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Forty years
Council of Europe
Quarante ans
Conseil de l'Europe

40 years, but what next?

For nearly 30 of its 40 years of existence, the Council of Europe has taken an interest in the natural environment as a result of an initiative by its Parliamentary Assembly. This was a beginning of a long series of excellent studies on endangered animal and plant species and biotopes. These studies form the basis for resolutions and recommendations to governments. In 1979, this work resulted in the coming into force of the Bern Convention, currently the best legal instrument for the protection of the European environment.

We regard these achievements as a starting point. We are proud of them, but it is the future which interests, concerns and stimulates us.

We are accordingly devoting this issue of Naturoopa to information, which is the Centre Naturoopa's basic function, and education, which is vital to the preservation of tomorrow's environment.

Naturoopa 62 will be devoted to the illegal, and often cruel, trade in wild animals from other continents for use as pets.

H. H. H.



Articles and reports on nature and the environment appear in the press almost every day and, regrettably, the news on this subject is nearly always bad. The topic of the moment may be the sighting of an oil slick at sea, in which case we can expect soon afterwards to see pictures of birds washed up on the beach covered in it, or it may be dying trees, damaged landscapes or polluted rivers; all of these figure regularly in TV news reports.

Nowadays it is generally recognised that nature and the environment are suffering. Their present state has been brought about by human activity. Remedial action is possible, even if not all the problems can be solved immediately.

In order to pursue an effective policy on nature and the environment, it is necessary to use instruments in a coherent manner. A recurrent problem which arises here is the lack of appropriate knowledge and skills on the part of people dealing with environmental issues. In order to tackle a problem properly, it is necessary to have a sound knowledge of the requisite subjects. One needs to know what to do in specific instances, and this also involves acquiring certain skills.

Anyone who has studied the dangers to which nature and the environment are exposed knows that virtually all of us are affected by them in one way or another. The quality of nature and the environment matters to everybody. Accordingly, education on this subject is intended for all. Everyone who lives in Europe should know a certain amount about nature and the environment, about the damage caused to them by pollution and human activity and about attempts to remedy the situation.

Insufficient attention is often devoted to these subjects in general education and vocational training courses. Two types of activity are therefore needed. Today's adults need some form of "retraining" to fill in the gaps in their knowledge, and the citizens and workers of tomorrow — today's children — must learn about ecology at school. The aim is to ensure that people in different situations have a clear picture of what is currently going on in nature and the environment, what ecological principles and relationships are relevant to it and what contribution they themselves may be able to make to nature conservation and environmental protection. This is not a one-way process: education is characterised by the fact that it enables people to arrive at opinions of their own and to make choices.

In the Netherlands, a policy document was presented to the Lower House of

Parliament by the Minister of Agriculture and Fisheries and the Minister of Housing, Physical Planning and the Environment in the spring of 1988, stating policy on environmental education for the years ahead. Interestingly, Parliament's response was to call for more government action than had been announced in the policy document, and to point out that at least five other ministries should take measures in this field.

Does this mean that we shall see civil servants coming out of their offices to give ecology lessons? Certainly not: that would not accord with the way in which things are done in the Netherlands, and in any case it would not be necessary. Environmental education is not purely a matter for the state: other parties who are equally involved, if not more so, are schools, educational establishments, parents, non-governmental organisations promoting nature and the environment,



Conseil de l'Europe

and many others. An extensive network of environmental education organisations has come into being and is taking appropriate action.

The role of the government in this connection is primarily to create the necessary conditions. The policy aim is to support and renew environmental education.

Schools and organisations working in this field, displaying great enthusiasm and commitment, have built up a tradition of environmental education over a period of many years. But their work is by no means complete. The subject matter has not yet been demarcated clearly enough to enable the curriculum and teaching materials to be developed properly. More attention also needs to be devoted to teaching methods and educational theory, while feedback needs to be im-

proved so that education can be altered in the light of its results.

New methods and teaching material ought to be widely disseminated and exchanged. In this connection, it is important to make use of the modern mass media, and the valuable activities of the Council of Europe's Centre Naturoopa are certainly worthy of mention. National frontiers should not be allowed to act as barriers to the communication of knowledge about environmental education.

There is one important aspect which I have not yet mentioned. It is often supposed that drawing people's attention to the various environmental problems which exist will make them mend their ways.

In many cases, however, it will not. Just telling people about the destruction of the environment tends to evoke a response of fear and rejection, rather than encouraging them to try and find out more. But that is exactly what they need to do, given that the subjects at issue are complex. Environmental education must therefore be interesting and inspiring, making the learner want to know more. Although, as I said at the beginning, the news is often bad, a positive approach should be central. This is perfectly possible: all over Europe there are still special landscapes and areas of natural beauty. Only by adopting a positive attitude can one work towards a better environment. In the Netherlands this is known as "basing teaching on hope". The implicit expectation that it will be possible to achieve positive results is perhaps the most inspiring element in environmental education. Much is at stake, but by the same token, there is much to be gained!

Hans van den Broek
Minister of Foreign Affairs
The Netherlands
Chairman in office of the Committee of Ministers of the Council of Europe

The cover, by Isabelle Fischer and Céline Berg (12 years old), has been selected from drawings by children aged between 7 and 12 years for a local competition organised by the Centre Naturoopa on the theme "What do you think nature will be like when you are grown up?".

Captions to illustrations p. 16-17
Serre de la Fare Salewski/Bios
La Loire Desjeux
Chambord Duruel/Explorer

It is surely useful, in today's unsettled times, to remind oneself of life, the Creation, the certainty which for some may be uncertainty.

With spiralling problems of all sorts that together seem to threaten even our planet's very existence, let us listen to what some of the world's great religions say about our stewardship on this earth, the responsibility towards the environment which is, temporarily, ours, and which implies that we must pass on this Creation to those who come after us.

"First, man must be reconciled with nature by carefully preserving the integrity of nature, its fauna and flora, its air and rivers, its subtle balances, limited resources and its beauty which praises the glory of the Creator."

John Paul II, Strasbourg, 1988

"Whoever plants a tree and diligently looks after it until it matures and bears fruit is rewarded."

"If a Muslim plants a tree or sows a field and men and beasts and birds eat from it, all of it is charity on his part."

"The world is green and beautiful and God has appointed you his stewards over it."
Muhammad

"Let us declare our determination to halt the present slide towards destruction, to rediscover the ancient tradition of reverence for all life and even, at this late hour to reverse the suicidal course upon which we have embarked. Let us recall the ancient Hindu dictum: The Earth is our mother and we are all her children."

"Because the cause was there, the consequences followed; because the cause is there, the effects will follow."
Buddha

"Man's dominion cannot be understood as licence to abuse, spoil, squander or destroy what God has made to manifest his glory. That dominion cannot be anything other than a stewardship in symbiosis with all creatures."

"Whoever is merciful to all creatures is a descendant of our ancestor Abraham."
(Bezoh 32b)

World principles

Victor Kolybine

Preserving peace and the environment—in the worst of scenarios they can be the same problem—may be the world's most urgent concerns. They involve the two forces which dominate our time: the almost limitless capacity of humanity to build, develop and create "matched", in the words of the World Conservation Strategy, "by equally great powers of destruction and annihilation" in other words, nuclear holocaust, a lifeless environment.

The evidence of a deteriorating environment is stark and undebatable: 25,000 plant species and more than 1,000 animal species are threatened with destruction—Homo sapiens is rapidly becoming one of them—tropical forests, our global lungs, are vanishing at the rate of 11 million hectares per year, or 20 hectares per minute; 9 million square kilometres of arable land have become deserts and the pace is increasing; most of the world's population will be crowded into polluted cities by the year 2000. The litany of environmental degradation seems endless. But its very scope—transcending nations and oceans and reaching to the ozone layer—confronts East and West and North and South with a common solution: maintaining and even improving the quality of life through environmentally-sound, sustainable development.

Continuous education

A crucial factor in this global solution can no longer be slighted or denied, namely, the continuing environmental education of all, from citizen to decision-maker, from childhood through adulthood, that is, the lifelong development and maintenance of a global environmental ethic.

Almost two decades have elapsed since the UN Conference on the Human Environment (Stockholm, 1972) recognised this vital factor and urgently recommended that "organisations of the UN system, especially Unesco and other international agencies concerned ... establish an international programme in environmental education, interdisciplinary in approach, in school and out of school, encompassing all levels of education and directed towards the general public, in particular the ordinary citizen living in rural and urban areas, youth and adult alike, with a view to educating him as to the simple steps he might take, within his means, to manage and control his environment".

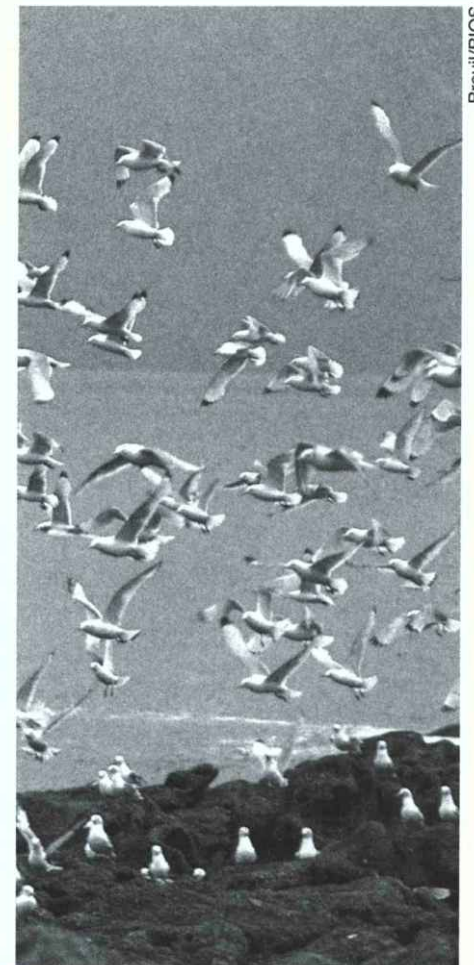
In response, Unesco and UNEP (the United Nations Environmental Programme) jointly launched the International Environmental Education Programme in 1975.

In 1977, the world's first Intergovernmental Conference on Environmental Education, organised in the context of the International EE Programme and convened in Tbilisi (USSR), established the framework and guidelines for environmental education and further specified the target groups: in addition to the general public, occupational or social groups whose activity and influence have an impact on the environment, such as engineers, architects, industrialists, trade unionists, agriculturalists, administrators, planners, policy- and decision-makers. Training of specialists for the prevention or solution of environmental problems—biologists, hydrologists, urbanists, sanitary engineers—was also stressed.

Successively, actions of the Unesco-UNEP IEEP have centred upon: development of general environmental awareness; development of concepts and approaches in environmental education, (interdisciplinarity, problem-solving, participation in decision-making, etc.); incorporation of an environmental dimension into the educational systems of member states.

