



ENVIRONMENTAL EDUCATION PROJECT

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15 FEB 1984

APRIL, 1979

Why is the natural environment so appealing to people? Thousands of Australians head for it each weekend, while others seek substitutes through gardens, pets, pot-plants and even T.V.

Is it the diversity of stimuli or the different quality of stimuli that continually lures people back to nature? Is contact with nature part of our "genetic estate"? Desmond Morris presented the case for such a belief in *The Naked Ape* in 1966. Certainly many Australians have been moved to express their feelings about the landscape and their hopes for its preservation. This newsletter looks at attitude development towards the natural environment through literature and art.

Urbanites, do not be dismayed by such adulation of things natural. Next newsletter is your chance to tell readers why "manscapes" are also suitable for usufructing. Write in.

LETTERS TO THE EDITOR

"Dear Sir - I'd like to comment on values education in reply to newsletter No.3. The Christian belief that man was made in the image of God has made man arrogantly decide that, having dominion over the animals, he may control all natural resources for his own purpose. He's conveniently forgotten some New Testament references to the importance of other creations! The youngest child can be shown how beautifully adapted every creature is to the part it plays in the whole ecological scene. Eventually man will be seen as a link in a total environment. We won't have High School students stating, "Of course we should kill every shark along the coast, so that surfing would be safe at any spot". ...

We need to change the system of making decisions in terms of economic values. In three years of sitting in on local mining hearings I've perceived a changing emphasis on the matters to be considered before a lease is granted, but invariably the magistrate's decision will be influenced by the anticipated economic value of the project. ...

Eventually we need to get the message across that even the man who owns land really holds it in trust for future generations. The care of our world and its resources is an individual responsibility each of us is obliged to accept. We must feel answerable to future generations for what we allow to happen to it."

W. A. Dove (Qld.)

"Dear John - I was most interested in your recent newsletter. While much of the same was trotted out again, I was impressed with David Stokes' article

(continued on p. 2)

National Project Director: John H. Smith



A C.D.C. funded project.

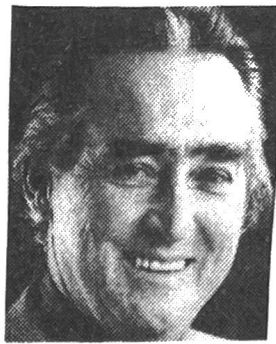
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THE ENVIRONMENT :

AN AUTHOR'S APPROACH

Colin Thiele

Director
Wattle Park Teachers Centre
S.A.



The history of literature abounds with examples of stories and poems that have stirred people's hearts. Very often, having been deeply moved, such people have then changed their minds, their attitudes, their "values". A simple story such as "Uncle Tom's Cabin" shook a whole nation on the issue of slavery. "The Marseillaise" fired French nationalism afresh. And it was no accident that Rousseau, wishing to convince his fellows, couched the message of "Emile" in the form of a story.

Emotions are a fact of life. They move in humanity at large. Any educator who ignores them is either crass or blind. The expressive arts work on them and through them constantly. When we see modern South African drama about apartheid, or read "The Gulag Archipelago", or see a film such as "The Chant of Jimmy Blacksmith", or stand before a painting or a piece of sculpture that reveals some aspect of the human condition, we experience with our emotions as well as with our intellects. And out of these emotions - sadness, anger, pity, disgust, sorrow, admiration, compassion - we very often develop or reinforce convictions which affect our future attitudes and actions. Whether we speak plainly and say that we have been influenced by our feelings, or whether we dress in the Educator's new clothes and bow to the "holistic impact of the affective domain", the fact is that we have changed.

I have had some experience in writing about the environment, and I have had a good deal of response from children and adults which indicates that they have often been moved to the point of new insight and new belief. I treasure a letter from a little boy who, having read "Storm Boy" and seen the film, wrote to me in one all-embracing sentence:

"Mr. Thiele, I'll never, never NEVER kill a pelican."

A girl, deeply involved in a story which, she said, "seems like real life to me" went on with the significant post-script, "and I feel as though I am in the story as well".

A Year 8 student in New South Wales admonished me for the fury of the bushfire in "February Dragon". "It needn't have been so vicious," she said. "And to make old Barnacle get burnt, that was horrible." In replying I had to say that unfortunately big bushfires respected nothing - not even human lives.

Some children are hesitant about confessing how deeply they have been moved, like the girl who shyly admitted that when "Storm Boy" had a lump in his throat, "I had a lump in my throat too".

Some critics have considered that my purpose in such books is too overt. I conspicuously set out to teach, they say, and become the "Great Didactic". I accept the proposition quite happily. Frequently I do set out to teach about the environment, but I hope I do not also preach.

I hope the stories entertain, just as I hope that my values and attitudes are shown firmly and clearly. I am therefore heartened when a commentator with the perception and experience of Rosemary Wighton writes:

"There is no need for Colin Thiele to give his readers explicit lectures about conservation ... The hidden persuaders in his prose work most children into a passion of protectionist emotion."

Even when young readers are not wrenched emotionally the story can still present environmental issues as part of their own experience, and so affect their attitudes and decisions.

"You can never escape from civilisation," said a Year 5 boy from Victoria.

-2-

"It makes you think," said another from Queensland. "You tell your children, and they will tell theirs, and so on." What magnificent insight that is from a primary school child - already aware of the march of the generations, and of the importance of transmitting our heritage from one generation to another.

Another boy fixed his sights on the government and its responsibilities: "It might show the Government that all animals should be protected - even snakes and the dingo."

At an older level, of course, there is greater capacity for debate and awareness of options. A Year 10 girl wrote to me at some length about "Albatross Two" and the rampant off-shore oil well in the story: "I was a little annoyed with myself because I couldn't be sure where my sympathies lay - with the fisherman or with the men on the oil rig. The world needs oil badly and I doubt we could survive without it, but we must conserve our wild life also."

