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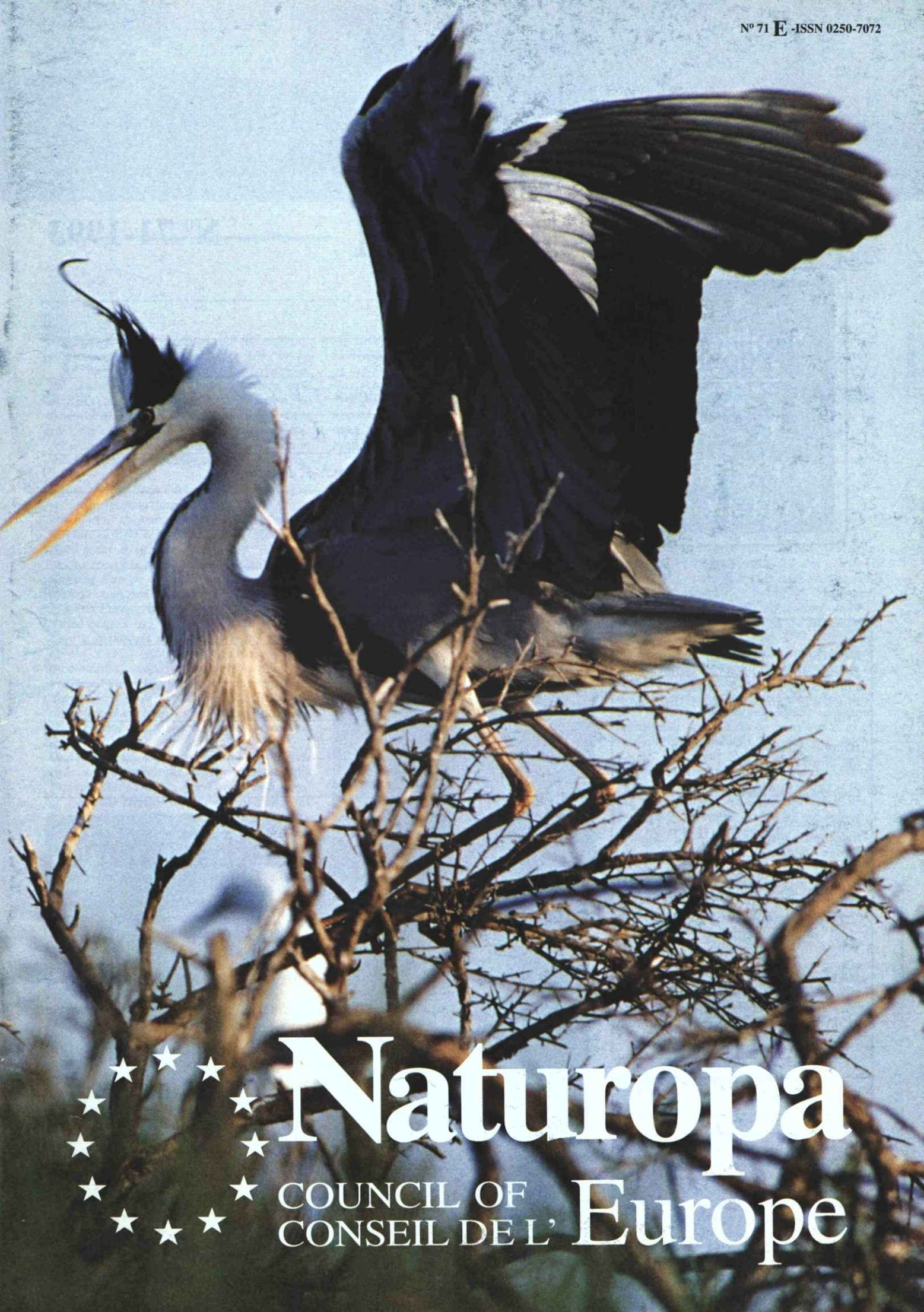

Naturopa

COUNCIL OF
CONSEIL DE L' Europe

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Nº 71-1993

The Council and Europe

Strasbourg, Stockholm, Rio, Lucerne: no-one can say that the planet's state of health is being ignored. It is an increasingly worrying state of health, and the doctors cannot yet agree on what emergency treatment to apply. Nevertheless, little by little, the dialogue advances, and we must hope and believe that out of all the declarations, charters, viewpoints and positions there will come the political determination to succeed.

