. It has been found that the cooperation of staff members is necessary if the initial enthusiasm which is aroused is to be maintained. This involvement by teachers has been noticeably lacking in most schools.

In short, we hope to become more involved in environmental education as our resources of money, people and time increase. However this also requires more cooperation from established educational institutions.



NOTES

Car stickers are a popular way of promoting messages. They use various "advertising" techniques and usually urge the action based on a value position.

A few ideas for activities using stickers are:

- What effect does each of the following have on you?
- Which ones are most effective in promoting their message? : Which messages do you agree with?
- Which do you follow?
- Design one of your own using a local issue and the expertise you can find in the English, Art, Science ... departments.
- Use one of these (or one of your own) captions as the title for an essay (encourage lateral thinking!).
- Design stickers to promote the opposite messages to the ones given - remember the messages must have credibility.

IF YOU CAN READ THIS- THEN THANK A TEACHER

ETNS

news summary

Editors: Mari Davis Hilary Boyce

Newspapers scanned

AdelaideAdvertiser AdelaideNews Age Australian BrisbaneCourier Bulletin
CanberraTimes DailyTelegraph DailySun DailyTelegraph FinancialReview
GeelongStar HobartMercury MelbourneHerald MelbourneSun News-
Pictonal MelbourneTimes NationalReview NationalMiner NationalTimes
NewcastleMorningHerald Sun-Herald SundayTelegraph SydneyMorning-
Herald WeekendNews WestAustralian

Classifications

BR = book review E = editorial F = features I = interview L = letter
N = news item NF = news feature plus = illustrated
The column length of text is given in centimetres for articles longer than 15 cm.

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a fortnightly summary of Australian views
on environmental issues

Centre for Environmental Studies University of Melbourne Parkville 3052 Tel. 3451844 Extn. 6427



NEWSLETTERS

Whilst Newsletter No. 3 brought a favourable reaction, it didn't bring any spontaneous articles, cartoons, words of wisdom, etc. The editor's stock is running low. Please don't be put off by the proposed themes - they are meant as a focus for part of, but not the whole of, each newsletter. No. 5 will be rather thin unless you can contribute - deadline is 10th February - holidays to do it in etc. ... Look forward to hearing from you.

Back issues of Newsletters 1 to 3 are no longer available (despite several reprintings). Subscription for 1978-1979 (approx. 10 issues) is \$3, or an exchange newsletter. Send to Environmental Education Project, Wattle Park Teachers Centre, 424 Kensington Road, Wattle Park, S.A. 5066, (and make cheque payable to CDC - Canberra).



LAND RIGHTS

JUST MIND



DON'T
SPEND
THE
EARTH!

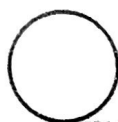
Safety First



GOING HOME OUR TIGER

Support Diogenes

WHAT DO YOU DO
IN CASE OF
A NUCLEAR ACCIDENT.



POWER WITHOUT PURPOSE



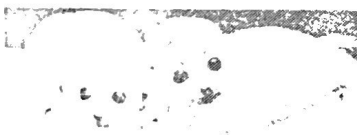
KISS YOUR CHILDREN
GOOD BYE.
ST. P. HANDY MINING

Save the Torgens

SAVE THE TORGENS

SAVE THE FRANKLIN

Tasmania's last wild river



SAVE THE SEALS

support Greenpeace



WORLD HERITAGE.

PRODUCED BY THE TASMANIAN WILDERNESS SOCIETY



E-DAY
JUNE 5



SAY NO
TO A
NUCLEAR
WORLD

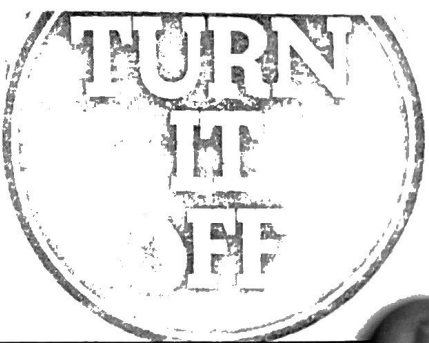
THE GORDON RUN FREE



SAVE THE WHALE

I SUPPORT
WILDERNESS

WOODCHIP
FOREST RIP-OFF



Industrial Organisations

THEIR ROLE IN E.E.