Some students, of course, see authors as fair game, or at least as morally responsible for rendering assistance to beleaguered students:

"Could you please write a short (1-2 page) story for my English class on 'What you would do if you had a day to do all you could do to aid conservation?'"

I could go on and on with further examples, but I think the point has been made. In teaching about the environment I consider poetry to be more powerful than polemics, tales to be more effective than tracts.

LETTERS TO THE EDITOR - (continued from p.1)

especially his fourth approach. This is what we at Sturt CAE in Curriculum Studies are attempting to do -

- (1) Look at the overall aims of an Env. Ed. program (R-7).
- (2) Identify basic concepts - mainly from Health, Soc. Studies and Science.
- (3) Identify basic process skills.
- (4) Identify values and attitudes.

Then we look for activities to develop these concepts, skills and attitudes through values clarification and through the child's personal, classroom and outdoor environments.

While we don't talk about Env.Ed. as a discipline but as an integrating or unifying approach, it appears to be understandable to the students and they are making some excellent resources in the form of unit boxes.

David Stokes seems to me to be advocating the developed skills approach rather than the selected skills approach. In many courses in our schools we list and attempt to teach all the skills we think the children might need during the year. Unfortunately when we actually need them, the skills have to be taught over again (remember the problems with microscopes!). However, the developed skills approach uses "real world issues" and a teacher then develops those skills which are necessary (depending on the readiness and development of the child). We don't need new materials to develop the skills as we already have handouts, books, lab. manuals, etc. but we do need to use the materials in a different manner."

E.R.Sandercock (S.A.)

"Dear John - Congratulations on your newsletters. They are very interesting and useful and certainly fill a gap as the E.T.A. has published very little on the more philosophical aspects of environmental education. ... I hope the newsletter will continue after the end of this year." P.Biro (Vic.)

Editor's Note - It is intended that the newsletter will finish at the end of this year as the editor's role in this project terminates in December. If, however, readers agree with P.Biro's sentiments, moves would need to be made soon to find a method of maintaining the newsletter.

Correspondence is welcomed.

ENVIRONMENTAL AWARENESS IN THE WORK OF CONTEMPORARY AUSTRALIAN CHILDREN'S WRITERS

Anne Hazell

School Libraries Branch
Education Department,
S.A.



That the landscape has had a stimulating effect upon Australian artists and writers has been apparent since the days of the first settlement. Through the years, Conrad Martens and John Glover struggled to come to terms with new plants and animals bathed in a much stronger light than in Europe; Banjo Paterson and Adam Lindsay Gordon used the rough, untamed landscape as a complement to their rough, untamed characters; Henry Handel Richardson and Martin Boyd portrayed people torn between their love for the European and Australian landscape and culture. Early children's authors such as Ethel Turner and Mary Grant Bruce wrote books in which "bush" settings played a major role although in fact, in an already urbanised society, this setting was totally unfamiliar to many of their readers.

Recently however, Australian children's authors have begun to respond much more positively to their environment, reflecting current trends about such social issues as pollution and conservation. In the following article reference will be made to some of the contemporary children's fiction in which the authors, both overtly and covertly, show their sympathy for their physical surroundings.

The land itself is threatened in Colin Thiele's "The Schnuks", a strongly didactic picture book in which man's disastrous impact upon the environment is explored in both the text and illustrations. Less dramatic but probably of more immediate relevance to this younger age-group is "Keep Out" by Noela Young, whose pleasant picture book tells about a group of city children who convince the authorities to create an adventure playground on an unsightly demolition site. The effectiveness of a more subtle approach in promoting a cause such as conservation is nowhere more apparent than in a comparison between the book "Storm Boy" (also by Colin Thiele) and parts of the film. Throughout the book the Coorong and its flora and fauna emerge as an area worth preserving at almost any cost, while in that section of the film where the dune buggies threaten the area, the subtlety is lost and less impact is made upon the viewer. Motor bike riders who leave a trail of destruction are again the villains in Nance Donkin's "Yellowgum Gil" (a Hamish Hamilton Antelope book) in which a small boy is holidaying with his grandparents in Western Victoria on the edge of a National Park. However the incident with the bikies is blended into Donkin's overall plot.

For older children, a readable, attractive and at the same time informative book on this theme is "Pelican Point" by Sue Couper, who relates in diary form the adventures of a group of children on a camping holiday where once again the environment is endangered by greedy adults. In Thiele's "Albatross Two" an oil rig off the south coast of South Australia threatens to destroy the local fishing industry as well as the fairy penguin population. Both of these novels represent conscious attempts to make their readers aware of the conservation issue, but the sympathy of the authors for the environment in three less didactic novels, "Longtime Passing" by Brinsmead and "Conquest of the River" and "The River Kings" by Fatchen is equally apparent. In these stories, readers are introduced to the Blue Mountains before the devastation of unplanned tree-felling (Brinsmead) and the River Murray before the effects of pollution became so apparent (Fatchen).

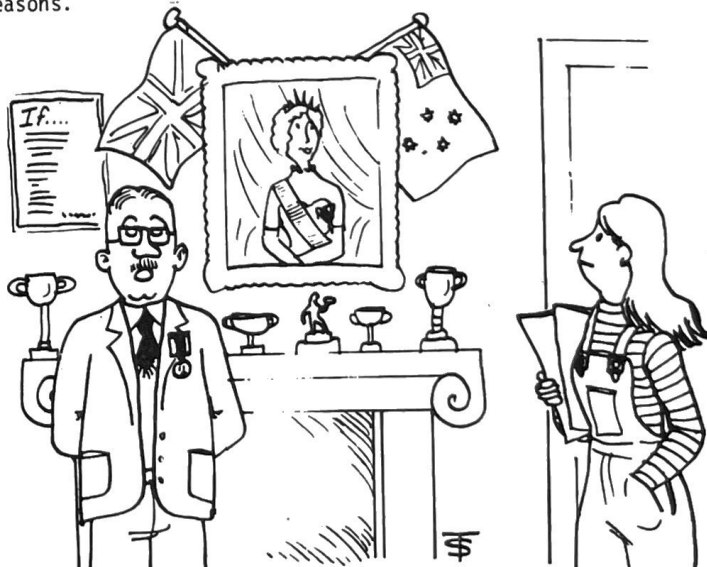
Christobel Mattingly is an author for younger children who introduces the need for conservation into everyday urban life as well as into country living. "Battle of the Galah Trees", "Show and Tell" and "Lizard Log" succeed in making children aware of the balance of nature while at the same time encouraging them to examine and