Global awareness has been promoted through international and regional meetings and free distribution of IEEP's newsletter Connect, which is published in Arabic, Chinese, English, French, Russian and Spanish for a mailing list of over 17,000 environmentally concerned individuals and institutions. Over 130 nations have been directly involved in IEEP's activities, more than 260,000 pupils in primary and secondary schools, some 10,000 teachers, educators and administrators.

As for concepts and approaches, content, methods and materials for environmental education, IEEP has produced a coherent body of multilingual teaching materials, comprising methodological guides, thematic modules and textbooks for use in general education and in pre- and in-service teacher training. The "Environmental Education Series" comprises



Breuil/BIOS

more than 25 titles to date. With regard to training of educational personnel, an ongoing series of international, regional, subregional and national seminars, workshops and courses have been organised within the framework or with the support of IEEP.

Over 30 pilot projects

The International EE Programme itself has undertaken over 30 pilot, experimental or research projects aimed at aiding member states to incorporate environmental education into their national educational processes. These and other activities of IEEP have been conducted in all five regions of the world (see below) with the result that, increasingly, nations are making environmental education an integral part of their educational policies, plans and innovations.

Unesco's five regions consist of Africa, Asia and the Pacific, the Arab States, Latin America and the Caribbean, and Europe (including North America). Of particular interest to Naturopa's readers might be a sampling of completed pilot projects for Europe and Africa: On EE Methodologies for Secondary Schools and the General Public (France and the

Ukrainian SSR); On Urban Environment Educational Programmes (U.K.); On Comprehensive EE Programmes for All School Levels (Czechoslovakia); On the Sahel Region (Senegal); On Incorporation of an Environmental Dimension into Consumers' Education (France); On Incorporation of an Environmental Dimension into Biology and Geography Studies (Poland and Portugal); and similarly into General University Education (Czechoslovakia, Morocco and Spain); and into Nonformal Education (Gabon and Mali); etc.

Both Europe and Africa have had teacher-training workshops organised by IEEP on a regional and subregional basis as well as at the national level (seven in Europe, thirteen in Africa).

The future

As for the future, two major UN reports have brought the pressing concern of planetary ecological balance and environmental quality to world attention. They are UNEP's "Environmental Perspective to the Year 2000 and Beyond" and the Brundtland Commission's "Our Common Future". Both establish long-term environmental strategies for achieving sustainable development. Each recognises

the crucial role of environmental education in that respect for successive generations.

Recent and relevant is the resolution adopted by the UN General Assembly that the 1990s be designated as the International Decade for Natural Disaster Reduction. Explicit in the resolution is the seeming paradox that natural hazards, such as earthquakes, cyclones, tidal waves or floods, need not become national disasters. The key to the paradox lies in national preparedness at all levels. Again education and training are indicated.

The Unesco-UNEP International EE Programme will play its role in the projects and activities of the designated decade (with reports appearing regularly in *Connect*); the characteristics of an effective environmental education and training programme coincide, by no accident, with those of an effective programme for natural disaster preparedness. Indeed, the Unesco-UNEP International Congress on Environmental Education and Training (Moscow 1987) in many ways anticipated the UN resolution in the adoption of its own International Strategy for EE Action in the 1990s.

The UN System-wide Medium-term Environment Programme (1990-95), moreover, will be implemented educationally in the framework of the International Strategy for EE Action at all levels—national, regional and global. Further, SWMTEP (II) envisages a continuing role for the Unesco-UNEP International EE Programme as catalyst and co-ordinator of this aspect of the United Nations environmental actions. Throughout the world the 1990s will witness an invigorated promotion of environmental education, training and information on the part of the IEE Programme.

Europe

Regarding Europe, several results of the Fourth Conference of Ministers of Education of European Member States, organised by Unesco in conjunction with the UN Economic Commission for Europe (September 1988), are particularly relevant. Firstly, with Unesco serving as a catalyst, future action will include participation in the "Copernicus Project", initiated by the Standing Conference of Rectors, Presidents and Vice-Chancellors of European Universities (CRE); the project focuses on the study of European environmental problems and the search for appropriate solutions.

Secondly to be noted is Recommendation No. 2 of the European Ministerial Conference, which is devoted entirely to the Europe-wide development of environmental education, incidentally recalling recommendations of IEEP's Tbilisi Conference (1977) and Moscow Con-

gress (1987). Concretely, the Conference urged member states:

— "to review their educational policies and practices in view of the global ecological crisis and the recommendations of the Brundtland Commission on Environment and Development;

— to take the necessary steps to make this perspective an integral part in the education and training of professional groups—especially of teachers—whose activity can influence the quality of the environment;

— and to stimulate research and development in this field ...".

To the Director-General of Unesco the Ministerial Conference recommended that the Organisation (and thus the Unesco-UNEP International EE Programme, where appropriate) "promote dissemination of the findings of science and technology as well as the exchange of experience of schools and other educational establishments which have engaged themselves in environmental education by having taken practical measures to protect their environment; examine possibilities to intensify environmental education by the linking and co-ordination of university, school and out-of-school activities in the field of environmental education...; and support such initiatives by providing material relevant to the protection of the environment and to examine the possibility of financial assistance for schools and other establishments in this area of concern".

High priority

The Conference, furthermore, requested Unesco's Director-General "to give high priority to educational programmes relating to environmental education aiming at sustainable development in the Organisation's Programme and Budget for 1990-91 as well as the Medium-Term Plan for 1990-95".

Lastly, in the context of Recommendation No. 2 and as part of a Unesco report to the forthcoming Conference of European Ministers of Education to be organised by the Council of Europe in October 1989, the Unesco-UNEP International EE Programme will undertake the following in collaboration with European educational institutions, namely, the preparation and organisation of:

1. a meeting on environmental education within the Associated School Project (Norway, 1989);

2. a seminar on developing nonformal environmental education in Europe (Ukrainian SSR, 1989);

3. an international symposium on the content and methods of environmental education for professional groups, economists, planners, etc. (Malta, 1989);

4. a symposium/workshop on the development of evaluation methods and tools for environmental education (1989);

5. a conference on the needs, priorities and strategies for university-level environmental education in Europe (Belgium, 1989); and

6. a seminar on the use and dissemination of findings of environmental research carried out through international scientific programmes (Malta, 1989); etc.

Three great challenges face the world, in the view of Unesco's Director-General Federico Mayor. They are "peace, development and preservation of the environment globally". The role of the International EE Programme is clear. It is to realise environmentally sound, sustainable development through education, training and the vast involvement of an alert, informed public. ■

Dr. V. Kolybine

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11 000 000 hectares of tropical forest per year ...



Halleux/BIOS



A planetary ecological balance

Free access

Wouter van Wijk

The right of free speech is generally recognised in Western democracies, although its application may vary in different countries. On closer inspection free expression of opinions should be founded not on feelings only, but foremost on sound grounds and facts. Feelings can arise as a reaction to certain events, real or supposed, but they are seldom a healthy basis on which to found an opinion. Personal, subjective impressions of events that cannot be traced to clear facts may give a false idea of reality. Therefore it must be acclaimed that various countries have added—or are preparing to do so—to the right of free speech a right of free access to or of disclosure of information, which may make it easier to give an opinion an objective and factual foundation. Everybody can see how someone interprets the given facts, uses them correctly or misuses them for his own ends.

In environmental matters a right of disclosure is already applied in some countries or being prepared in others. The preparation of legislation by the European Community is well on the way, in which confidentiality will be guaranteed solely in clearly defined cases of commercial or state interest. The introduction of such legislation will be an important gain for democracy but it is only a first step, the second and more difficult one being its application. The heart of the matter is that the European countries and others as well do agree that nature and environment are severely endangered but that they still differ on what should be done to ward off the peril and to repair the damage already done to soil, water and air. Nationally some countries are actively repairing the damage done to their natural resources and are taking preventive measures. Other countries are less advanced in this matter and as a consequence, transfrontier pollution continues and makes the "good" ones suffer from the "bad" ones. Often inhabitants think that on a national basis already very much is done actively and financially, but internationally the result of these efforts is poor: unfortunately it is not enough yet.

Borders do not stop pollution

The environmental problems of pollution are global. They do not stop at borders and countries cannot stop them. What happens in one country may have damaging effects in another, many hundreds of kilometres away. Certainly, it is progress that some countries are actively countering the dilution of the ozone layer, but what is the use if only some countries do this and others do it halfheartedly or not at all. Yet one should praise the active countries and hope that the others will soon follow the good example.

Returning to the draft legislation of the EC and its clauses on national and commercial interests, one should wish that they be few and those that are inserted be clear. It is easy to imagine that national states and industries want to protect their military and industrial secrets and products, international competition being what it is. One can understand that research and experiments need some privacy but they should be carried out without endangering outsiders. Once developed and covered by patents, others must be given the opportunity to learn in advance the composition of new products in order that one can know its properties, healthy or not. Alas, thus far we are not, certainly if one takes into account the preponderance of national and/or commercial interests, among which modern agriculture should not be forgotten.

The right of free access to information looks to be a gain for the individual citizen. However, what is he going to do with the numerous exact, physical, chemical and other data he may obtain by using his right? Will he be able to interpret them objectively or will he make a construction more according to his feelings? More or less the same may be said of some interest and pressure groups which use the information for their special aims and in some cases by dubious methods.

The above does not mean that one should abandon the idea of free access to information, but on the contrary the right to it should be accompanied by clear guarantees that it cannot be misused for purposes other than that for which it is intended: factual, exact information on data concerning the natural environment etc, given to those who request it.



Nardir/JACANA

Centre Naturopa

Hayo H. Hoekstra

One of democracy's prerogatives is the right to information, ie full access to the information necessary for a free life. It is a valuable right which must not be misused. The Council of Europe's Centre Naturopa works on precisely that basis to provide a better knowledge of the extreme complexity of our environment and the many problems which often pose a serious threat to it, and to offer possible solutions.

The Centre Naturopa, whose secretariat at the Palais de l'Europe in Strasbourg forms an integral part of the Directorate of Environment and Local Authorities, is the heart of a network of official and unofficial national correspondents extending far beyond the frontiers of the 23 member countries and representing a tremendous potential in terms of information and documentation.

The Centre's primary role is obviously to be the Council of Europe's spokesman on all matters relating to the environment. This is done, as in the case of virtually all its other activities, through and with the support of the Centre's correspondents, who are perfectly aware of needs at national level. Above all, the Centre also acts as a catalyst and promoter of ideas and activities permitting contacts at regional, national and international level between all kinds of government departments and governmental and non-governmental organisations.

In all its activities, the Centre is impelled by a genuine desire to co-operate and thus avoid duplication of effort and wastage. In this way it serves a valuable cause: preservation and improvement of the natural environment with due regard for other living beings.