At the end of April this year, an important pan-European conference in Lucerne, Switzerland, will once again bring together experts and decision-makers, to discuss "An environment for Europe".

The Council of Europe will be presenting the natural world of Europe, a sphere in which it has worked for over 30 years and in which its expertise is recognised. More protected areas, more effective legal protection, conservation of wildlife and landscapes outside protected areas, tourism that is environment-friendly, promotion of environmental education, these are the problems which the Council of Europe will submit to the Ministers. All these measures, of course, must be also placed in the context of European Nature Conservation Year which the Council of Europe is preparing for 1995.

As ever, this issue of Naturopa pays tribute to Europe's nature and to what the Council of Europe is doing to protect it better - on this occasion with even greater pleasure as, for the first time, the paper used is chlorine- and fibre-free. The message will get across all the better. ■

H.H.H.

CENTRE NATUROPA

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R. Rosolani

Editorial

There can be no doubt that the environment is one of the priority items in the intergovernmental work programme of the Council of Europe. There is nothing new or unusual about this: for over 30 years, the Council of Europe has been working incessantly to curb the impoverishment of the natural world and remedy an ecological situation which is giving increasing cause for concern.

Charters have been adopted and authoritative scientific papers have been brought to the attention of the member States in the form of resolutions and recommendations. Above all, there is the Bern Convention, our "weapon" in the struggle to conserve the fauna and flora of Europe as well as in a number of African countries. Many states of Central and Eastern Europe have already acceded to it, while others are planning to do so. Our Centre Naturopa and its publications have for the past 25 years been the instruments of a continuing campaign to alert the public to the need to safeguard the environment. European Conservation Year 1970 was a pronounced success, marking the beginning of a new and widely shared broad awareness.

Our Organisation reacted swiftly and effectively to the upheavals and revolutionary changes that took place in Europe at the end of 1989. As part of a policy of opening out towards the countries of Central and Eastern Europe upholding the same values and principles as ourselves - pluralist democracy, human rights and the rule of law - the Council of Europe drew up co-operation programmes aimed at sharing with those countries its achievements and experience in every respect of the work of building up an authentically democratic society. So far, three of those countries - Hungary, Poland and Bulgaria - have been admitted to membership of our Organisation, bringing the total number of member countries to 26, and all three now participate in our environmental activities. Many requests for membership from other Central and East European countries are currently being examined. As early as October 1990, in Vienna, the Parliamentary Assembly organised the first pan-European Parliamentary Conference on the protection of the East/West environment. Co-operation at intergovernmental level has involved practical action of various kinds:
- fact-finding visits by experts;
- courses for senior forestry officials;
- colloquies on tourism and the environment;
- a colloquy on the teaching of environmental law (first in Budapest and, more recently, in the old town of St. Petersburg).

The importance of the work accomplished by the Council of Europe to improve the natural environment was highlighted by the President of the French Republic in his speech to the Parliamentary Assembly on 4 May 1992; François Mitterrand invited our Organisation to make its action in defence of the environment pan-European, thus consistent with its present vocation.

He said: "You do not content yourselves with being a mere forum. You plan joint ventures, you discuss wide-ranging topics of paramount importance - the environment in particular - on which you undertake very specific projects: the Bern Convention on the Conservation of European Wildlife and Natural Habitats, European Diplomas for the most dynamic regions in the field of nature conservation, the many different awareness-raising campaigns organised as part of your Naturopa project. It might be useful to consider extending such activities to fields which are by definition 'pan-European'".