appreciate various aspects. More demanding and horrifying is "The Death of a Wombat" by Ivan Smith, whose simple text is underlined by Clifton Pugh's magnificent paintings which show a bushfire, started by a bottle which has been carelessly left behind, racing through a helpless animal community. While some destruction may be the result of carelessness and ignorance, other birds and mammals are subjected to deliberate destruction as is the case of the mutton birds on an island in Bass Strait where their annual migration provides the background for Mavis Thorpe Clark's novel, "The Hundred Islands", in which a family is split because of the father's and son's conflicting views about the traditional slaughtering of these birds. For those who are out of step with it, such as Socker and Kevin in Joan Phipson's "The Cats", nature itself may appear as a threat with unusual winds, falling trees and feral cats combining to terrify the antagonists.

Paralleling this developing response to the environment has been a growing awareness of the rights of the land's original inhabitants and of the need to preserve their culture. For the first time older children have available to them lively, sensitive stories incorporating Aboriginal mythology from Patricia Wrightson "The Ice is Coming" and "The Dark Bright Water") and Bill Scott "Boori" as well as serious novels which attempt to explain the importance of these beliefs, such as "The Curse of the Turtle" by Thomas Roy. Younger children can appreciate the rich, vibrant colours of the Cape York landscape which are recaptured in the beautiful picture books, "The Giant Devil-Dingo," "The Rainbow Serpent" and "The Quinkins" by Aboriginal artist, Dick Roughsey.

Concern for our surroundings extends beyond the physical landscape and its inhabitants to the gracious buildings erected by our predecessors. Ted Greenwood pleads for the conservation of a charming old office-building sandwiched between sky-scrapers in his picture book, "Joseph, Lulu and the Prindiville House Pigeons", while a frantic effort to save some lace ironwork is the central activity of Graham Jenkin's hilarious poem, "The Famous Race for Wombat's Lace". Older children will identify with Ruth Park's heroine in "Callie's Castle", where the girl's need for privacy leads to the restoration of a long-disused area of her family's Sydney home. To the heroine of Thiele's "The Hammerhead Light", the demolition of the old lighthouse represents the end of her childhood as she realises that not all adults are as loving and supportive as her family and the old man to whom the lighthouse is home.

These then are a few of the books available at present to help Australian children become aware of their environment and therefore to act responsibly towards it. In some, the author's message is only too obvious; in others the conservation theme is skilfully woven into stories which may attract children's attention for other reasons.



"... AND I'M AFRAID WE SIMPLY CANNOT COUNTENANCE THE WAY YOU FORCE YOUR OWN OPINIONS ON THE CHILDREN, MISS SMITH."

THE ENVIRONMENT AND ART

TEACHING

Les Johnson

Art Consultant,
Education Department,
S.A.



There is a contradiction in talking of the environment as a special stimulus for artistic endeavour. If the environment is "*surrounding objects and circumstances*" (Shorter Oxford Dictionary) and our mental processes use as raw materials the sensations and perceptions of the world about us then all artistic expression, including that involving imagination and fantasy, derives from interaction with the environment. Sensation is of the environment and is a necessary condition for all artistic activity. Thus, discussion of the role of the environment in art teaching is not a matter of whether or not but rather of the quality of experiences of the environment. An essential element of art teaching therefore involves teaching students how to develop their awareness of that which is sensed, particularly visually. Further the opportunity to reflect upon sensation is important and often neglected.

To consider a particular example let us examine art education as a part of outdoor camping activities for children at a suburban school. Let me hasten to point out that I am not succumbing to the almost automatic assumption shared by many urban teachers that "environmental education" involves distant and different environments rather than that of the home, school, suburb and city. The example is chosen because the issues seem clearer in this setting. Anon, I shall relate the example to the broader implications of environmental awareness generally. The scenario is a large suburban secondary school. The class teacher of a group of 35 Year 10 students decides to conduct a five-day under-canvas camp for the students in the vicinity of a remote ocean beach. The purpose is to extend the children's learning opportunities in their usual subject areas. Various of the subject teachers agree to participate. Rich opportunities for geography, biology, history (there are shipwrecks and aboriginal sites involved) and social studies are quickly identified. It is assumed that equally obvious opportunities exist for the art teacher.

Several different possibilities present themselves for devising a program for the week. One approach could follow a line of reasoning akin to:

- The students have learned painting and drawing techniques.
- The camp site is "scenic".
- Transport paint, paper, drawing implements, etc. to the site.
- At predetermined times students exercise their acquired skills to produce paintings and drawings.
- The outcome is seen in terms of one or more completed drawings.

Although such a program can and has resulted in successes for some children my experiences of such planning are not encouraging. The actuality often entails a group of students uncomfortably using materials and techniques developed in the specialised confines of the school art studio. Sand embroidered paint, the unplanned markings on wind-flapped paper, and possibly worst, the confinement for the period of production all serve to disenchant the students.