Like its parent organisation, the Centre Naturopa rarely produces front-page news. Like its parent organisation, it works discreetly with an eye to the longer term, and it does so in two ways. On the one hand, the Centre answers all inquiries directly or by referring the inquirer to a specialist source of information. On the other, it conducts a permanent active campaign through its publications and ad hoc activities to disseminate information. During the 23 years of its existence—it was established shortly before European Conservation Year—the Centre has

drawn attention in particular to problems associated with the soil, national and international waterways, wetlands, indigenous species and their habitats, the water's edge, and farming and wildlife.

The Centre offers a variety of information services. In general, bearing in mind its resources, the Centre's "messages" are targeted at an audience comprising decision-makers, politicians, scientists, pressure groups and the press. Here again, nearly everything goes through the correspondents, who are the best-informed people in their own countries and able to adapt the message to the particular target group.

The Centre's publications complement one another. At present they consist of:

— Naturopa-Newsletter, monthly bulletin in ten languages;

— Naturopa-Environment Features, 6 short articles per year on topical subjects, and a two-monthly Library Bulletin;

and

— Naturopa, illustrated magazine, published three times a year.

The Centre also publishes specialised bibliographies and provides various documentation services for its correspondents.

Approximately every three years, the Centre and its correspondents mobilise for a particular activity, and this is how such information campaigns as those on the Mediterranean coasts, farming and wildlife, and European freshwater fish are mounted and conducted.

The information provided by the Centre Naturopa is concerned almost exclusively with the state of the natural environment, ie flora, fauna and biotopes. This is a logical development, related to the current activities of its parent organisation. The social and economic implications are left to other, more specialised organisations. This explains why the Centre is mainly in contact with experts on the natural environment.

It is the Centre's role and duty to provide information. Having been informed in this way about the state of our planet, how could decision-makers refuse to take the necessary measures? ■

Ing. H. H. Hoekstra
Head of the Centre Naturopa

A necessary co-operation

In spite of all single national measures, international environmental policy is still anarchic, especially when it comes to its implementation. In some places calamities are acted upon, fires are extinguished, until in other places other calamities arise. If ever the transfrontier, global pollution of nature is to be stopped, and with that the health of man, animal and plant saved, it will be necessary to arrive at international co-operation of all countries and men on our globe. The right of free access to information may contribute to the understanding of this necessity. International agreement that the environmental situation is very serious does exist, the reports of all kinds of committees supporting this view and proposing measures and solutions are verbal tokens of uneasiness, while strict effective action on a global scale is necessary.

In the meantime mankind is waiting for that calamity which opens all eyes, but then it may be too late. ■

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Influencing behaviour

Andy Anderson

Trying to change popular attitudes to the environment is no different from trying to change attitudes or exert influence on popular thinking about any other subject. Indeed, there are really only three prime forces that change attitudes to anything, and they are all very closely linked.

The first two forces are, of course, the time-honoured allies punishment and reward, and we will examine these in the environmental context. The third is education, and it is potentially the strongest because if employed effectively, it can make the other two almost obsolete, though it is perhaps not a bad thing to know that they are waiting just offstage to provide back-up.

Punishment

At its simplest, the punishment system can be interpreted by prohibitive laws—"If you discharge poisonous waste material into the North Sea, or manufacture for sale anything proven to be unacceptably harmful to the environment, we will fine you x million ECUs and put your directors in prison for rather a long time". This does tend to focus Chief Executive Officer's attention on the need for better emission control systems, but until recently there have been few signs of any very rigorous application of such punishments. If there had been, the North Sea might be a lot cleaner today, and we might not all be frantically clucking about CFCs and the greenhouse effect.

However, the punishment principle does not end there. It has influence that goes further than making people in positions of power think about lost money or dark

days in dungeons. If Everyman can be made to understand that the direct consequences of a neglectful attitude towards environmental matters will be punishment with air that is difficult to breathe, water that will not support marine life, genetic degradation through exposure to noxious substances, trees that will not bear fruit, tribes wiped out through famine, pestilence and drought, and so on, then he is far more likely to adopt a responsible attitude to his habitat. It has to be said that the closer the threat is to Everyman's home, the more likely he is to pay attention to it, but perhaps that is natural.

The attendant problem is that our attention tends not to wander very far outside our own lifespans. In a hundred years' time no one reading this will be around to see the result of today's lack of concern for the tropical rainforests—why then should we think much about donating action or money to their preservation? In philosophical terms the answer is perfectly obvious, but there is no denying that the slow rate of environmental change does blunt our perception of the need for immediate action.

Every generation is held to account for its actions or its inertia by the generation which follows, and thus environmental education is of paramount importance. Before discussing that, though, consider the reward system and how in the short-term it can be more effectively utilised.

Reward

Reward also has more than financial connotations. It is certainly true that there exists in Europe a number of good and worthy schemes sponsored by govern-

mental organisations, by foundations, and by industry, all offering monetary inducements to those who are judged to have made some contribution towards environmental well-being. Ford's European Conservation Awards and the Better Environment Awards for Industry schemes are good examples, and represent helpful steps in the right direction. The position that we have to get to, though, is one where we do not need such schemes to see that we all have to clean up our acts and get personally involved if we are to

reap the reward of a cleaner atmosphere, river water we can drink again, and forests that produce life-giving oxygen.

Even those of us who have reached the age of majority can still learn enough to teach us what actions can be taken that will make a real difference in our own lifetimes. Witness the improvement in the quality of water in the Thames, the low but steady rehabilitation of the European Barn Owl, the all-too-short moratorium on whaling. All brought about by the concern



Dorreboom/Greenpeace

and dedication of informed individuals and pressure groups, and all achieved within relatively short time spans.

Our children

Consider, then, what our children might achieve, given access to information and proper instruction on how to use it. They are likely to need all the information and instruction they can get—the problems facing them are legion, and each succeeding generation will need to husband its resources more carefully than the last. Most opinion formers concerned with environmental matters take the view that it is vitally important for conservation to become a standard curriculum subject as soon as possible. In some countries it already is, but the sooner the principle is universally adopted, the better chance those future generations will have of nudging this planet back to a state of ecological balance, where they can live in harmony with their environment.

Much needs to be done. Teachers need to be trained, courses devised, and examinations set. This all takes time, but once the need is recognised by the education authorities and the will to implement such a scheme is expressed, there is no immediately apparent reason why compulsory "Planet Care" education could not be on the syllabus of every school in Europe by 1992. Let it not be left much longer; every year of delay will reduce the quality of life our descendants will inherit, and will detract from their ability to manage the environment we leave them. Education has to be the most effective way of all to influence public opinion about the environment, even though its results will not be immediately seen.

But there are things that governments can do immediately which will also have a beneficial effect. On the reward side, they could involve more government grants for the installation of emission control equipment for manufacturing processes, or for proof of reduced emission levels through adoption of new techniques. In tandem with that, rigorously enforced heavy punishments for companies convicted of "Environmental Crime" could be coupled with widespread media exposure for such transgressors.

United Europe

In a Europe united in an attempt to secure a better environmental future, countries which consistently offend against internationally agreed good practice (by exporting air or water-borne pollutants, for example) would be commercially ostracised—short-term commercial losses would just have to be accepted as the price to be paid for the improvements required. But that unity of purpose is essential, because such sanctions do not

have a universally high success rate in other fields, and would be widely resisted by commercial interests unable to see past the possible loss of those short-term profits.

What we have to work towards is a situation where any uncaring attitude towards the environment—whether it be from industry, individuals, or government—is as unacceptable as racism, rape, treason, murder, drug trafficking, or any of the other crimes society considers most repulsive. Public opinion is the most potent weapon that can be employed in this cause—winning it over and marshalling its strength is a task which, though difficult, is eminently achievable. If we fail to do so, future publics' low opinion of our collective complacency will be entirely predictable. ■

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Don Williams

Getting the message across

Paul Melen

liged to belong to the federation in their department, headed by an elected executive and president. The 95 federations (including four overseas) are affiliated, through seven Regional Councils, to a National Union which acts as the official representative of all hunters in France.

This pyramid structure encourages the circulation of information. At the end of 1976 the Union Nationale des Fédérations Départementales des Chasseurs set up and financed the Comité National d'Information Chasse Nature (National Committee for Information on Hunting and Nature) to train and inform hunters and provide a public information service on all aspects of modern hunting and its impact on the public and the environment. The National Committee now has 12 years' experience of information about hunting—12 years of action and analysis which have revealed the main priorities, the mistakes to be avoided and the best ways of reaching the widest possible audience.

The television

All studies of this question show that television has been the most important media vehicle, firstly in terms of audience size (French people spend 4 hours a day on average in front of their television screens) and secondly because the visual image is powerful—the collective imagination contains a wealth of images of hunting, even for those who do not live in the countryside and have no personal experience of hunting, if only as a non-participant accompanying father or friend. The hunter and his dog, nature in autumn, wild animals and the hunters' meal among friends are all highly evocative images shared by the whole population.

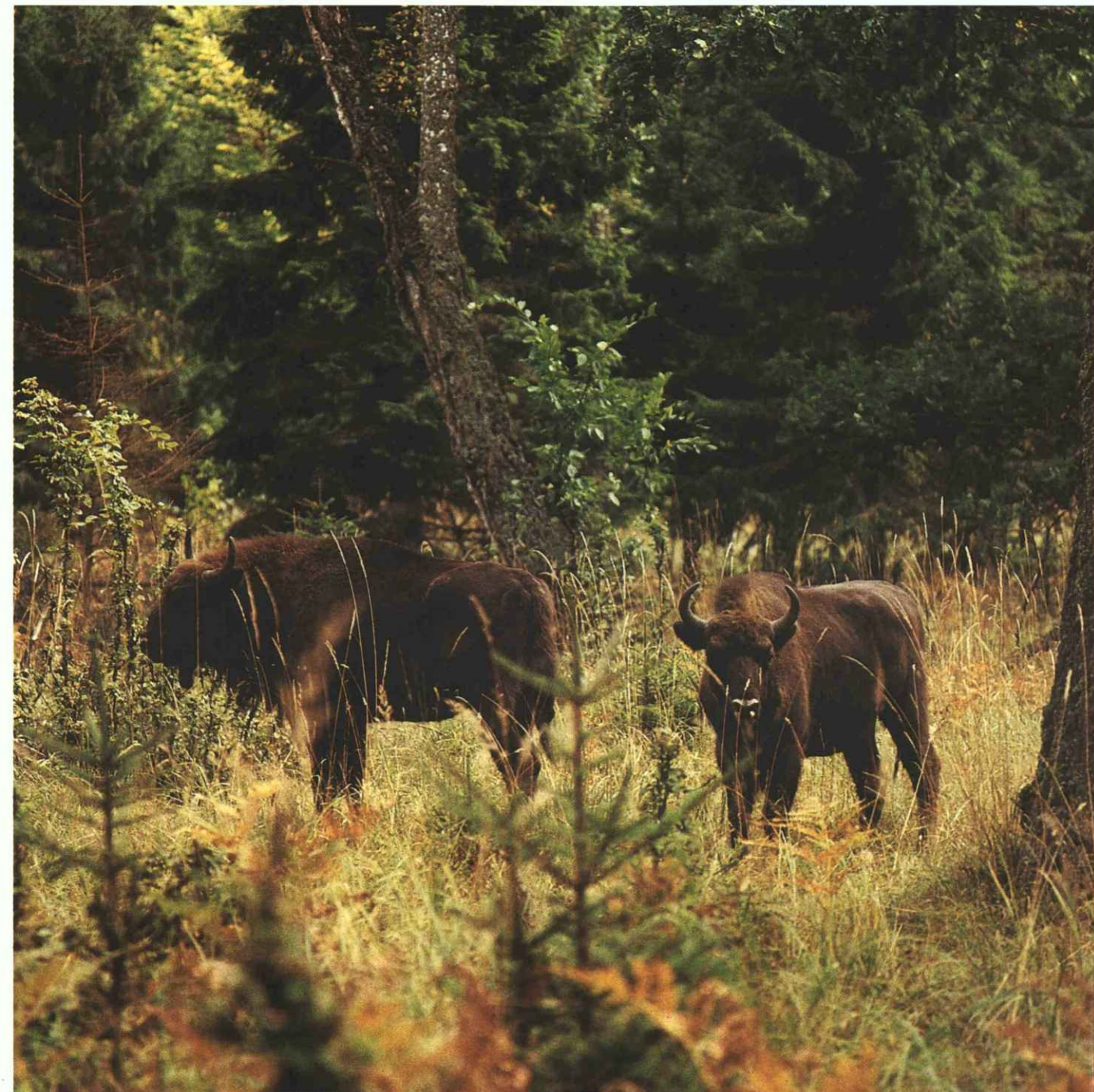
Moreover, an extensive public opinion survey has shown that hunting is a subject which interests everyone, ie attitudes to hunting are not divided along socio-economic lines, nor do they depend on age, sex or the areas people live in. The survey revealed that nearly 70% of the population had a favourable attitude towards hunting once they had been made aware of the full relationship between