Council of Europe

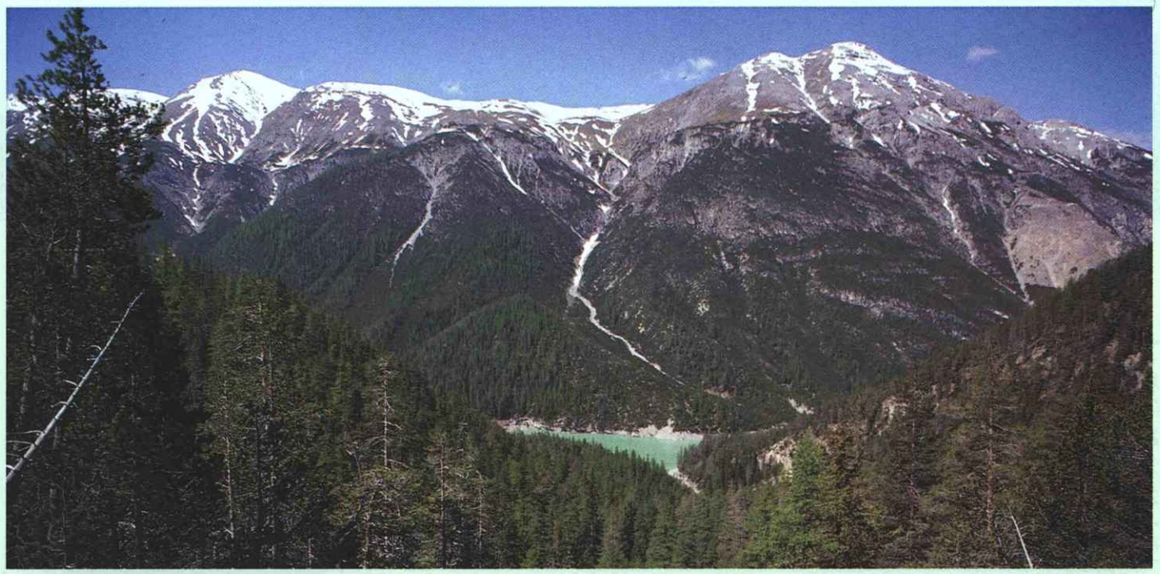
Last June's Conference in Rio de Janeiro is, for us too, a challenge for the future: the political, economic and judicial future of our continent. The Council of Europe also has a responsibility to give shape to the wishes, hopes and decisions formulated at Rio and adapt its activities and work programme for the benefit of the greater Europe. By this I mean a Europe where the natural environment is not subjected to artificial frontiers but where nature is respected and its laws and demands taken duly into account.

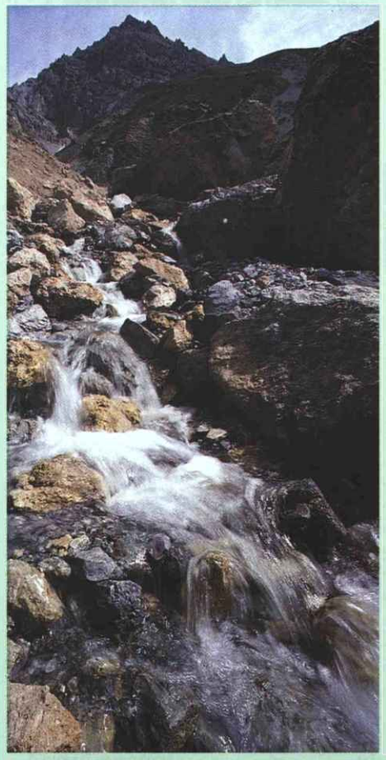
In two years' time, the Council of Europe will be organising European Nature Conservation Year, ENCY 95. We are confident that its International Organising Committee, and especially its national committees, will ensure that the theme attributed to that year has a major impact on planning and management policy where Europe's physical environment is concerned: the principles of nature conservation must be taken into account in all human activities.