An alternative, and I would suggest ultimately more satisfactory approach, could be structured as follows:

- The site provides the opportunity for new and dramatically different sensory experiences for most of the students.
- Copious time is allocated for students to see, feel and hear.
- Planned devices can heighten sensory opportunities. (Consider "colour hunts" - "touch excursions" - "worm's eye views", etc.)
- Opportunities to reflectively experience the totality of the surroundings are planned. (Consider solitary

walks through a dune system - perhaps a "follow the footprints" device with students walking at two or three minute intervals under unobtrusive but watchful supervision to avoid the possibility of lost students).

- Time is allocated for didactic discourse on experiences - perhaps around the campfire at night.
- Impressions are recorded by means of sketch books, writing and importantly by photography. (The use of a camera by students offers numerous advantages. Many images can be recorded quickly and simply. Changing light can be recorded. Using the camera view-finder helps to define the field of vision. Photographs can emerge as art forms in their own right. Students can be equipped with simple cameras for black and white photography cheaply. Skills in using equipment are readily acquired.)
- The immediate outcome is in the store of sensory impressions aided by the tangible records of the camp.
- The long-term outcome for art is in the products of studio work over succeeding weeks or months.
- The ultimate worth of the artistic outcome is in terms of the acquired sensitivity toward and understanding of the environment experienced.

The above is a simplistic black vs. white view of two approaches to art activities as a part of outdoor education. Approaches to using craft activities and the attendant implications with regard to using natural resources, ephemeral sand sculpting, etc. have been left aside. The message is essentially that any planned interaction with the environment as it relates to art education can be conceived and implemented in terms of making works of art or as works of art arising from reflection upon experience. The latter view suggests that the processes can be categorised as an interaction of at least the following:-

to OBSERVE
EVALUATE
UNDERSTAND
REFLECT UPON
REFORMULATE
COMMUNICATE

If the example above is translated to the total process of involving students in making art it becomes clear that, whether they profess it or not, all art teachers are involved in environmental education. The example holds in the case of students painting from still life in the classroom, creating images from their daily life and even in a more indirect way when they fantasise.



THE STIMULUS OF NEW FRONTIERS

During 1978-1979 the Biology staff of Darwin High School, in conjunction with the Territory Parks and Wildlife Commission's Wildlife Research Unit, have conducted a regular series of weekend camps for students doing Years 11 and 12 Biology.

These camps have been conducted at a particular site that is fairly unique in the top end of the Northern Territory in that it contains several types of rainforest and has only recently been disturbed by buffalo which are a major destroyer of many of the habitats of the area.

Last year we had about 60 different students and 20 staff members involved in carrying out a series of experiments on the flora, fauna and physical factors that interact in these systems. It has given our students an opportunity to participate in "real" research (all of our data are used by the Wildlife Research Unit) and also shows students that a scientist is not someone who sits in a laboratory, wearing a white coat, surrounded by expensive equipment. Another role of this program is to provide students with work experience.

(continued on p.7)

STATE NEWS

AUSTRALIAN CAPITAL TERRITORY



Environmental Education. What is it? As a Curriculum Advisor in Geography and Environmental Studies this is, perhaps, the most common question asked of me.

One of the things which distinguishes the curriculum taught in ACT schools from that taught in schools in other Australian States is that its development is entirely school-based. That is, teachers have the freedom to develop their own courses of study at all levels - there is no prescribed course in any area of the school curriculum. ACT education is compartmentalised in Secondary Colleges (Years 11 and 12), High Schools (Years 7 to 10), Primary Schools (Years 1 to 6) and Pre-schools.

Five of Canberra's six Secondary Colleges offer a course entitled Environmental Studies, the other offering a course called Environmental Science. The six Colleges offer these courses with the Science, rather than the Social Science faculty. All courses have been accredited with the ACT Accrediting Agency and all have received Tertiary Entrance approval.

With respect to the Years 7 to 10 High Schools, four have courses entitled Environmental Studies, five have units of Environmental Studies incorporated in Geography courses, four have units of Environmental Studies incorporated in more general courses such as Humanities and Social Science, one has a unit of Environmental Studies in a Science course. Only one High School has no courses or units pertaining to Environmental Education. Of the fourteen High Schools, two offer courses at Year 7, five at Year 8, eleven at Year 9 and eleven at Year 10.

All courses and units of work are electives and have been examined by their High School's curriculum committee, approved as part of the Education Program for that school and forwarded to the Schools Office where it is ensured that they conform to the criteria decided on by the ACT Schools Authority.

As closely as it can be ascertained, at least 50% of the 65 ACT Government primary schools either dabble in or teach quite extensively elements of Environmental Education.

Peter Hobbs

SOUTH AUSTRALIA



Many schools are taking initiatives in developing programs in Environmental Education. These range across the full spectrum from small scale activities in awareness and sensitivity to a total R-7 curriculum developed against an environmental education framework.

There are many different foci for the developments. In the R-7 area these tend to be through school projects, keeping plants or animals; an increased use of the educational services at the Zoo and Botanic Gardens; an integral part of the regular curriculum; maximum use of Arbury Park Outdoor School; an increase in out-of-doors activities which in some instances involves the use of closed schools as camp schools.

In the 8-12 area the subject specific outdoor activities continue to develop; outdoor education in the general sense is being taken seriously by several schools; the users of school camps, standing camps and excursions place

more emphasis on environmental concerns; INSPECT activities are coordinated by the Conservation Council; senior courses in Environmental Studies and Natural Resources Management as well as topic emphases in traditional subjects offer a particular focus for senior classes.

A number of teachers have been given scholarships to undertake outdoor education diplomas.

The development of schools grounds with the initiative from within the schools themselves or through the Directorate of Educational Facilities has resulted in some amazing transformations.

As yet there is no coordinating group for environmental education but the wheels are being put into motion!

Lester Russell

TASMANIA



The Tasmanian Education Department accepts the need for environmental education but believes this should take place within the existing curriculum, except at upper secondary level where it may be studied as a separate subject. At other levels environmental education is seen as interdisciplinary, involving science, social science and outdoor education.