Many organisations have produced films, posters and booklets of an educational nature. In recent years some of these have had an environmental component. However, the majority of articles below is a result of a lack of the author's time to establish contacts and to review materials rather than an absence of interest in environmental education by industry. Reviews of such materials are most welcome, especially of materials that are readily available to the public, such as the Australian Mining Industry Council's "Mining and the Environment" and "Nuclear Electricity".

Australian Coal Association

100 Victoria Street, Sydney • G.P.O. Box 2668, Sydney, 2001 • Telephone 27 7744
 100 Victoria Street, Sydney • G.P.O. Box 2668, Sydney, 2001 • Telex 44 27479

Make no mistake, coal will play an increasingly important part in all our lives. It is a source of low cost energy. It is vital in the manufacture of that most basic of all industrial metals, steel. And it is the raw material for a wide variety of goods.

Coal is also important to all Australians as a source of export income. Without that revenue Australians would be appreciably worse off.

Of course the more coal is mined the more we must be concerned for the effect of this mining on the environment. The coal industry encourages this concern and considers that it has an obligation to make available information about its environmental activities and its environmental expertise to educators. Young people must have this information if they are to study objectively the need for balanced resource management.

Material available from the Australian Coal Association, G.P.O. Box 2668, Sydney, 2001, comprises a 16-page "Coal Fact Book", wall charts and a pamphlet entitled "Coal and the Environment".

Sets of 36 slides with teachers' notes have been distributed through the Education Departments to High Schools in Queensland and New South Wales, and limited numbers of these sets are still available for schools.

A 10-minute 16mm film "Coal Facts" has recently been distributed to the Education Departments in all States. This film is available on loan from their respective film libraries.

The Australian Mining Industry Council, P.O. Box 363, Dickson, A.C.T. 2602, issues a booklet "Mining and the Environment" which contains a section on coal.

In addition more specific information is often available from individual companies such as Uta Development Company, G.P.O. Box 1389, Brisbane, 4001.

Packaging Council of Australia

Telephone: 696 4278-9

370 St Kilda Road,
 Melbourne,
 Victoria 3004



A variety of educational services is provided by the Council; it includes:

- "Envirofacts" - detailed information sheets on Packaging and the Environment, Solid Waste, Litter, Recycling, and Steel.
- Newsletter - covering litter control, recycling moves, legislation etc. \$12 p.a., bimonthly.
- Recycling Resources - a game for primary to lower secondary children.
- Films - "A Place to Begin", "The Realities of Recycling" - 38 min; "Resource Recovery is..."
- Slides - "Waste Not" and "The Packaging Story".
- Library - comprehensive, with loan materials.
- Speakers - if sufficient notice is given.

Contact is M. E. de Kretser, Information Officer.

Government Organisations

THEIR ROLE IN E.E.

I had intended to spell out the praises of the Department of Environment, Housing and Community Development, which has been vitally involved in E.E. through "Habitat", World Environment Day, and information dissemination. However, since December the Department has been disbanded with the Environment section moved to the Department of Science. "This in particular will enable the Government's scientists and advisers on the environment to work more closely together to give effect to the Government's commitment to preserving and enhancing Australia's environment" (Prime Minister 30.11.78).

The role of the new Science and Environment Department in environmental education will not be clarified for some time but hopefully it will be a significant role, not confined to Environmental Science.

"Managing the Environment" by P.J. Crawford (Ed.) 82 pp., \$2.50, is one of the last D.E.H.C.D. publications. It is aimed at tertiary students and the interested public and covers policy formation in environmental management.

Territory Parks and Wildlife Commission



P.O. Box 204, Darwin
 Northern Territory, Australia 5789

Telephone 22 0211
 Telex Parks AAB5336

The Environment Unit of the Territory Parks and Wildlife Commission is the main co-ordinating agency for environmental matters on behalf of the Northern Territory Government. The role of the Unit has been considerably expanded since the advent on July 1 of self-government for the Northern Territory, when many of the environmental functions formerly under Federal control became local responsibilities. The Environment Unit currently has a staff of three officers.

Environmental Education is considered an important function within the expanded role of the Environment Unit and high priority will be given to the encouragement and co-ordination of public awareness programs. Schools are the natural focus for stimulating environmental awareness in the community and particular attention will be given to programs for widening both student and teacher knowledge of environmental matters. Wherever possible, talks in schools by appropriate persons from within the Government will be arranged and assistance given to teachers planning school projects and field trips on an environmental theme.