hunters and nature and their very extensive knowledge of wildlife and the natural environment.

For the public, hunting is a legitimate activity provided that hunters respect the rules which exist to ensure the safety of others and the protection of nature. This is also a very important element of national or regional traditions and the basis for a very deep-rooted rural culture whose value nobody questions.

These very precise findings are taken from a detailed and extensive survey conducted by the Institut Français d'Opinion Publique in spring 1988 for the Union Nationale des Fédérations Départementales des Chasseurs. The National Union has used them in the preparation of a national information policy on hunting and nature. With the same objective in mind, the National Union and the Comité Chasse Nature have for several years been presenting and explaining hunting to the media and public opinion, particularly through television.

Since 1982 there has been a television programme called "Histoires Naturelles" on the subject of nature. The National Union immediately became involved with its preparation and helped to publicise it before becoming its co-producer with the Office National de la Chasse and providing technical advice through its director, who participates personally in the choice of subjects and in filming. To date 60 programmes have been produced and shown. "Histoires Naturelles", which is produced by a highly respected and well-known team (Igor Barrère and Jean-Pierre Fleury), is watched by a large audience—4 to 5 million viewers on average for each programme, with peaks reaching 7 million for some subjects such as "At the feet of the Archangel" (Mont St Michel). Some programmes have been shown up to 15 times. Regular night-time repeats of "Histoires Naturelles" were introduced a few months ago in a successful media experiment which has made the programme even better known. Everyone, whether he hunts or not, knows that programmes on hunting are repeated at night and these repeats have regularly attracted a sizeable additional audience (300,000 viewers



per programme). The main reason for this success is the programme's exceptional quality, with its beautiful photography, precise commentary and congenial tone. It portrays hunting as a true culture and a factor for social integration. Each hunter interviewed is chosen for his authenticity and the public is not deceived; they fully understand the place of hunting in the lives of hunters themselves and the preservation of natural balances.

In 1989 the National Union will also co-produce ten new 40-minute programmes with a different national television channel (FR 3.) This will be a magazine programme on nature entitled "Territoires" and will be shown at 4 o'clock on certain Saturday afternoons. Hunting, fishing, the picking of wild fruit and mushrooms will be presented through regional reports as elements in the management of nature, the environment and wildlife.

The Hunter's Little Green Book

This development of audiovisual information should not be allowed to eclipse the "Petit Livre Vert du Chasseur" (the Hunter's Little Green Book), which is a basic reference work and has been the leading publication of the Comité Chasse Nature since 1978. Each year a new title is added to the hunter's information on nature and

wildlife. The "Little Green Book", which has a regular print-run of more than two million copies, acts as the link between the National Union, the Comité Chasse Nature and all hunters in France, for whom it provides what might be termed "further training". It is also the main, or even the only source of information on French wildlife for school children. Eleven issues have already appeared: the hare,

partridges, roe deer, ducks, wild rabbits, pheasants, wild boar, wetland protection, the woodcock, the hunter's passport and the hunter's legal handbook. In 1987 the Comité Chasse Nature decided to celebrate the Little Green Book's tenth anniversary with a special issue on a European theme. The "Hunter's Passport" incorporates the code of conduct for hunters recommended by the Committee of

Ministers of the Council of Europe. It has been translated into several languages and forms the strongest link in the chain of international information about hunting and wildlife management.

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Woodcock

S. Cordier

An original approach

N. F. Halbertsma

An ostrich singing a hit-song, a monkey looking for his hearing-aid, a turkey asking whether anyone has seen her anti-wrinkle cream, a young gorilla ringing the church bells, rhinos doing their morning exercise—these are the hilarious scenes of "Animal Crackers", a series of short television presentations by André van Duin, one of the best known comedians in the Netherlands. He added his witty comments to videoclips of animals in zoos followed by a call for support to WWF (World Wide Fund for Nature) in the Netherlands. Together with a one-year-old orang-utan called Sabine, André van Duin was able to raise 20,000 new donors this year.

Even more spectacular was his appearance in a special WWF show in October 1987 when he interviewed HRH Prince Bernhard, founder-president of WWF, about the many activities of the fund.

The interview took place in Burgers Zoo, Arnhem, discussing (while walking) WWF activities against the background of the zoo's animals. The idea to have a comedian interview a member of the Royal family on a serious subject was something which some 4 million television viewers did not want to miss. They were pleasantly surprised to see how André and Prince Bernhard were able to convey the message of conservation with a touch of humour and common sense which, together with other participants like Brigitte Bardot, David Bellamy and

Sir Peter Scott, really hit home. 100,000 new donors were registered!

It goes to prove that the proper combination of personalities and a sense of humour can reach new audiences very effectively. With the help of André van Duin, WWF-Netherlands doubled its membership to 270,000 donors and 25,000 youth members making it the biggest NGO in the field of conservation in the Netherlands. No wonder that on November 19th Prince Bernhard presented André van Duin with The Order of the Golden Ark, his personal award for conservation achievement.

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The CORINE programme

Gunter Schneider

The citizens of the countries of the Council of Europe and of the European Community are the custodians and the users of a unique heritage: the natural resources and the countryside of Europe and its surrounding seas. This diverse inheritance not only reflects the history and the culture of the peoples of Europe, but also constitutes the basis—with its accompanying limitations—for social and economic development.

But there are many threats to this inheritance: the last Report on the State of the Environment in the European Community brought to light the gravity of environmental problems and the tendency of many of these problems to become ever more serious. To respond to these, the Community is actively following its environmental policy, the spirit of which is clearly reflected in two principles: the prevention of damage to the environment and the integration of the environmental dimension in other policies.

To apply this policy in a coherent manner, the Community and the 12 partners need comparable information on the state and the evolution of the environment and of natural resources.

CORINE

The goal of the CORINE Programme (COoRdination of INformation on the Environment) is to supply this comparable data. The three central objectives of the programme are:

- gathering information on the state of the environment for a number of Community applications;
- co-ordination of initiatives in member states or at international level to improve information;
- ensuring the consistency of nomenclatures, definitions, etc. and generally creating the conditions necessary to ensure comparability of data.

To meet these requirements, the organisational structure chosen consists of a group of projects undertaken by thematic working groups (more than 120 scientists in total). The Commission, assisted by a committee of representatives of the member states known as the CORINE National Experts Group, manages and monitors the programme.

Each of the projects lead to the establishment of a thematic data base and these collective data bases form the CORINE Geographic Information System.

Considering that the programme did not get underway until the end of 1985, the results obtained to date are already numerous. In relation to CORINE's co-ordination activity, the Commission and various international organisations have passed agreements to ensure the complementarity and coherence of their projects.

— CORINE and the Council of Europe have developed a methodology in common as the basis for the computerised inventory of biotopes of significant importance for nature conservation. They have also co-published the natural vegetation map of Europe.

— The European inventory of atmospheric emissions, CORINAIR, is being carried out using a method common to both CORINE and the OECD.

An operational nature

Above all, the data already assembled are of an operational nature for the activities of the Commission's services. This is particularly the case for the biotopes inventory which is specifically used for the application and development of the nature protection policy (proposed by a Directive on the protection of habitats).

Other results (land cover, coastal erosion risk) are used by research groups. Some are also used in national and regional management processes.

A notable example is the land cover map of Portugal obtained using satellite images, resulting from the CORINE pilot project, which led to the creation of the first European land cover data base available and functional for a whole country.

Information obtained within this framework can be used for:

- detailed map production 1:100,000;
- extraction of statistics;
- location and description of nature areas and their surroundings;
- information on forest cover and its condition, detection of changes (fires);
- supplying a useful tool for decision-making in large-scale management programmes.

At the halfway stage in the programme, the CORINE programme balance sheet aims to provide an operational tool for a more efficient protection of the Community's natural heritage, as well as a considerable strengthening of practical collaboration in this area at all levels.

This last aspect is of particular importance as it permits savings in economic and human resources at every level.

Likewise the transfer of experience and knowledge, especially in the area of new information technology with which the Commission is already equipped, represents attainments indispensable for the more efficient application of environmental policies.

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S. Cordier



The Loire

The Loire, last great natural river in Europe, risks losing its original character because of important human interventions.

The conservation of a heritage, be it natural or historical, depends upon its appreciation, objective or subjective, based on knowledge passed on.

Education is a long-term investment, whereas information forms the basis of immediate action in emergencies.





S. Cordier
Open-air class

achieved in the recycling of refuse and paper. In another practical example, active citizen participation has been achieved in the cataloguing and rehabilitation of damaged suburban sites (Barcelona). Madrid groups have secured extensive participation in tasks relating to the re-introduction and restoration of natural vegetation and indigenous woodlands, etc. Other important changes of attitude that have occurred in recent years among the public and in government circles are more difficult to ascribe to specific activities, although the activities in question must have had some kind of indirect influence. One of the most significant advances is the growing public interest in natural habitats (which creates new management problems), the designation of a large number of protected areas, the increasing emphasis on environmental issues on television and in other media.