H.S.C. Level (Grades 11-12)

Students may study "Environmental Studies" at either level 11 or 111 but this subject has not as yet been approved for matriculation purposes by the University of Tasmania. The syllabus has evolved from the Victorian H.S.C. "Agricultural and Environmental Science".

In 1978 a total of 215 students in all seven secondary colleges in Tasmania studied H.S.C. Environmental Studies (total H.S.C. enrolment in Tasmania = 3,907).

Junior Secondary Level (Grades 7-10)

Environmental Studies does not exist as a separate subject in any High or District School. The Science and Social Science Syllabuses in Tasmania are environmentally-biased but the extent to which this is so in other subjects is largely dependent upon individual teachers.

Most High Schools throughout the State are involved in outdoor education to some extent and this provides teachers from all subject areas with the opportunities to develop integrated environmental programs.

In 1975 a Committee on Environmental Education consisting of representatives from schools, tertiary institutions, museums and the State Department of the Environment recommended that environmental studies be initiated within the existing secondary science program largely because the science syllabus placed stress on the understanding of the environment (e.g. A.S.E.P. units). The Education Department accepted the major recommendations of this Committee and subsequently recommended that each individual school should develop a distinct overall policy towards educating for the environment. It is difficult to assess the extent to which this is occurring; it would certainly vary from school to school.

Primary Level (Grades K-6)

There has been a most conspicuous return in recent years to studies of the natural environment in the environment. Consequently there has been a great demand for resources such as those produced by the Gould League of Victoria. There is however no Departmental policy on E.E. at this level.

Study Centres

Over the past few years some 6 Study Centres have been established throughout Tasmania in response to a tremendous interest in outdoor education demonstrated by schools.

Down D'Entrecasteaux Channel way much interest is focused on the Marine Studies Centre which is nearing completion. Brainchild of former Woodbridge District High School Science teacher Allister Martin who was a successful applicant for a Schools Commission Innovations grant, the Centre when fully operational will cater for groups of secondary students - sixteen at a time with a teacher - to visit for a day's program of marine study.

Part of the Innovations grant of \$47,250 has been used to construct a jetty and to convert a former scallop-splitting shed on the foreshore to a modern, fully-equipped laboratory, marine museum and study centre which will cater for a wide range of activities including practical fisheries, water sampling, classification of marine animals and plants, navigation skills and study of seashore ecology.

Additional assistance and cooperation has been received from the Tasmanian Government which has generously made available the former Fisheries Development Authority vessel F.R.V. *Penghana* with the provision of a skipper and maintenance and running costs on a long-term basis. Modifications to the F.R.V. *Penghana* have been completed and will enable full use to be made of all marine resources in the area.

Most Junior Secondary Schools in Tasmania now have outdoor education programs and there is an ever-increasing use of residential centres by Primary Schools. The recently terminated "Tagari" project involved Years 7-10 students in extended live-away experiences within urban and rural environments both in Tasmania and on the mainland.

The Education Department, the Division of Recreation and a few individual schools have developed some 14 sites and centres along with resource materials.

Teacher Development

Over the last few years there has been an increasing demand from teachers for inservice training in the use of the outdoors. As a result Teacher Development offered a number of seminars in 1978. In 1979 seminars involving the study of mathematics in the outdoors will be offered.

Grant Godfrey

VICTORIA



A POLICY FOR ENVIRONMENTAL EDUCATION?

Restructuring in the Education Department of Victoria has resulted in the formation of a major curriculum determining body, the Curriculum Council. This Council will have a number of Joint Advisory Committees to advise it in several new and developing areas of the curriculum, in particular those that are inter-divisional in scope. The first to be established is the Joint Advisory Committee on Environmental Education. It is to be the focus for developments in environmental education and will advise the Curriculum Council on policy development, suggestions for projects, production of materials, and the provision of support services. The Committee is being chaired by Dr.G.R. Maddocks, A.D.G. (Curriculum and Planning) and has representatives from the three teaching divisions, Special Services Division, extension services, tertiary institutions and teacher organisations.

The first function of this Committee will be to produce a comprehensive statement on environmental education to assist administrators and teachers in developing programs of study.

Jim Wilson

When we take man as he is, we make him worse, but when we take man as if he were already what he should be, we promote him to what he can be.

Goethe

ASSOCIATIONS

ENVIRONMENT

TEACHERS

ASSOCIATION



Late in 1976 a few graduating Melbourne State College Environmental Science students held a meeting to discuss ways in which they could keep in contact and share experiences and materials. Others interested in environmental education also attended and from this meeting arose the Environment Teachers Association. The membership at the end of March 1979 was around 230. Most members are secondary teachers but we also have trainee teachers, tertiary staff and some primary teachers.

The main aims of the ETA are:

- (1) To promote and foster an interdisciplinary approach to environmental education.
- (2) To promote the professional development of teachers of environmental education.
- (3) To cooperate with other organisations interested in and/or involved in environmental education.

Our main activity is the production of the journal *EINGANA*, twice per term. Its major function is to provide practical materials which are of relevance to the classroom teacher. Regular features include teaching units; information regarding the H.S.C. Environmental Science course; ideas for excursions; information on environmental organisations; reviews, etc.

A monthly newsletter of current environmental events is also published. Other activities include inservice education and participation on various committees concerned with environmental education. We have established a resource centre in the Victorian Environment Centre library. Later this year we hope to publish a range of audio-visual materials.

Although we are a Victorian based organisation, we would welcome members and material for publication from other states. For further information, contact:

E.T.A. c/- 28 Hunter Street, Ferntree Gully, Vic. 3156

Peter Biro
(President)

THE UNIVERSITY OF NEW ENGLAND "ECOFEST"

Environmental education activities form a major component of the Continuing Education programs of the University of New England.