Within the wider community, encouragement will be given to local environment organisations and groups in fostering environmental awareness. The Environment Unit will also be contributing more directly through such avenues as World Environment Day activities, and environmental publicity in general.



"Let's enjoy it while we can - this is where they're going to build the new Leisure Centre."

National Parks and Wildlife Service

11-13 Kent Street
Sydney

The Service has an environmental education philosophy but at this stage it has not been formulated into a policy. The policy is currently being prepared.

Over the last four years the Service's major input to E.E. has been inservice courses for teachers. These courses have lasted from two to nine days and have involved teachers in program ideas and methodology of field studies.

As the Service protects wildlife throughout N.S.W. we have a broad interest in land use throughout the State. One course, held in the north-west of N.S.W., investigated the elements of a habitat in a national park and compared a similar, though managed, forest in a state forest as habitat for wildlife. While wildlife was a theme in the ensuing study we also investigated the energy flow in the systems and the effects on people of the following land use:- national park management, timber industry and forestry management, cotton and pastoral industries and mining. These uses of land find an economic and social focus in the towns, and methods of studying towns were investigated.

There has been pressure on the Service to broaden its work into the general community. While publications have some undirected effect on the community we have recently begun weekend programs to improve our contribution. Two of these have been held, one in Royal National Park, the other in Boudi National Park on the Central coast. So far the courses have been one day in duration with the visitors presented with 2 hours (morning tea in between) of talks on basic ecological principles, how the landscape has come to look as it does, and the Service's management of the park. All this is followed by a walk and we try to reinforce these ideas as we go. There's great potential for running a series of days which build onto previous courses and develop more depth. That is to come.

Another avenue of work will be with a "junior ranger programme". This will ultimately provide young children with the opportunity to be involved in an ongoing environmental education program.

The Service has provided facilities for two field studies centres on its land. One is at Royal National Park, the other at Muogamarra Nature Reserve. The Department of Education has supplied a teacher to each who holds classes for the Department's schools as well as contributing to inservice training of teachers.

At this stage the Service has only one person employed to direct attention to environmental education and that has to fit in with editing responsibilities and programs for honorary rangers.

New South Wales Government

Health Commission of New South Wales

Wincombe House,
9-13 Young St.

The Health Commission of New South Wales has statutory powers, authorities, duties and functions under the Health Commission Act, 1972, for the purpose of promoting, protecting, developing, maintaining and improving the health and well being of the people of New South Wales to the maximum extent possible having regard to the needs of and resources available to the State.

The Commission in considering the physical, mental and social well being of the population realises the important part played by the multifactorial environmental facets. Although the Commission does not conduct courses in environmental education, it considers that all persons employed in health services should be health educators and should include environmental factors where applicable to the provision of their services. The Division of Health Education is a resource and advisory organisation which provides consultant and information services, professional

advisory research and evaluation facilities and preventive programs of a State-wide impact. The target populations include such groups as persons in isolated communities, persons in industry, farmers and similar persons in country areas who may be subject to environmental hazards.

The people at the work face who would carry out these programs in many cases would be attached to the Community Health Centres and include community nurses, social workers, psychologists, psychiatrists, geriatricians, paediatricians and of course health education officers.

In other fields there are the health inspectors and food inspectors who are responsible for ensuring that the provisions of the Public Health Act and the Pure Food Act are not breached. The former Act covers a range of environmental facilities including housing with special reference to structure, state of repair, overcrowding and lighting, water supplies, nuisances relating to accumulations of water, nuisances associated with insects and animals and the keeping of the latter, and various other facilities and nuisances, particularly where they are injurious or dangerous or prejudicial to health.

The Commission was responsible for the administration of the Clean Air Act, the Clean Water Act and the legislation regarding noise before these activities came under the State Pollution Control Commission. However, the Commission does become involved in these areas where there is a health hazard.

Department for the Environment South Australia

Ansett Centre, 150 North Terrace, Adelaide

Postal Address:
Box 667, G.P.O.
Adelaide 5001
Telephone: 212 5555

In Reply Please Quote:

The South Australian Department for the Environment was established in 1972 and is responsible for a wide range of environmental matters. These responsibilities include the management and development of the State's national parks system, administration of wildlife laws, management and protection of the South Australian coastline, noise control, beverage container legislation, aboriginal and historic relics preservation, heritage legislation, the use of satellite imagery to undertake a resource inventory of South Australia, the assessment of the environmental implications projects and research related to environmental protection. The most recently formed division of the Department is responsible for co-ordinating the Government's environmental policies and programs and the development of an information service within the Government and the community.