Formulation of objectives

Lately, and also as a result of the discussions on the most recent national surveys (Valsain, 1987; Navas del Marqués, 1988), Spanish environmental education specialists seem to have embarked upon a stage of reflection and evaluation. The results of international gatherings, such as Tbilisi (1977) and Moscow (1987), are being analysed and compared with the criteria governing environmental education in Spain. After the above-mentioned period of rapid expansion and the continual adjustments and experiments with various environmental education methods and approaches, sometimes with insufficient emphasis on the formulation of objectives and design of programmes, there now seems to be greater concern about the effectiveness of work. Concern focuses on the proper identification and definition of priority objectives, the quality and appropriateness of the methods used, etc. However, being concerned about effectiveness and evaluation does not mean wanting to impose external controls or "measurements" of the success of completed activities. There is even less question of naively applying so-called metric methods to identify progress in knowledge, attitudes.

The main areas of interest are self-evaluation with reference to objectives (and the best way of defining them), the search for

improved results through reflection and training, greater quality as compared with indiscriminate quantity, etc.

Research

The widespread interest in quality and in better understanding of the mechanisms involved in environmental education has led to a considerable increase in research by specialist groups (Barcelona, Madrid, Seville, etc) in the environmental education field.

As usual, the majority of this research is geared to analysing cognitive aspects. Some interest has been shown in analysis of the "preconceptions" which children have about crucial environmental processes. For example, a study has been made of how children perceive the Guadalquivir River in Seville and what it means for the city. Other subjects of study include the ideas the public have about the water cycle and how it is affected by the most common domestic activities, or children's knowledge and images of the ways in which animals adapt to their environment. In this type of research, the aim is to identify the conceptual errors requiring special attention in education and, hence, in the design of curricula (as in the case of the Municipal Centre for Educational Research in Seville or the Municipal Educational Institute in Barcelona).

Other research has dealt with the affective sphere. This ties in with a long tradition of interest in motivation (eg Decroly). Attempts have been made to identify experimentally the "centres of interest" or subjects which capture children's attention and arouse their curiosity most in the observation of their environment. The results show that it would have been difficult for teachers to do this intuitively. For example, on the subject of vegetation (which usually stimulates little interest in children), it has been observed that some plant species arouse their curiosity spontaneously. They are species which, examined after the event, seem to possess some fairly unusual and disquieting features making them focuses of attention and interest. On geological subjects (usually not very attractive either), children have been found to take a spontaneous interest in cavities in rocks and cave-shaped formations (games involving them, continual presence of the cave in accounts of outings, making up of stories about people or animals living in caves, etc). The centres of interest in environments visited by children can be identified by systematic observation of their behaviour or analysis of their accounts, "letter to a friend" exercises, etc. This is important for the design of interpretative programmes because the material can be organised around these centres of spontaneous interest (Autonomous University of Madrid).

Investigations

Other research has dealt, for example, with changes of attitude that have occurred after various environmental education exercises. For instance, studies of this kind show shifts towards greater interest in the environment or a more "sympathetic" attitude depending on the type of exercise done previously. Another aspect is the finding that some children may easily feel overwhelmed by an excess of physical activity in the natural environment or the constant rivalry with their companions in skills related to it, camping, etc, and that this can have a negative effect on their attitude. A certain rejection of the excessive presence of monitors or adults performing an educational role has also been observed. Among other unexpected results, it has been observed, for example, that the "unhygienic" image which urban children unfamiliar with the countryside have of farm activities is reinforced (contrary to what might be expected and intended) after a visit to a farm school (Perello et al, 1987).

Research can help to improve some educational methods, but teachers as a group have derived most benefit from the discussions held at workshops and seminars. One important conclusion reached is the need to design programmes of activities with reference to specific problems. In this way, greater interest is taken in the careful planning of improvements to activities in progress and new programmes, provided they have been studied in length.

Another widespread concern is the feeling that environmental education activities continue to be very diverse, scattered and disconnected. There is a need for more systematic exchanges of experience and for the creation of an appropriate network for that purpose. Progress is being made in that direction by the two existing specialist publications and an environmental education society (in Catalonia). But there would seem to be a need for the (frequent) training courses to be based more on real needs and detailed experience of the problems actually encountered.

Lastly, the lack of a stable staff situation is regarded as an obstacle, and this raises professional issues as well as problems of stability. Continuity of projects is too dependent on political decisions, and this makes it necessary to find solutions for long-term programmes. In practice, these are the ones which can produce interesting results. ■

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The impact of school

F. G. Bernaldez,
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Environmental education has grown rapidly in Spain since the 1970s. It is interesting to note that while the time of the dictatorship was uncondusive to activities of this kind, Spain experienced an outstanding period foreshadowing present-day environmental education in the years preceding the Civil War. Various civic institutions made their influence felt both in the education system ("Institución Libre de Enseñanza") and in other fields: mass tourism, museums and societies (Autonomous Government of Catalonia).

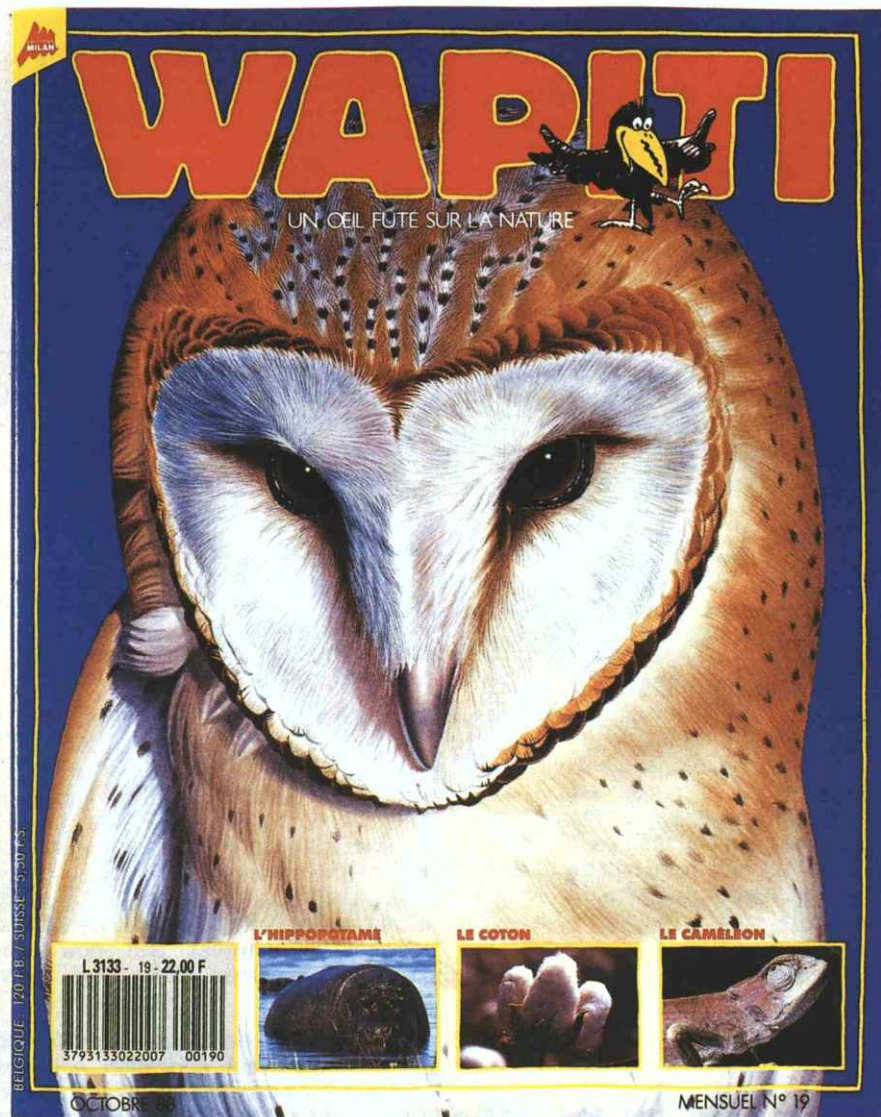
The year 1983, coinciding with the first national meeting (Sitges, Catalonia), saw a considerable upsurge in educational activities of this kind, noticeable for example in the annual rate of increase of the number of permanent centres and other facilities (farm schools, initiation centres, residential facilities in the countryside for schoolchildren), which rose from four or five a year prior to 1983 to three times that number in the ensuing period.

The latest national gatherings have served to record important achievements in terms of changes of attitude and behaviour among the population. There are many visible signs of this, one of the most highly appreciated being active citizen participation in the solving of environmental problems. For example, in various places, and especially the Navarre region, where the initiative originated, increasingly effective participation has been

At the farm-school



S. Cordier



Wapiti

Claudine Masson

Children are curious by nature and they are curious about nature. Childhood is the time of the embarrassing "why?" questions, as everyone used to children knows full well. And the older children are, the less they can be satisfied with a few pictures or a few simple words trotted out absent-mindedly. Children's questions become more and more searching, and adults must sheepishly admit that they do not know the answers. They don't even know how old a mouse is, or whether all fish have scales. Yet all this is part of children's daily lives. They see, smell, touch and sometimes even taste what is around them and want to know everything about nature, which surrounds them and which they discover before their very eyes and with their noses. Filled with wonder or surprise, they keep on asking questions

about, for instance, a snail that puts out its horns or a flower opening further and further.

Why yet another magazine?

In 1987, "Editions Milan" published three magazines for children aged 2 to 12: Toupie, Toboggan and Mikado. They contained informative articles, stories and games about nature, but only occasionally.

Television is omnipresent in children's daily lives but, where nature is concerned, it usually caters for an adult audience or, at best, for the general public, both adults and children. The images pass very quickly, the humorous or poetic texts are difficult to understand, and it is impossible for adults to explain a sequence to a child when the next one is already taking place.

There is a need for a nature magazine, and Wapiti has been launched.

Yet more pictures...

Children already see large numbers of pictures of nature, from all sources. A multitude of fauna and flora from throughout the world appears on our television screens. Our nature magazine makes use of these images—striking ones, beautiful ones, funny ones and tender ones. They are pictures that beckon and say, "Come and have a closer look". Nature appears before the child in her working garb or in her Sunday best! The child looks at, is surrounded by and breathes nature. There is a feast for the eyes, from Amazonian forests to the underwater world, and from the nooks and crannies of the hedgerow to the hollow in the dead tree, within a stone's throw of the child's own home. There are animals, plants, habitats and natural phenomena that may or may not be familiar. We teach children about the threats to certain species and the protective measures needed to safeguard the wealth of variety in nature.

Pictures and words

Phenomena are complex, and we have deliberately opted to face up to the problems and not to hide anything. Yes, of course, animals eat one another! But does this harsh law of nature not enable each species to exist? When we explain



both the fragility and the rich variety of a natural ecosystem such as a hedgerow, are children not better able to understand the part they will have to play and their future responsibilities? To destroy a hedgerow for a good reason is to attack nature as a whole. It is up to the child to choose! Today's children need to know, however, that although their decisions may not have any immediate effects, they will have consequences in 10 or 20 years' time or even later. Serious thought and a great deal of time are needed in order to take a detached view and long-term action. The written word is a particularly appropriate instrument for achieving these objectives. The child can read and reread, call on adults for help and look for more information in books.