While the main emphasis has been on the defence of the natural environment, the work of the Council of Europe touches on other fields as well. A Water Charter was adopted in 1968, and the Parliamentary Assembly is at present conducting a campaign on behalf of "Freshwater Europe". A Soil Charter was adopted in 1972, and a new legal instrument for the protection of soils is currently in preparation. In addition, the European Ministers of Justice have recommended the adoption of a European Convention on civil liability for damage resulting from activities dangerous to the environment. Work will soon begin on a similar text dealing with criminal liability. Might it not be conceivable, as the Parliamentary Assembly has proposed, for the Council of Europe, an Organisation situated at the point where human rights and the environment converge, to show how seriously it takes the Rio summit and undertake to draft a European Convention enshrining the individual right to a healthy environment?

Looking ahead to the first meeting of Heads of State and Government of the Council of Europe, which will take place in Vienna in October 1993, we ought, I think, to reflect on this question, on the words of President Mitterrand, and on the activities that the Council of Europe might be prompted to undertake in the wake of the pan-European Conference on "An Environment for Europe" to be held in Lucerne on 28, 29 and 30 April 1993, for which we are co-operating with the European Community and the United Nations Economic Commission for Europe. ■

Catherine Lalumière
Secretary General of the Council of Europe





Lucerne and after

The first pan-European Conference of Ministers of the Environment, held in June 1991 at Dobříš, by Prague, set in motion a process which may provide the framework for vital co-operation.

Switzerland has now volunteered to host the first Conference in the wake of the Dobříš Conference, in Lucerne on 28, 29 and 30 April 1993.

The States involved and competent international organisations have played an active part in the work of preparation.

One of the conference's major objectives will be to ensure that governments commit themselves to an immediate, practical, wide-ranging programme to tackle the environmental problems of Central and Eastern Europe in a coherent manner, in line with an established order of priority.

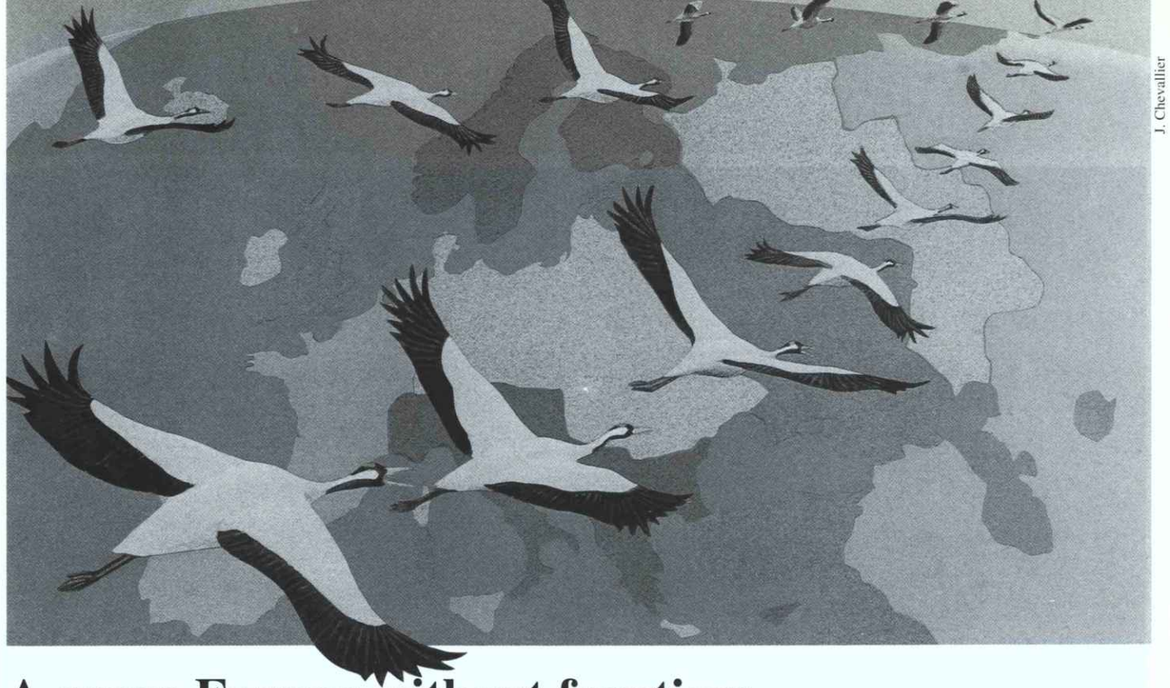
The "nature protection" part of this immediate programme is being worked out under the leadership of the Council of Europe, whose competence and long experience in this field, together with its pan-European vocation, mark it out for the task.