The Department needs to provide information on a range of environmental matters to a wide cross-section of the community. The provision of information, however, is only a first, but vital, step in the development of a more environmentally aware community. The environmental education movement within the school system is an essential step in the development of an environmentally literate community of the future. The Department supports in principle the development of environmental education across the existing school curricula. The prime responsibility for the development of an environmental emphasis and environmental topics within the school curricula lies with the educational authorities. The role of Government agencies, such as the Department for the Environment, should be in the provision of appropriate information. With the increasing demands for information services generally this must be done in an efficient and co-ordinated way to make the best use of existing staff and facilities. Co-operation with curriculum groups and groups preparing material for use in schools is one of the most appropriate ways to foster such co-operation and the Department welcomes approaches from such groups.

With the development of an information service within the Government for the general community the provision of information on environmental matters to schools should increase. A new series of basic information sheets known as the "Green Guides" is due to be released early next year. Of particular interest to teachers will be the development of the Native Fauna Zone of the Cleland Conservation Park into a world class display of Australian native animals and a prime site for environmental education.

Ministry for Conservation

Environment Protection
Authority of Victoria

240 Victoria Parade
East Melbourne, Victoria
Postal Address: Box 41
East Melbourne, Vic 3002

Towards the end of the 1960s there was a marked upsurge of community concern that development of Victoria's resources needed to be balanced by environmental safeguards. This concern culminated in the adoption of the Environmental Protection Act 1970 by the Victorian Parliament.

The Act established a three man Authority to assume overall responsibility for the protection of Victoria's environment, basically through the prevention of pollution. The Act encompassed land, water and air quality, together with the control of noise and litter. Thus it covered a wide range of environmental concerns. This new Agency was intended to replace the pollution and environmental noise control responsibilities vested in other Government agencies, and to provide a focal point of responsibility for environmental quality protection.

Later the E.P.A. became an agency in the Ministry for Conservation which was established by the Victorian Ministry for Conservation Act in 1972. This Ministry gathered together a variety of agencies with responsibilities in respect of natural resources including Fisheries and Wildlife, Soil Conservation, National Parks, Land Conservation Council and Port Phillip Bay Authority. The link between these agencies was the need to provide a healthy environment on the one hand and to provide for the life systems dependent on the environment, on the other. Of course, other agencies such as the Department of Health continued to exercise environmental responsibilities within their spheres of jurisdiction.

The primary thrust of the Environment Protection Act is the prevention of pollution. The main mechanisms to achieve this goal are the development of State Environment Protection Policies designed to be established for segments of the environment, e.g. Port Phillip Bay. These policies set out the beneficial uses of the segment of the environment needing protection from adverse quality factors and the criteria necessary to protect these uses. Policies are adopted by Government after they have been put out in draft form for public review and comment. Policies have the effect of defining what is or is not pollution and what are or are not acceptable noise levels. Policies for air, water and land are supported by a system of licensing the discharge of wastes to the environment to prevent the occurrence of pollution. The E.P. Act contains provisions for the involvement of the public in this licensing process to ensure that the views of affected parties are considered.

The E.P. Act was considered to be innovative in 1972 in that it contained significant statutory provision for public participation in the mechanisms to achieve a healthy environment through the prevention of pollution. Since then a number of other Acts have been framed similarly.

Many individuals in the community and groups of citizens wish to participate in the decision process affecting the environment in which they live. However, this participation, to be effective, should be supported by an understanding of the environment and the delicate web of interacting systems that sustain the life forms that co-exist in the environment.

The E.P.A. has a responsibility to aid the community through education and information services. Sometimes environmental decisions involve trade-offs. For example, when a project is considered to have far greater value to the public than the natural environment it will displace. Society must be able to appreciate the environmental cost of not controlling pollution. Sometimes irreparable damage can be done to the receiving environment and such a cost could be unacceptable to the community. Thus it is important to understand the effects of pollution, noise and other environmental adversities.

This educational process starts in the schools, where the emphasis should be on gaining an appreciation and understanding of the environment. This process should be carried through to adults so they can contribute to community participation in environmental decision making.