Man and nature

The people present in nature are also present in the magazine, which explains how human beings manage natural resources. They make use of nature, which provides them with their food and surroundings. But management does not mean wastage or destruction. It is therefore necessary to explain that, when certain people make mistakes through ignorance or negligence, other people repair the damage. Within a few years (which will pass very quickly!) young readers will, in turn, be responsible for the management of the planet. Ignorance can cause ecological disasters, and information is therefore necessarily a prerequisite for action. We tell children what is happening in the world, even when there is very sad news, such as the imminent extinction of the rhinoceros and the blue whale. If we refuse to tell lies, it is because we want children to believe us. Their trust sometimes difficult to win and we must con-



Friess-Irmann

tinue warrant it by consulting scientists and keeping abreast of the news of statistics and of the action taken by associations. Instead of just saying, "Come and look", we add, "and you'll understand". This approach is essential if each child is to become aware of his or her responsibilities.

Truth and humour

Children all display a passionate interest in nature, each in his or her way. One will collect pictures of animals and play at putting a name to each one, while another will spend hours stroking a cat or watching the antics of a bird on the window-sill. Then suddenly, for no apparent reason, the child is afraid of an insect! Nature magazines, by teaching children more about their environment, enable them to master it and therefore feel more at ease in it. Being reassured and convinced, because the information they see in black and white is reliable, the readers can become animals' advocates. They can provide evidence and put forward arguments, text in hand, in favour of, for instance, the need to protect weasels, which serve an essential control purpose

in nature, given the proliferation of small rodents. As a written document, their magazine has credibility where adults are concerned and can even prompt further research in libraries or the request for more information from teachers. But hard facts do not mean boredom! Humour that puts the point across is better than a long speech. The magazine's mascot, a crow called Caesar, makes the children laugh. He is their great pal: he talks to them, answers their letters and gives them advice and information. As an animal, he listens to animals' complaints and is able to defend animals with zeal. Together with the rest of the magazine, he shows the children things, explains them and provides information.

Nature activities

The pleasure of reading and discovering nature in remote places arouses children's curiosity and awakes in them the desire to go a stage further, and possibly to see things for themselves—to follow animals' tracks, and catch them unaware at a stage of their lives that is so different from, or so similar to, their own. Through its magazine and, in particular, its club and its computer line, accessible to the public through the "Minitel" system, Wapiti offers numerous activities: nature courses, outings and do-it-yourself activities. For nature is something to be experienced every day, at first hand. It is up to the child to do things, take action and create things. Every month the magazine describes a "nature" activity: how to make a herbarium or a feeding-table for birds, or how to breed insects, so that children can become more familiar with nature by using their own hands and eyes. We are catering for children aged 7 to 13 with a sense of curiosity, who will find a magazine specially designed for them, which they can look at and understand and which will enable them, as friends of nature, to get involved in nature activities. And in the years to come, as they assume the responsibilities of adulthood, they will protect nature increasingly effectively. No mean project!

So, happy reading, everyone. Children, it's all yours!

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Roy/EXPLORER

Discovering the environment

Using all means

Simon F. Hodgson

The last decade has seen an unprecedented upwelling of interest and concern for the environment throughout Europe. This would have both surprised and pleased the pioneers of environmental protection and wildlife conservation in the earlier part of the century. By contrast however they would have been appalled at the destruction of the environment and the loss of habitats and wildlife that has taken place since the need to conserve and protect the natural heritage was first developed. This contrast is by no means accidental and it could be simply concluded that concern for the environment has grown as the destruction of nature has increasingly intruded on the lives and day-to-day concerns of ordinary people.

It would however be very depressing if the conservation of the natural heritage of Europe was to remain dependent on sufficient continued destruction of the environment to make headlines in newspapers or directly threaten the welfare of communities and individuals. The key to success is not in having to act after the event but to create sufficient awareness to ensure that the event does not happen in the first place. An optimistic challenge, but one that nevertheless does give those concerned for the future of the environment the main focus for their work; the raising of awareness and the education of everyone to the fundamental importance of protecting and conserving their environment.

Education-Action

The statement that conserving the environment is as much about education as action is not necessarily new, but what is perhaps less familiar is the concept that the environmental education process is not one that just takes place within the walls of the schools and colleges or should be in any sense limited by the constraints of formal education. The opportunity for people to learn about the need for environmental protection needs to be much more widely available and as much a part of the training programme of industrial companies or the work of local and community councils as it is the concern of the academic or dedicated environmentalist. In short, without the acceptance that the protection of the environment is a part of everyday life and the concern of every individual, there cannot be a great deal of optimism about the future.

The organisations directly concerned with the conservation of nature and the protection of the environment have been at

the forefront of educating the public about the need to care for nature; in the UK for example the voluntary sector organisations such as the RSPB (Royal Society for the Protection of Birds) and the BTCV (British Trust for Conservation Volunteers) have always had as a main aim raising awareness amongst the public about the need for the conservation of nature. This has been achieved through the development of membership information services, though work with the formal education sector in schools and also more recently by developing new and innovative approaches to the creation of opportunities for people to learn about the environment. The last of these offers the most interesting area for further consideration as it is the process whereby organisations spread understanding about the environment in informal and surprising ways that do not require people to join societies or attend formal courses. It is the process whereby people learn and begin to understand about the need for conservation through activities not necessarily related directly to conservation.

The widest possible audience

In the UK the number of people who are members of conservation organisations is at an all time high (+2 million) but it still only represents a small proportion of the population and most of the population in both the UK and the rest of Europe are "non-joiners" and, given the wider concern for environment that is clearly present, many people must be drawing their awareness of conservation problems from other sources. This strongly suggests that creating much higher levels of awareness in the future will not necessarily be solely dependent on the work of the dedicated conservation organisations. Other channels to informing people will have to be researched and exploited if the message is to reach the widest possible audience.

The value of considering how informal education processes can work to raise awareness about the environment is based on the principle that the quality of the environment is something which affects us all and neither can or should there be any limit to the type of oppor-



Roy/EXPLORER

Practical example

BTCV is the UK's leading voluntary sector organisation concerned with the practical involvement of people in the conservation of their environment. Our principal concern is to create a range of opportunities for people of all ages and backgrounds to become involved in the care of their environment.

For many years the BTCV has run a programme of holiday projects that have as their main aim the achievement of a practical conservation work project and the spread of understanding about the need for protection and conservation of the natural environment.

The programme covers the whole of the UK and now runs throughout the year. The projects cover a wide range of practical work including special species protection such as the building of otter holts and the management of semi-natural ancient woodland. The projects are often based in National

Parks or areas of high conservation interest such as National Nature Reserves. Each year the projects complete a vast amount of practical work and make a very real contribution to the conservation of the flora, fauna and countryside of the UK. The projects are made up of 12 people with a leader and assistant who have complementary social and conservation skills to ensure the projects run smoothly.

However, to focus just on the practical achievements of the project programme would be to miss the main point. The greatest achievement of the programme is to educate people and especially young people about the need for environmental protection and conservation. Each year the BTCV involves 6,500 people on 500 projects in this programme and they are often people who have had no experience of conservation before and who join the programme initially because it is cheap and offers a new experience. But the combination of the experience, the feeling of doing something of value

and the special effort the BTCV puts into ensuring that everyone learns more about the environment as a result of the involvement, means that very few people leave at the end of project not having become convinced that the protection of the environment is important and that they have a personal and effective contribution to make.

Each project includes a detailed explanation of the value of the work and the contribution it makes locally, regionally and nationally to the resolution of a particular conservation problem. All participants get practical training in the skills necessary to complete the project and many develop a long-term interest or special expertise in some of the practical and craft skills required to complete practical conservation projects.

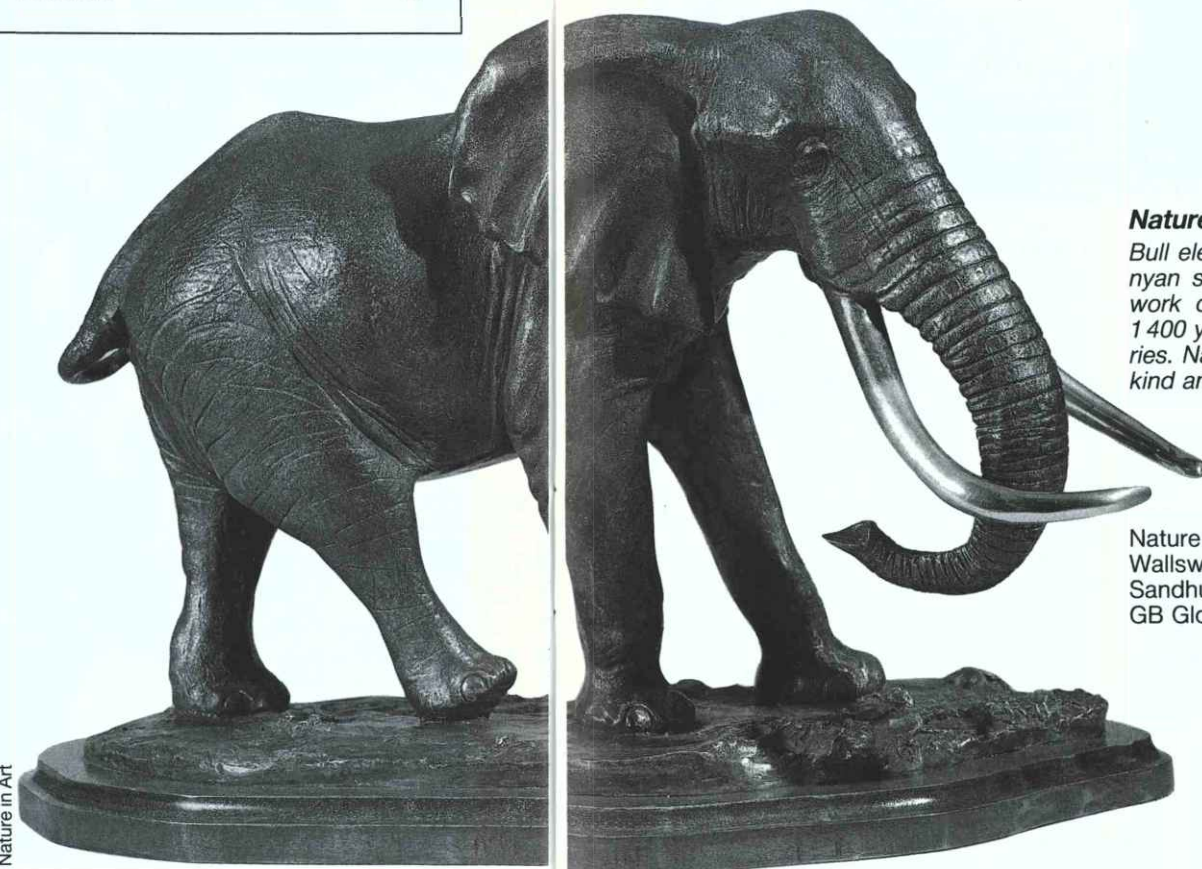
The very real success of the Conservation Working Holidays Programme is that it encourages and attracts people who have no expertise or past experience of environmental protection, to become involved in conservation and to learn in an informal, supportive and enjoyable way about conservation, the underlying theory and need for protection of the natural environment. ■

tunities which have been developed to promote and understanding about the environment. For instance the pressure of consumer interest in the environment is beginning to change the type of products being stocked in supermarkets, more "environment-friendly" products are appearing on the shelves and that in itself is an educating process, because the mere presence of a product labelled in this way will draw people's attention to it and they will be curious as to the meaning and as a result will learn a little more about protecting the environment, in this instance through consumer choice.