The University's two regional offices at Tamworth (Namoi Region) and Coffs Harbour (North Coast) conduct a joint program titled ECOFEST.

Dorrigo National Park - April 13-16
Mt. Kaputar National Park - August 16-21
Tweed Valley - September 3-7
Macquarie Marshes - September 28-October 5
Wilson River (near Wauchope) - September 29-October 1.

Plant Identification - Pt. Macquarie - June 15-18
Identification of Rainforest Plants - Lismore
- July 6-8
Wild Food - to be set
Principles of Ecology - weekend School in Lismore.

Further details about ECOFEST are available from the North Coast Regional Office of the University of New England, P.O. Box J 200, Coffs Harbour Jetty, 2451.

A black and white sketch of a mountain range. The mountains are rendered with bold, expressive black lines and shading, giving them a rugged, textured appearance. In the bottom right corner, there is a signature that reads "G. KIM".

(from ENVIRONMENTAL CONCERNS
see p.8)

STIMULUS OF NEW FRONTIERS - (continued from p.4)

Some of our results have filled in gaps in the ranges of several amphibians and we have discovered a native mouse that has an unusual chromosome number for that species. Besides these more spectacular results (at least to a specialist) we are also gathering base-line data that may be useful in determining a buffalo management program and future usage of these areas as parks and reserves. This work is at the frontiers of Biology, and the students get a real feeling of excitement and their curiosity grows rapidly.

These trips have also provided many other benefits and a much more meaningful interaction between staff and students than can occur in a classroom situation.

Don Zoellner
Senior Teacher, Science

* * * * *

To learn to dominate Nature we must first learn to obey her.

Sir Francis Bacon

1. A SAND COUNTY ALMANAC - and Sketches Here and There

Aldo Leopold, Oxford University Press \$4.65

This book is about the Conservation Ethic, written when few dared to question the direction of "progress". A book written by a scientist in 1948 and still being reprinted in 1977 must be about more than science. I am sorry I didn't read it in my adolescent years before I opted into one of the "true cultures" for if ever a work defies that division it is Aldo Leopold's. I leave it to the passage below to illustrate the inspiration to be found in the changing rhythms of the earth as seen on Leopold's sandy farm in Wisconsin, U.S.A. The book ranks with the works of American authors Henry Thoreau and John Muir. It's no wonder the U.S.A. was the first country in the world to declare a National Park (Australia was the second!).

Quote from pp.81,82

Pines above the Snow

Acts of creation are ordinarily reserved for gods and poets, but humbler folk may circumvent this restriction if they know how. To plant a pine, for example, one need be neither god nor poet; one need only own a shovel. By virtue of this curious loophole in the rules, any clodhopper may say: Let there be a tree—and there will be one.

If his back be strong and his shovel sharp, there may eventually be ten thousand. And in the seventh year he may lean upon his shovel, and look upon his trees, and find them good.

God passed on his handiwork as early as the seventh day, but I notice He has since been rather noncommittal about its merits. I gather either that He spoke too soon, or that trees stand more looking upon than do fig leaves and firmaments.

The pine's new year begins in May, when the terminal bud becomes 'the candle.' Whoever coined that name for the new growth had subtlety in his soul. 'The candle' sounds like a platitudinous reference to obvious facts: the new shoot is waxy, upright, brittle. But he who lives with pines knows that candle has a deeper meaning, for at its tip burns the eternal flame that lights a path into the future. May after May my pines follow their candles skyward, each headed straight for the zenith, and each meaning to get there if only there be years enough before the last trumpet blows. It is a very old pine who at last forgets which of his many candles is the most important, and thus flattens his crown against the sky. You may forget, but no pine of your own planting will do so in your lifetime.

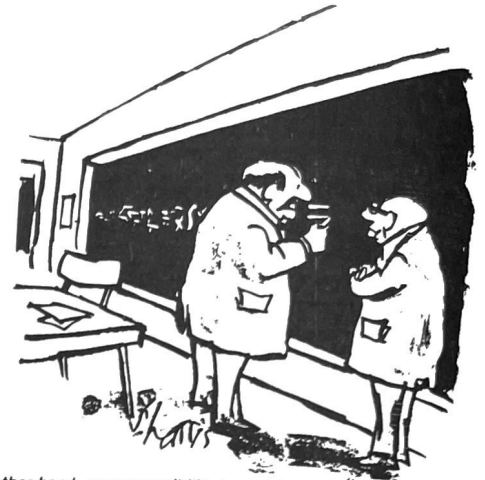
If you are thriftily inclined, you will find pines congenial company, for, unlike the hand-to-mouth hardwoods, they never pay current bills out of current earnings; they live solely on their savings of the year before. In fact every pine carries an open bankbook, in which his cash balance is recorded by 30 June of each year. If, on that date, his completed candle has developed a terminal cluster of ten or twelve buds, it means that he has salted away enough rain and sun for a two-foot or even a three-foot thrust skyward next spring. If there are only four or six buds, his thrust will be a lesser one, but he will nevertheless wear that peculiar air that goes with solvency.

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2. ENVIRONMENTAL CONCERNS : THE WORLD

R. Sweeney, Harcourt Brace Jovanovich, 1977 \$4.27

This book of case studies examines the concept of "the world environmental system" by introducing issues such as the quality of life, growth and limits, the commons, hunger, pollution, equilibrium, and values in action. It attempts to show the relationship between natural resources, political and economic systems and human values not by



"On the other hand, my responsibility to society makes me want to stop right here."

Scientists are concerned about some of the practical uses to which their theories may be put. To you, are the benefits of

technology more important than its possible harm to the environment—or vice versa? Explain.

moralizing but by providing information and then asking questions such as:

"Do you rely on your government to predict such events? Or should everyone be alert to such possibilities?"

or "...For what purpose, if any, would you support clearing lands in the national forests?"