Education is a vital factor in the achievement of our aims. An uninformed public is ill-equipped to cope with problems of pollution, noise or other environmental degradation. Some of the educational materials produced by the Ministry are:

- "The E.P.A. game" - a simple look at your lifestyle.
- "How to stop smoking your neighbour out" - compost and recycle.
- "Keeping the peace" - noise pollution.
- "The Environment Protection Act - How does it affect you?"
- "Measuring Melbourne's Air Pollution - a Teachers Guide.
- "Recycling in Victoria, 1977" - encouragement to do so.

SOIL CONSERVATION AUTHORITY

225 Collins Street, Melbourne, Victoria 3001. Telephone 311 1111

The Soil Conservation Authority of Victoria has traditionally placed an emphasis on education. As soil conservation is essentially an ecological problem this education is, perforce, environmental education.

Although the SCA has long been involved with schools this involvement became more intense with the secondment of a teacher from the Victorian Education Department. At present the following range of services and materials is offered to schools.

In most rural areas SCA staff conduct excursions for local schools. Metropolitan schools are encouraged to use excursion kits prepared by the SCA but which do not require SCA personnel. But there are 2 excursions conducted by the SCA which are available to metropolitan schools, viz. Parwon Valley and Woodstock.

The SCA conducts teacher inservice education courses analysing various environments and their use. Recent courses have placed emphasis on equipping teachers with techniques of enquiry used in environmental education. Other courses provide teachers with the skill and confidence to use the excursion kits.

A range of classroom materials including booklets, pamphlets and a slide set, are provided by the SCA.

Most of these materials are free and are disseminated to schools by the seconded teacher, who also provides information on contacts, references and teaching activities in environmental education.

Overall the role of the SCA has been to assist and encourage environmental education in schools through the services outlined above and by fostering projects such as the one developing environmental education resources in the Eppalock catchment.

ENERGY

Statutory bodies such as energy authorities are becoming increasingly involved in E.E. as they realize the money to be saved by encouraging the public to conserve energy. Both the S.A. and Victorian electricity authorities have launched electricity conservation campaigns. C.S.I.R.O. has done much research in the fields of energy in housing and agriculture. They have recently built a low energy house based on an A.V. Jennings design. Their publications are numerous, ranging from technical reports to layman's magazines such as "ECOS", "Rural Research" and "Scifile", and books such as "Principles of a Balanced Land-use Policy for Australia", E. Hailsworth; "Energetics of Agriculture and Food Production", Gifford and Millington. For details write to C.S.I.R.O. Editorial and Publications Service, P.O. Box 89, East Melbourne, Vic. 3002.

A new bimonthly bulletin on solar, wind and related technology, "Solar Focus", lists government policies, research development, new products, publications and meetings in the energy field, e.g. it reports on Melbourne University's energy conservation campaign which hopes to reduce consumption by 10% (and save \$100,000!) in 1979. Subscription is \$35 from P.O. Box 45, South Yarra, Vic. 3141 (your friendly energy authority probably subscribes!).

SMALL SCALE GRANTS FOR ENVIRONMENTAL EDUCATION

Of the 75 applications received for round 2 grants only 27 were approved by the management committee as fitting the criteria outlined in newsletter No. 1. To date, 20 of these have been funded, covering the following topics:

- : Interaction with the local environment - Yr 11-12 Sc., Geog.
- : Hydrology: an individualized maths. unit - Yr 9-10.
- : Visual and Mathematical aspects of the human environment - Yr 4-8.
- : Humanity and Environment - Yr 8-11 integrated.
- : Children's Environmental Fiction - K-7.
- : Studying the local urban environment - Yr 9-10, Hist. Geog.
- : Language development in Environmental Education - Teacher.
- : Environmental Education and the Art/Craft teacher - a Yr 7 course.
- : School buildings - conserving energy.
- : A solar conservatory house - Yr 10-12, Tech.St., Home Ec.
- : Environment week festival - community involvement, activities.
- : Environmental economics - Yr 10-12, based on Australian case studies.
- : Environmental Studies around the school - Yr K-6.
- : Streets - observation starter book - Yr K-6.
- : Walmit divided - simulated township decisions - Yr 6-9, integrated.
- : Imagination and environment - role playing, decision-making - Yr 1-7.
- : Primary Environmental Education Project - approaches to local environment.
- : Environmental dance/drama activities - Yr K-12.
- : Inservice in field E.E. - Yr K-2.
- : Curriculum development in E.E. in a small school - Yr K-7.