Another example of the way in which informal education can work is through the process of community involvement. The

geographical proximity of people in a village or urban community creates a common bond of place and although the mutual interests of the inhabitants may not traditionally have been associated with environmental matters, a concern for the quality of the local environment can become a very natural focus for the community. Threats to the local environment, say a road development, can unite the community and the process of opposing the development can raise awareness in that community of the number of uncontrolled developments on a regional, national and global scale. In other words, involvement in one process has raised awareness about another, in this case the damaging effects on the environment of some new road developments.

Nature in Art



Nature in Art

Bull elephant, a bronze sculpture by Kenyan sculptor Terry Mathews. This is a work of art from a collection covering 1400 years by 140 artists from 19 countries. Nature in Art is the first centre of its kind anywhere.

Nature in Art
Wallsworth Hall
Sandhurst
GB Gloucester GL2 9PA

Outdoor recreation

The growth in outdoor recreation pursuits is another excellent example where those involved have an opportunity to learn about the environment while undertaking an activity that was not primarily conceived for the purpose. The increasing interest of the general public in active outdoor activities such as walking, climbing and orienteering presents a good way of extending knowledge about the countryside and the conservation of nature. The provision of outdoor information boards, leaflets and interpretive facilities all provide opportunities for people of all ages to learn more about the area in which they are undertaking their activity and it is hoped that a greater understanding of that area will increase the desire to see that environment protected.

All opportunities

Those who have either a professional concern for the environment or are personally committed to protection of the environment have a responsibility at all times to seek new ways of promoting the message to more people, using any and every opportunity to promote learning about conservation and nature.

The key message to convey is that conservation of the environment should be important to everybody because it affects all aspects of everyone's life. The challenge for those seeking to promote the message is to understand that only small numbers of people respond to certain types of learning opportunity and we have to create new and imaginative ways for people to learn about the environment and make it relevant to them. The influence of television is tremendous and has been one of the most important influences in raising awareness about nature, but television alone will not solve the problem of ignorance and many people will not respond in a positive way to what is shown on the television. Similarly the whole range of adult education programmes and distance learning techniques will attract many people to learn more about the environment, but they will not attract everybody and some people will be positively put off by this type of opportunity. But start to add up all these various opportunities for people to learn

about the environment and combine that with a commitment to seek out new techniques for spreading the message to the full spectrum of society, and suddenly the combined effect is significant and maybe then we will begin to see the substantial change in attitudes that starts to open up the prospect of a real change for the better in societies' collective attitude to the environment and its collective desire to take positive action to ensure that it is protected.

In summary, education is the key to creating understanding about and concern for the environment, but the formal education sector will be only part of the process, as will the organisations that are specifically concerned with conservation. People involved in either of these areas will, I am sure, recognise that their work will come to very little if the greater part of society remains in ignorance about the need for and practice of environmental conservation. To create this greater understanding about the environment we have to look imaginatively at a whole range of new learning opportunities, some at first rather unlikely, that stimulate an interest amongst ordinary people and encourages them to learn more and ultimately feel that YES they do care about the environment. ■

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International exchanges

Initiatives in Poland

Jan W. Dobrowolski

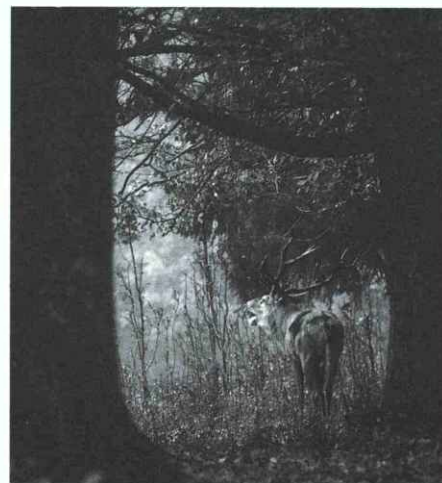
This article will examine the current state of environmental education based on the assumption that a relationship exists between the ecological crisis and the education system. Generally speaking, education may be described as being increasingly specialised. The trend is for pupils to be expected to assimilate an ever-growing mass of information about increasingly restricted areas of study: in other words, the mental outlook is narrowing. This paper sets out to see whether this phenomenon is of benefit, or otherwise, to mankind.

The adaptation of technological and environmental protection methods to human requirements is intended to guard against direct or indirect health hazards. Representatives of the various scientific disciplines should exchange information and must be encouraged to co-operate on a practical basis—something which is not currently practicable within the context of the teaching provided in university institutions. For this reason in 1968, I organised teaching and research courses throughout the country. The purpose was to conduct inter-disciplinary research, aimed at determining the state of the environment, and to identify the principal causes of the deterioration it had suffered. The courses took place in locations of renowned natural beauty in various regions around the country. They were intended not only to report accurately on the situation, but also to devise practical implements and even specific plans, in order to bring about improvements. These field projects were accompanied by discussions on environmental problems. Students had an opportunity to co-operate with each other as well as discussing issues with local inhabitants and, with the latter's approval, to propose solutions to the practical problems facing them.

The research courses came to represent an acknowledged forum for the international pooling of experience. We raised

the question of the social problems caused by environmental protection some 20 years ago in Poland, this being subsequently incorporated into the Unesco MAB Programme and into the UN Environment Programme. In view of our limited means, we adopted the slogan: "Think globally—act locally."

We planned to extend our research work to the development of types of economic activity which do not jeopardise protection of the natural environment.



Lapinski

Monitoring of pollution

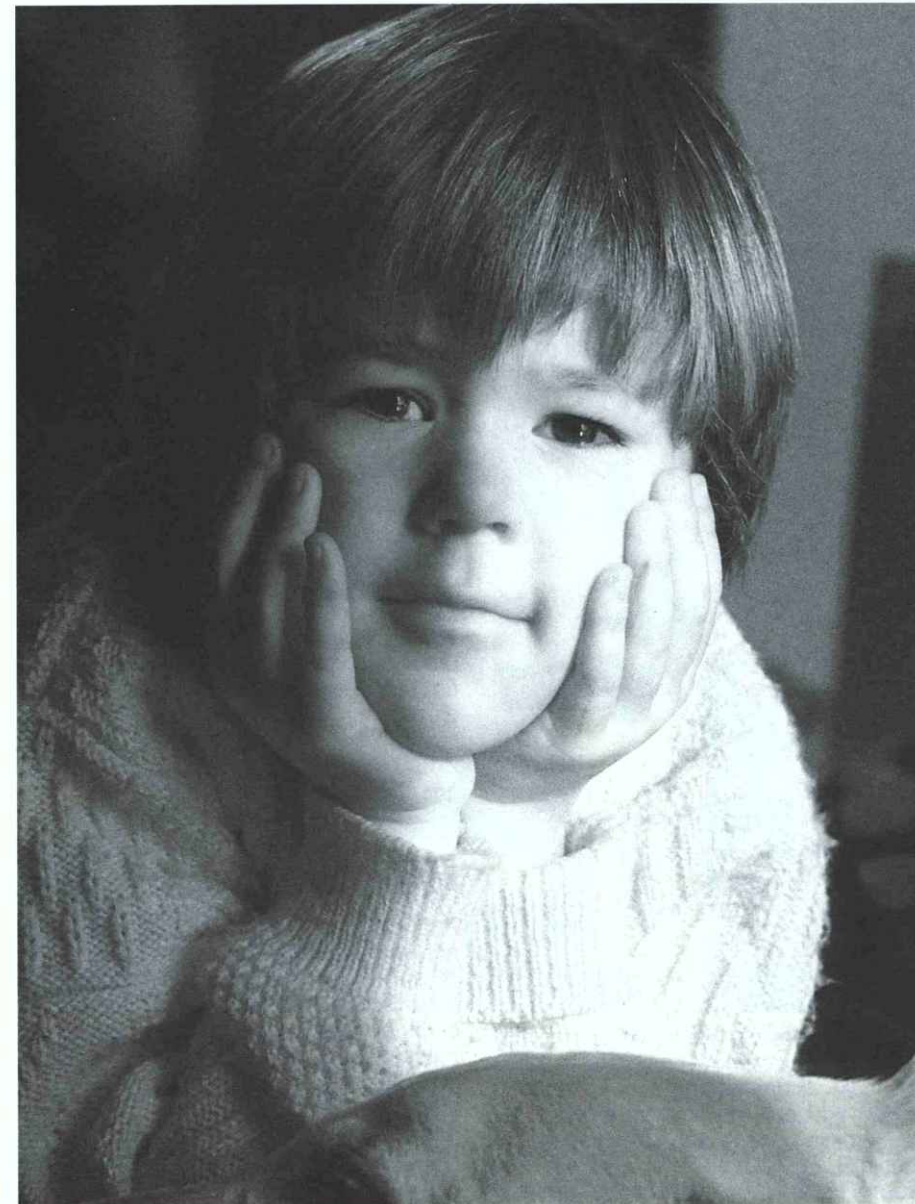
Courses on simple methods to monitor air and water pollution are an essential element of international collaboration. The quality of the environment, from a health point of view, can be assessed using these methods. The courses were given by Kazuo Amaya of the Tsukuba Research Centre, who has also secured the co-operation of the Bando company, which hopes to introduce small, low-cost, but highly efficient treatment plants into Poland, where they are sorely lacking. These are some of the positive results of direct co-operation both in research and in the practical application of methods to improve environmental quality. Individuals, and teachers in particular, must also be made aware of the ethical aspects of ecology. B. Zaufal has proposed an "eco-development" code which comprises rules governing the protection of the natural environment to be applied to the management and organisation of planning systems covering all activities in a given region.

Some 2,000 students and scientists have attended the courses and seminars organised throughout Poland. The figure may appear low, but it shows that environmental protection-orientated research and training can occupy a place of importance within the university context.