If Europe is to be built in harmony, and is to meet the expectations of its inhabitants, a high degree of environmental quality and protection must be secured throughout the continent.

I am convinced that the Council of Europe will make an invaluable contribution, its own unmatched contribution, to achieving this end.

René Felber
Swiss Federal Department of Foreign Affairs

K. Robin (4)



J. Chevallier

A green Europe without frontiers

Fer von der Assen

If we could fly over Europe like the cranes depicted on the centre spread of Naturopa 64, we would be struck first by the extreme diversity of the physical environment: the steppes of Siberia, the wetlands of north-west Europe, the arid landscapes of the Mediterranean.

No less striking as the years went by would be the realisation that the journey from one part of the continent to another was becoming more difficult. The reason is that human expansion, in terms of farming, recreation and tourism, is demanding more and more land and attempting to take over the last remaining natural areas in Europe.

Nor, I feel sure, would it escape our bird's-eye view that the number of obstacles strewn along Europe's seaboard was steadily increasing. The coasts of Europe are particularly vulnerable to demographic pressure and economic growth. Migrating birds have to find new nesting places every year, and the search becomes more and more difficult. Oil slicks and intensive hunting are added reasons for taking avoiding action.

If we were to don the skin of a wolf, a monk seal or a brown bear, we should probably experience some panic at the alarming rate of habitat depletion, both in quantity and quality. Species such as these are increasingly hemmed in by the encroachment of human activity. Not to mention the 60,000 invertebrate species in Europe, of which 10 or 20% are threatened with extinction, or the 200 species of freshwater fish of which half are in peril.

When we speak of "Europe's natural heritage" we refer to all these endangered or threatened species and their habitats. The word "heritage" clearly implies an obligation. A heritage is handed on from generation to generation, and each one is in duty bound to take proper care of it.

Europe's heritage is a European responsibility. Its natural environment knows nothing of the frontiers drawn by human beings, although it does suffer the effects of transfrontier pollution. Many decisions affecting nature and the environment are taken at the European level. A strong conservation policy, both national and European, must therefore be developed.

In my view, there is important work here for the Council of Europe to do; or rather to continue, for nature conservation has been one of its major priorities for a long time.

Looking back

Nature conservation has featured in the work programme of the Council of Europe since the early 1960s. In the course of the past 30 years, the ministers responsible for the natural environment in the member countries have adopted a whole array of resolutions on nature and landscape conservation. These range from the establishment of a network of biogenetic reserves to the appointment, in 1962, of the Committee of experts for the protection of nature and landscape, the ancestor of the present Steering Committee for the Conservation and Management of the Environment and Natural Habitats (CDPE).

The year 1967 saw the creation of the European Information Centre for Nature Conservation which was later renamed Centre Naturopa. The purpose of this to my mind highly significant initiative was the dissemination of knowledge and information concerning nature and the environment, by public awareness campaigns, international seminars and the like. European Conservation Year 1970, which was organised by the Council of Europe, marked the beginning of a series of political conferences on the natural environment which since 1973 have been held every three or four years.