It doesn't dwell on past decisions but rather uses them as a basis for deciding how to look at the future—beginning with the Limits to Growth world model. The views of scientists, statesmen and artists are used to good effect, e.g.

You call your thousand material devices "laborsaving machinery," yet you are forever "busy." With the multiplying of your machinery you grow increasingly fatigued, anxious, nervous, dissatisfied. Whatever you have, you want more; and wherever you are you want to go somewhere else... your devices are neither time-saving nor soul-saving machinery.

What is your reaction to this description?

Despite the size of the task attempted this book seems to have succeeded in providing a highly readable approach to encouraging secondary level students to analyse the world's environmental problems and prospects.

J.H.Smith



Should we use hand-pushed lawn mowers rather than power mowers, iceboxes rather than refrigerators? What would be some of the advantages and disadvantages of returning to the older technologies?

"This is a 1930s replica — a real nostalgia item — economical, nonpolluting, quiet and good exercise!"

3. MAN AND LANDSCAPE IN AUSTRALIA : TOWARDS AN ECOLOGICAL VISION

George Seddon and Mari Davis (eds.) Australian Government Publ. Serv. Canberra, 1976 373 pp. \$10.50

This book is the second publication of the Australian UNESCO Committee for Man and the Biosphere and consists of 28 papers from a symposium held at the Australian Academy of Science, Canberra, in mid-1974. The aim, implicit in the title of the book, is to seek an understanding of how Australians perceive their landscape. The individuality of perception makes this an impossible task and, although some common perceptions can be identified, the contributors mainly concerned themselves with analysing their own interaction with the landscape, historic development of attitudes, planning and decision-making concerning the environment, or some combination of these. In the words of George Seddon, the general editor of the publication, the following questions were addressed:

What there is.
What we have done to it.
What it has done to us.
What we can and should do in the future.

Many contributors described the deterioration in those characteristics of the landscape which they personally value. The deterioration is, at times, clearly attributed to our exploitative behaviour but care is taken to try and clarify the historic reasons for our overkill. To say that the consensus of opinion on the future of the Australian landscape is pessimistic would be unfair. Solutions or partial solutions (compromises?) are often presented. The common concern for urgent resolution of our environmental problems is a clearly identifiable and unifying theme.

It is disturbing to speculate about how much progress has been made towards solving our environmental problems since these people met in Canberra three years ago. The alteration of public attitudes is a pre-requisite to change and one can't help recognizing that our ever-increasing exploitation of the Australian continent has only aggravated the problems discussed in 1976. Positive changes get lost in the shadows of scale.

Unfortunately there were few contributors who saw our compulsory education system as an effective aid in overcoming the processes of environmental deterioration. This was probably just an error of omission.

I would, however, highly recommend this book to educators.

(continued over page)

The perceptions of historians, poets, biologists, engineers, architects, journalists, etc. are worth giving our full attention. We need their guidance and expertise to broaden our own understanding before designing and implementing curricula which use the process of environmental education.

Rick Lambert (Sturt CAE)

4. ENVIRONMENTAL EDUCATION RESOURCE DIRECTORY 1979

Victoria's Ministry for Conservation has just issued an invaluable (to Victorians) guide to environmental pamphlets available from Vic. Government and non-Government organisations. Contact the Education Officer, Marta Hamilton, 240 Victoria Parade, East Melbourne. 3002.

ENVIRONMENTAL EDUCATION RESOURCE DIRECTORY 1979

*** APOLOGIES ***

1. I omitted the names of authors from a number of reviews in Newsletter No.5. They were as follows:

ESSENCE I and II (p.10) - Editor
ENV.ED. TEACHERS HANDBOOK (pp.13,14)
Review 1 - Ms. C.Lawrence (ACT)
Review 2 - Dr. A.Lucas (SA)
MAGAZINES (p.14) - Mr.A.Reid (VIC)

2. The small size of this newsletter print allows more information per page, but some find it difficult to read. Which would you prefer - BIG PRINT and less info. or small print and MORE INFO?

ENVIRONMENTAL EDUCATION IS MOVING -

TOWARDS A CONSENSUS"

This four-page press release from the Environmental Education Project has been sent to most subject associations in Australia. However, copies are available to any subscribers who would like one.



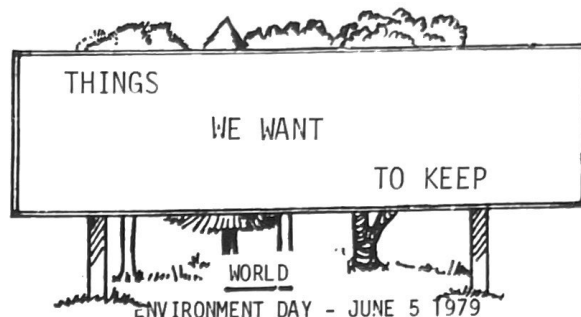
I found vivid joy (in my country boyhood) in the Australian out-doors; but might not my joy have been deeper if somebody had taught me to read the story which time had written upon the Australian earth? My teachers could not help me to use my eyes, because nobody had helped them to use their eyes.

Sir Keith Hancock



What is the use of a house if you haven't got a tolerable planet to put it on?

Henry Thoreau



How can we keep our natural environment? We need unspoilt natural places. We need them for walking, canoeing, ski-ing or climbing far away from the pressures of the modern world. We need them for family picnics and peaceful strolls. We need them for scientific research and creative inspiration.

Australia still has wild and natural places left to choose from. Some countries aren't so lucky. But if we are to keep these places for our children, we have to make sure we don't heedlessly destroy them. We have to conserve large enough areas so we can keep examples of our rainforest, deserts, alpine country and wetlands, as well as our coastal districts, woodlands, eucalypt forests and other environments.

For World Environment Day this year the Department of Science and the Environment is producing a booklet, poster and small exhibition to help make people more aware of the need to conserve the natural environment.



WHAT CAN YOU DO?