The study of the environment has enabled us to obtain fresh scientific data and to develop further instruments for enhancing environmental quality—a topic to which no-one can remain indifferent. It is our hope that the general willingness to work for the environment will result in concrete action: for example, replacing people with machines and robots when necessary and the development of new specialist training methods and programmes. Exchanges of experience in this area have been helped by a series of inter-disciplinary meetings held at the initiative of Yoichi Fukushima of the Science Council of Japan. The international conference of "Scientists for Better Human Environment" held in Tokyo in 1975, is an example of what is needed.

Respect for human dignity and life should lead us to reject the consumer society model and the desire for domination which have prevailed thus far. To this end, new educational models must be devised. Faced with the ever growing threats to the ecological balance, the inescapable conclusion is that it is our response to this moral imperative which will decide whether the human race is doomed or whether a species, worthy of the name "Homo sapiens" will survive. We trust that the survival of mankind may take precedence over more immediate aims prompted by selfishness. Whether or not this will happen depends on each one of us.

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C. Meyer

The family

Children start learning about their environment in earliest infancy (in the womb, according to some). They are assisted in their discovery by their parents, who pass on an inherited knowledge handed down from one generation to the next.

This is one of the fundamental roles played by parents, who, through their example and their explanations, show that you do not have to know in order to respect. Indeed, respect does not necessarily imply knowledge. It is the fundamental pre-existing attitude which should accompany every step, be it intellectual or practical. It is the parent's role to awaken children to the environment and help them to discover the world around them. This is a discovery which involves the five senses. There is no need to put a name on each thing provided it is enjoyed, or even rejected. One can appreciate and learn about nature, like music and indeed like everything, without necessarily passing a value judgement.

As the basic social unit, the family should be the starting point for all environmental education. Children see, understand, judge and choose. It is for parents to give them the means to make their choices.

Of course, it would be unrealistic to expect an ecologically-minded family to produce only naturalist adults. As with all forms of social behaviour, however, the family circle is the source of many basic personality traits. Every child should inherit respect for the environment. As with all knowledge, it will be up to him to put it to good use in later life.

Information centres

Karlheinz Fingerle

Nature conservation information centres as components of public relations policy are a legitimate means of getting the aims of nature conservation across to the general public and developing understanding of the official conservation measures taken at national, regional and local authority level.

Education about the natural world and the environment, and their interpretation, ought to pursue broader goals

than simply gaining acceptance for the relevant political decisions. These goals can be attained only if there are technically and educationally qualified people to staff not just supraregional but also regional nature conservation centres, and if visitors are given the opportunity to engage in activities of their own (under supervision): field-work, courses, discussion circles and seminars can also relate to professional and private interests derived from school and other studies and

stimulate a desire for further education. The most important factors here are motivation and the ability to do nature conservation work of one's own, plus opportunities to compare notes with other similarly committed people. Information for occasional visitors, suggestions for holiday-makers and walkers can be a way of encouraging activities based on practical experience, directed at specific target groups and action-oriented, paving the way for independent and active co-operation.

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Black-footed ferret

A unique combination

Edward J. McCrea

What do a small national wildlife agency, a state department of public instruction and the largest non-government conservation organisation in the country have in common? They are all integral parts of the environmental education system in the United States today. Environmental education programmes in the US are a diverse mixture of content, delivery systems, philosophies and definitions. This is partially due to the divergent origins of environmental education programmes in North America, but constitutional and leg-

al mandates also have played decisive roles in shaping American environmental education. As a result, the US has a unique mixture of formal and non-formal, private and public institutions providing environmental education to a wide variety of audiences.

Responsibilities for environmental education in the United States

According to the Constitution of the United States, education is not a primary area of responsibility or concern of the National Government. Instead, each of the 50 states has been left to decide what should be taught in its classrooms. There has been some standardisation over the years, but sequence and content of instruction as well as basic curriculum structure vary considerably from state to state. The system of standardised testing

so integral to education systems in many countries does not exist in the US. In addition, local school boards, frequently with considerable advice from parents, may decide what textbooks and other instructional materials are used in the classroom. The concepts of "national curriculum" and of "national teaching materials" do not exist in the United States.

One result of this decentralisation of education has been a rather scattered and disorganised system for teaching environmental education. While states have begun to include the teaching of environmental education as part of their standard curricula, as of 1987 only 17 states had legislation mandating an environmental education programme.

Partially because schools have not systematically included environment education in the past, a great deal of environmental education instruction in the United States is accomplished outside the formal education system. There is a long tradition within the environmental education field of the use of parks and preserves as places for visiting school groups and families to learn about nature subjects. Zoos, museums, and nature centres also are prime education sites.

A variety of audiences

In addition to the diversity of sites in the non-formal arena, there are also a variety of audiences. Families on camping vacations, Boy and Girl Scouts, and nature clubs all receive environmental education messages as part of largely recreational activities. To supplement a lack of materials prepared by major text book companies, non-governmental organisations (NGOs) such as National Audubon, the National Wildlife Federation, Zero Population Growth Inc., several natural resource related industries, etc. have produced environmental education materials widely used throughout the United States—both in the classroom and in non-traditional settings.

In fact, it can safely be said that in the United States today, almost all environmental education is a hybrid combining many resources, systems and sites. As a typical example, a school under its state mandated curriculum might bring its students to a national forest where the students use educational materials developed by a consortium of forest products industries. Before the visit, teachers may have received training in environmental education techniques at a workshop, perhaps given for college credit, run by instructors from NGOs and state and national government agencies. At its best, this system allows for the sharing of resources and expertise to insure that American youth are equipped to make informed decisions about environmental matters.

L. C. Goldmann, U. S. Fish and Wildlife Service

Valérie Cranz



Sophie Bourgenot

Examples at two levels

Since the states have the primary role in education, programmes at the national government level are largely restricted to providing facilities and materials in a coordinating and facilitating role. For instance, the US Fish and Wildlife Service manages some 480 National Wildlife Refuges encompassing over 35 million hectares. Many of these refuges are used by visiting school groups for learning activities. The Fish and Wildlife Service has produced lesson plans and activities in the past to help school use the areas as outdoor classrooms. The Service also has responded to requests for assistance in planning education programmes by producing two recent publications: "How to plan a conservation education programme" and "A directory of selected environmental education materials". The first of these publications provides a step-by-step planning model for analysing an environmental problem and designing an education programme to help solve the problem. The second publication provides one-page descriptions, with ordering information, of over 70 environmental education activity guides. These descriptions are grouped by subject area and concepts covered and may serve as examples for other people developing materials on a particular issue.

Many programmes at the state level use a variety of written environmental education materials at it is implemented. Much of that material may be provided by NGOs and private industries. A good example of such material is "The CLASS Project" produced by the National Wildlife Federation. NWF is perhaps best known for its colourful magazines, but as the United States' largest conservation organisation, the Federation has also been active in producing educational materials for school use. As the introduction to the California version of the CLASS Project states:

The CLASS Project is a series of 33 classroom-ready lessons presented in six thematic units: energy use, hazardous substances, wildlife habitat management, wetlands, forest watershed management and environmental issues. The materials are designed to be as "hand-on" as possible, thus reducing the teacher's role as the deliverer of information and increasing the amount of time students are actively involved in learning. Many lessons are designed with a co-operative learning format, promote basic skills, and encourage thinking about information in novel and productive ways.

The NWF materials reflect the goals and objectives of the organisation and are designed to fill what NWF sees as a gap in

the formal education system. Perhaps as many as 100 other NGOs and industries also produce such supplementary materials—reflecting each organisation's interests and concerns.

Trends

In the United States in the future, an extension of the status quo is likely. For fiscal as well as constitutional and philosophical reasons, the national government will play a modest co-ordinating role in environmental education with the states having primary responsibility. NGOs will also have active programmes and will produce educational materials to supplement the formal curriculum. As the description of the NWF material states, the emphasis will be on factual, hands-on materials which are easy for the teacher to use. While the approach to environmental education in the United States appears to be unwieldy and potentially duplicative, its long evolutionary history and solid foundation on the US constitution, indicate that it will be around for many years to come. ■

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At the Council of Europe



- biology: basic principles of ecology: trophic chains, energy flows;
- chemistry: pesticides, nitrates, pollution;
- physics: the water cycle, radioactivity;
- geography: soil formation and evolution, landscapes, natural resources.

b. publications

"Environmental awareness" describes the impressive range of pilot schemes in a number of European countries for teaching young people and adults about the environment. The potential use of botanical gardens, conventional and open-air museums, zoos and nature trails are mentioned and discussed.

"Environmental education for the farming community—experimental schemes in Europe" describes some of the ways in which various European countries are endeavouring to make farmers more conservation-minded. Leading members of a prominent organisation, the European Confederation of Agriculture (ECA) were actively involved in this study which recommend, among other developments, a change from intensive to extensive farming practices wherever possible.

The fascinating but little-known world of the invertebrate species is described in a remarkable and abundantly illustrated booklet published on the occasion of the adoption of the Charter on Invertebrates.

The Council of Europe has always taken a very keen interest in environmental education, in the firm belief that in our democratic countries, pressure of public opinion is a decisive aid to political decision-making. This area of activity devolves mainly upon the Environment Conservation and Management Division and the Centre Naturopa.

What has been achieved? Here are some examples:

a. recommendations

The most important of these is undoubtedly the recommendation on the introduction of the principles of nature conservation into education (Resolution (71) 14 of the Committee of Ministers of the Council of Europe), in which our experts offer practical proposals for incorporating the relevant aspects of ecology into the traditional disciplines. For example:

c. seminars

Co-operation with the farming community which carries so much of the blame for the present monotony and impoverishment of our countryside, was stepped up in a seminar on "Environmental training in agricultural circles" organised in conjunction with the European Confederation of Agriculture (ECA). Nitrates and land redistribution were the two subjects under consideration. A day of field work proved a helpful complement to the spoken word.

There have been several seminars for administrators of protected areas, in order to help them master the problems of, for example, wetland management or, more importantly, to foster co-operation with the local populations and acquaintance with the socio-economic life of the region. A protected area can be properly managed only by persons who are made aware of the problems and given appropriate training.

Initiatives have also been launched with the hunting community, especially the International Council of Game and Wildlife Conservation and the Federation of Hunting Associations of the EEC. As a result, a European code of conduct for hunters has been framed.

Current projects include preparations for a seminar on the uses of natural history museums and ecomuseums in educating the public. Conventional museums are no longer used solely for research, taxidermy and the preservation of specimens in alcohol; the trend everywhere is now towards greater involvement with the public, by such means as temporary exhibitions, lectures, debates, afterschool activities, etc.

The following activities are planned for the future:

- preparation of a guide to good farming practice, as envisaged by the Committee of Experts on Environmental Education in Agriculture (EE-AG);
- preparation of a guide to nature conservation at the local level (following the Sukopp studies);
- consumer education (activity proposed by Mr Antonietti of the Steering Committee for the Conservation and Management of the Environment and Natural Habitants (CDPE);
- seminar on the role of voluntary organisations in nature conservation. ■

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