Many of the other applications were felt to be worthy of funding and the Project Director is currently looking for sponsors. All suggestions welcome.

ENVIRONMENTAL SCIENCE FOR K-2

Dorothy Pearson, Armidale, N.S.W.

Can you envisage teaching five to seven-year-olds basic ecological concepts? Can you imagine such teaching being based upon experiences out-of-doors at places within a few minutes walking distance of the children's own classrooms? Well, that's how I interpret environmental education for K-2 children.

An example of such a program is one that I led recently at Guyra, N.S.W. The class began with shadows, considered their existence (previously unknown to many of the children!), shape, position, edge and density; this led the children to an awareness of daily changes in the position of shadows, to an awareness of the difference in northern and southern aspects, and of the role of light in plant growth, as witnessed, for example, by the lack of plants in dense shadows. This group's program was based upon the *ecological concept of interaction* - here it was the interactions of plants, of light, and of shadows and time that formed the basis of their activities. It led to another program on the ecological interactions of animals and natural litter and of animals and rocks: i.e. the program was on animals and shelter and involved the establishment and documentation of compost heaps and animal gardens.

Then it was planned that another class was to develop plant community maps of the nearby grounds. On their first class to the out-of-doors, the children spoke of seeing roads, fences, telephone posts, buildings and cars in a car park: they had to be directed to see and speak of the bare soil and green plants at their feet, the trees near the fence and the slope of the place where they stood! So, before any significant field work could be done, the children had to be taught to see and thus to differentiate the general smear of things that is often all that is seen of the natural world out-of-doors.

REMEMBER: "A Journey of a thousand miles starts with a single step." Chinese Proverb

So, for example, they learnt that the so-called "grass" on their playing area was in fact composed of many vastly different plants. Their language necessarily had to develop as their observation sharpened: a plant with serrated leaf margins became their "in-and-out plant"; a plant that surprised one child by being spongy when pressed became their "spongy plant"; sometimes I chose the language and then we found a "dissected leaf plant". So the *variability and similarity* in plants gradually became apparent - this was our first ecological concept. After this, areas of the grassed field were chosen where there were lots of a particular plant with which the children had become familiar. Hence, through their own experiences, the children were led towards their second ecological concept, that of *dominance*. From there they progressed towards the related concept of groups of plants living together and thus forming a *community* - their third ecological concept.

So, after six weeks of looking, being, feeling, walking, questioning, thinking, discussing and recording both indoors and out-of-doors, specific community plots were staked: these were then to be watched for the rest of the year. Changes in each were to be documented with permanent records in the classroom. Hence, their fourth ecological concept of *change* could be deduced.

I believe that our society needs to develop understandings about the workings of nature's systems and that these understandings, and these alone, must form the foundation stones of the edifice of environmental education. I believe that purely emotive appeals to preserve forests or pick up litter deny our students the opportunity to ever rationally assess man's impact upon his environment. And is not that what environmental education is really all about?



A Fable

ONCE UPON A TIME the animals decided they must do something decisive to meet the increasing complexity of their society. They held a meeting and finally decided to organise a school. The adopted curriculum consisted of running, climbing, swimming and flying. And since these were the basic behaviours of most animals, they decided that all the students should take all of the subjects.

The duck proved to be excellent at swimming, better in fact than his teacher. He also did well in flying, but he proved to be very poor in running. Since he was poor in this subject, he was made to stay after school to practise it and even had to drop swimming in order to get more time in which to practise running.

He was kept at this poorest subject until his web feet were so badly damaged that he became only average at swimming. But average was acceptable in the school, so nobody worried about the duck.

The rabbit started at the top of the class in running, but finally had a nervous breakdown because of so much make-up time in swimming - a subject which he hated.

The squirrel was excellent in climbing, until he developed psychological blocking owing to flying class, where the teachers insisted he started from the ground instead of from the tree-tops. He was kept at attempting to fly until he became muscle bound and only got a C in climbing and a D in running.

The eagle was the school's worst discipline problem for in climbing class he beat all of the others owing to his insistence on using his own method of getting to the top of the tree used for examination purposes in this subject.

At the end of the year, an eel who could swim well, run a little, and who had passing grades in climbing and flying received the highest average in the school and was made valedictorian.

The gophers, of course, stayed out of school and fought the tax levied for education, because digging was not put on the curriculum. They apprenticed their children to the badger and later joined the ground hogs and started a private school.

Plagiarized from an unknown source