. Organise trips to your nearest National Parks and Reserves and find out how they're managed and how fauna and flora are protected in them.

. Hold public seminars, displays and slide shows to look at the natural environmental resources you want to keep in your district.

. Plan trips, talks and competitions for school children based on parks and reserves.

. Talk about what you're doing and why, with local groups, service clubs and the media.

WORLD
ENVIRONMENT
DAY
1979

is more than just a day. It's a chance to stimulate concern and care for our natural environments, a chance to help people understand why we want to keep it and how we can do this best.



Foxfire

In 1966, during his first year of teaching ninth and tenth-grade English in a 250-pupil high school in the Appalachian Mountains of northeast Georgia, Eliot Wigginton helped his students found a quarterly magazine that they named *Foxfire*. As the magazine struggled to stay afloat financially, friends who believed in its educational potential helped him form a non profit, tax-exempt corporation within the school that would solicit donations and grant support. Well-timed grants to that corporation from groups like the National Endowment for the Humanities and individuals like Katherine Graham kept it alive; and now the financially self-sufficient activities that take place under the sponsorship of the Fund are generally acknowledged to constitute one of the most dramatically successful high school projects in this nation.



Foxfire Magazine

Foxfire is a lichen that glows in the dark. It is also the quarterly magazine that remains the cornerstone of our project.

The contents of the magazine are drawn from the indigenous Appalachian culture from which the students who edit it come. Tape recorders and cameras in hand, these high school students fan out into their surrounding communities in an effort to document the once self-sufficient culture that is their roots. Many of the resulting articles are vehicles through which grandparents who remember demonstrate once again, step by step, such nearly forgotten skills as blacksmithing, planting by the signs of the Zodiac, log cabin building, cooking on a fireplace, hide tanning, spinning and weaving, and the making of such once-essential items as coffins, shoes, banjos, flintlock rifles, fiddles, soap and home remedies. Other articles are simply monologues in which fascinating mountain elders recount, through tape-recorded transcripts, their lives, experiences and philosophies.

In the process, the students involved learn not only the language arts skills they must master, but also become engaged in a personal, vital confrontation with their own heritage and their own community.

In 1972, a selection of articles from the magazine was published in book form by Doubleday. *The Foxfire Book* is now well on its way to passing two million copies in print. It was followed by additional volumes (*Foxfire 2, 3, 4* etc.) in what has become an open-ended, continuing series. All royalties from the sale of these books go to The Foxfire Fund, Inc. to underpin the other activities it now provides, in the form of elective courses, within the public high school.

Environmental Studies

Mounting concern over the lack of factual knowledge about and sensitive concern for our fragile and distinctive environment, even among our high school graduates, led us, in 1977, to hire yet another staff member who has created two new courses in our high school.

One of the courses, through extensive activity in the outdoors, introduces the students to native plant and animal species that they may be unfamiliar with, and shows them in graphic detail how these species are interdependent and how their habitats are affected by man. Students also actively participate in ongoing experiments sponsored by the Fund such as work with irradiated American chestnut seedlings, raising native herbs and wildflowers, grafting fruit trees, beekeeping and the testing of various gardening practices.



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A reference library is maintained by the Fund; the text the students use is in the form of a constantly updated field manual that they themselves produce out of their own experiences.

The second course has been created for those students who wish to undertake major independent projects. These projects, tailored to their own interests, may be year-long studies of such areas as water resources in our county and how they are being affected by human use or abuse, unrestricted second home development, or traditional mountain names for native plants as contrasted with their Latin names. Or the projects may take the form of the creation of nature trails, or major landscaping projects that enhance—or repair damage to—the existing environment.

Through these activities, it is hoped that our students will not only emerge far more aware of the needs of our native environment, but also more committed to its protection and enhancement.

Foxfire Records

The Foxfire traditional music program is a new arm of the organization which explores yet another dimension of southern mountain culture. At the core of the program are three elective high school courses:

Appalachian folklore and folklife is a broad-based introduction to Appalachian traditional culture focusing on the local community. A range of both oral and material genres are covered including music, tales, jokes, superstitions, architecture, foodways, and folk medicine.

Foxfire Furniture

For those students truly interested in hand work and craftsmanship, an outlet is now available through the creation of exact copies (pegged together with hand-whittled wooden pegs) of the finest examples of traditional mountain hardwood furniture that we could find. Produced under the supervision of genuine mountain craftsmen, the line available for the general public will include, eventually, some twenty different pieces ranging from rocking chairs to tables, sideboards to corner cupboards, pie safes to meal chests.



Why?

From the first day *Foxfire* magazine began to the present, every activity we have sponsored has sprung out of a realization of the shocking paucity of positive awakening experiences that exist for kids at the high school level. It is our goal, therefore, to eventually implement at every level and in every department of our public high school, at least one solid, positive, experiential, community-based elective course with quality end products in which students can take genuine pride and from which they can derive justifiable assurance of their competence, ability and self-worth. Thus the environmental courses are now linked with the biology department, the magazine and book publishing courses with language arts, Appalachian studies with social studies, Appalachian music and creative photography with the arts, videotape with media sciences, and so on. Future offerings are in the planning stages and will be implemented as soon as feasible.

The emphasis on quality end products is secondary to process, but important nevertheless. It comes from a desire not only to prove to the students that they have tremendous untapped reservoirs of competence, but also from the desire to correct a sad fact of life in our community: a scarcity of jobs forces almost all our graduates to move away to find work. Through the building and shaping of many of our divisions (record production, publishing, furniture production, etc.) and the testing of new kinds of endeavors, some students are actively creating future jobs for themselves here at home.

It's not an unrealistic effort. *Foxfire* magazine began in 1966 with one teacher, 140 kids, and \$440 in donations from businesses and residents of our little community. It has since grown, step by step, into the operation you have just read about. And we haven't even started.