At the second Conference of Ministers responsible for the natural environment which took place in Brussels in 1976, a Committee of experts was instructed to frame a legal instrument that would ensure the conservation of the fauna and flora of Europe. The result of this Committee's work was the adoption of the Convention on the Conservation of European Wildlife and Natural Habitats, the Bern Convention.

Opened for signature in 1979, the Bern Convention came into force on 1 June 1982. It has so far been ratified by 22 member States of the Council of Europe, the European Community and three non-member countries.

The European Conservation Strategy, formally adopted in Brussels in 1990 at the sixth Conference of Ministers, is an important step on the way to a coherent nature and environment policy in Europe.

For all these reasons I consider that the Council of Europe has made an outstanding contribution to nature conservation in Europe. However, much more remains to be done.

Looking ahead

So deplorable is the state of the natural environment that, clearly, the Council of Europe cannot and must not relax its efforts. With the abolition of political frontiers between Eastern and Western Europe, the Council's role as a forum for discussion has been further strengthened.

With its 26 member countries, the Council covers a comparatively sizeable geographical area and is now, I feel sure, in a position to exercise to the full its traditional role of providing information and exchanging experience.

KLM Aerocarto

Boschplaat Nature Reserve (NL), Diploma awarded in 1970.

The Centre Naturopa and its National Agencies serve the Council of Europe well. I am convinced that their activities should be extended and reinforced. The funds and staff they need in order to continue to fulfil their function must be forthcoming.

Another task of the Council of Europe could be to draw up a European nature conservation policy plan. This would be the practical follow-up to the European Conservation Strategy, while also providing the framework for implementing certain measures set out in Agenda 21 of the Rio Conference. The Council of Europe is the European intergovernmental organisation best placed to render this programme effective both in the countries of Western Europe and in the vast expanses of Central and Eastern Europe. The plan should offer a pan-European response to the issues of nature conservation. It should be prepared in close co-operation with the European Community which could launch a comparable programme for the territory of the Twelve. Obviously, too, co-operation with the World Conservation Union (IUCN) is indispensable.

The plan should aim to make national policies cohere at the pan-European level.

A European ecological network bringing together the principal habitats of value to wildlife could fulfil this role. The areas in the network should be linked to each other by ecological corridors. For the rehabilitation of highly degraded habitats, special restoration or development measures should be taken. In addition to strictly protected areas, the network should include farmland of particular value in terms of nature and landscape.

I am sure that the establishment of such a network in the framework of the Council of Europe will be an inspiring and a fruitful enterprise. I regard it as one of the main challenges that Europe must take up in order to defend the natural world, with all countries being together responsible for establishing and maintaining the network, while each assumes its own specific share of responsibility.

Are these utopian ideas? I do not think so, for the idea of ecological networks is one which has already come up in the policies of several European countries: examples include Lithuania, the Czech Republic, the Netherlands, Belgium and Germany. Under the EEC Habitat Directive, the setting-up of a European ecological network is even presented as an obligation for member States of the Community.

I am very glad to say that in the preparations for the Pan-European Conference "An Environment for Europe" in Lucerne, this aspect has been taken very seriously by the Council of Europe. The Government of the Netherlands also welcomes the support which the Council has undertaken to provide for the European Conference which is to be organised jointly by the Netherlands and Hungary in Maastricht towards the end of 1993. The theme will be "Conserving Europe's natural heritage: towards a European ecological network".

ENCY 95

Another priority concern is the conservation of nature and landscapes outside the strictly protected areas. This is the theme of European Nature Conservation Year (ENCY) 95, a theme which brings us directly up against all the other forms of human land use: agriculture, tourism, town planning and infrastructure development. I hope that the question of the relationship between nature and landscape quality and the various forms of land use will remain on the Council of Europe's agenda after ENCY is over. A clearly formulated nature conservation strategy is a precondition for the rational discussion needed for coming to terms with the other sectors concerned. In order to reconcile nature conservation with other interests, the objectives must be clearly set out.

I have noticed that at the Council of Europe, general agreement on these objectives is often lacking. There are those who put species first, while others give priority to habitats. Although excessive uniformity is not a good thing, I think it is necessary, nonetheless, that there should be consensus in Europe over which course to take. Furthermore, because of the transboundary dimension of nature, the effectiveness of investments for nature conservation in one country often depends directly on the investment effort -or lack of it - in another. I hope it will be possible to reach agreement this year, at the Lucerne and Maastricht Conferences, on a pan-European approach.

I also hope that environmental education will be a particular focus of attention for the Council of Europe. The heirs to Europe's natural environment must be made aware in early childhood of the asset which a varied and healthy natural world represents. This challenge must be faced. The Centre Naturopa and its Agencies could have a leading role in this respect, together with organisations such as the IUCN.

Lastly, I should like to address one important aspect of conservation activity, namely co-operation between the public authorities and the non-governmental organisations (NGOs). In the course of my work I have noticed that the NGOs are often regarded as trouble-makers and spoil-sports.

I should like to put in a word for more constructive co-operation with the NGOs. Experience in many countries and also at the Rio Conference has shown that a common approach to the issues can be of immense benefit both for nature conservation and, obviously, for good relations between the interested parties. The Council of Europe can exert a beneficial influence here. In fact, by co-operating closely with the IUCN in the context of the Lucerne Conference and admitting NGO observers to the meetings of the CDPE, the Council has already made an important step in this direction.

To conclude...

The year 2001 will be decisive for judging the success of our efforts. The turn of a century is both the beginning of a new era and the time to take stock of the previous one. We have only eight years in which to redress the balance slightly to our advantage: an uphill task.

ENCY 1995 could be the occasion for an interim assessment. That is why I sincerely hope that it will be put to active use as a means of drawing attention to Europe's natural environment and the measure needed to conserve it. It is a year which will offer numerous opportunities for discussion and media events.

In the year 2001 we shall have to look upon Europe once again through the eyes of a bear, a wolf, a monk seal or a crane.

Shall we find a greener Europe covered with vast natural areas bound together by woodland strips and sinuous rivers flowing through an agrarian landscape where wildlife prospers and natural habitats abound?

How safe a place will Europe be? Safe, I mean, not only for humanity but also for the animals and plants? Will they have enough room in which to live freely without fear of being confined to ever shrinking habitats? Will it be a world without oil slicks, a world of clear, unpolluted waters and healthy forests? The choice is ours. ■

F. H. J. von der Assen
Chairman of the CDPE
Council of Europe

The ecological network in the Netherlands

As well as indicating the various existing natural habitats and other zones offering potential for development as such, this map shows the ecological corridors that need to be created or improved in order to form a coherent national network.

These corridors are intended to enable wild species to move from one habitat to another, thus avoiding confinement in a biotope with no outlets.

European Conservation Strategy

Richard C. Steele

The development of a European Conservation Strategy was based on a recommendation to the Committee of Ministers from the 5th European Ministerial Conference on the Environment held in 1987. The Committee adopted the recommendation and asked the Steering Committee for the Conservation and Management of the Environment and Natural Habitats (CDPE) to produce a draft recommendation and delegated its powers of adoption of the text of the Strategy to the 6th European Ministerial Conference on the Environment. The text was presented by the CDPE to, and adopted by, the 6th European Ministerial Conference in October 1990.

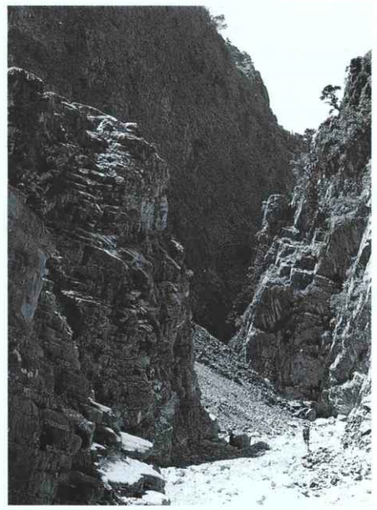
The European Ministerial Conference noted the impact of humanity on the environment. This growing impact not only endangered the survival of an ever-increasing number of plant and animal species and their habitats but of humanity itself. The European Ministerial Conference directed that the Strategy should meet objectives which sought to promote a culture that led humanity to co-exist with nature and met the legitimate needs and aspirations of all Europeans by basing economic, social and cultural developments on a rational and sustainable use of natural resources and the maintenance of a healthy environment. The Conference recognised the need to secure the co-operation of all Europeans in the development and implementation of the Strategy and in suggesting how sustainable development and conservation can be integrated and achieved.

To meet these objectives the Ministerial Conference considered that the Strategy should be based on the principle that the safeguarding of species, ecosystems and essential natural processes should be considered an obligation on all people and that all European states should accept sustainable development which helps to meet the needs of the present without compromising the aspirations of future generations. It followed from this statement that all European states should seek to continue their economic and social development within a healthy environment free from pollution and without the loss of values and opportunities associated with a broad and stable resource base.

With this Ministerial guidance the European Conservation Strategy was drafted by the CDPE. It contained both general and sectoral elements.

A call on governments

The Strategy calls on governments to accept their responsibility to draw up national conservation strategies and outlines the elements common to these strategies. Governments and authorities at all levels should provide the conditions suitable to the development and implementation of policies to safeguard the quality of people's lives, to sustain social and economic well-being, and to manage natural resources in economically effective ways. Governments should give high priority to environmental protection measures and the setting of environmental protection standards and should monitor and report on the condition of the environment. It was also necessary for governments to provide the legislative, fiscal and budgetary frameworks conducive to the formulation and implementation of national conservation strategies and to encourage the necessary vertical and horizontal linkages within and between countries.



A. Plymakis

Samaria National Park in Crete (GR), Diploma awarded in 1979.

Environmental issues must be integral to all development policies and practices. Such policies should be flexible enough to meet new challenges but should also be clearly formulated so that they can deal with existing problems. Remedial measures to repair environmental damage will continue to be necessary but a greater emphasis should be placed on the prevention of such damage. To help the development of preventive rather than remedial action, environmental data bases are needed and so are environmental audits which include non-monetary indicators of environmental performance.

To achieve these aims it is necessary to involve all sectors of society. Effective information systems must be used and wide consultation must take place. International co-operation is vital and aid programmes must be based on ecologically sustainable policies and practices.

Consequences

Sectoral elements of the European Conservation Strategy recognise that disruption of the many complex relationships that make up the environment could have serious consequences both in the short- and long-term. The increasing concentration of carbon dioxide in the atmosphere and the consequential rise in temperature, the hole in the ozone layer and its likely effects on human health, the acidification of our environment and its effect on wildlife are all taking place now and need to be addressed now. So too must waste production and waste disposal which leads to the contamination of land, water and air.

The European Conservation Strategy seeks to ensure that landscape conservation is integrated with all other uses of our environment including agriculture, forestry, recreation and urban and industrial development. It suggests measures to enable wildlife and biotopes to be conserved more effectively both *in situ* and, where appropriate, *ex situ* as in botanical and zoological gardens. The ECS emphasises that the protection of genetic resources is a key component both for its present use and enjoyment and as a prudent, even essential, investment for possible future values.

The European Conservation Strategy and national strategies need to be developed and implemented at all levels; everyone is involved and everyone must play a part. ■

R. C. Steele
"Treetops"
20 Deepdene Wood
GB-Dorking, Surrey RH5 4BQ

The Strategy which develops all the points mentioned in the article is available.

Ordesa y Monte Perdido

Ordesa and Monte Perdido National Park (E), Diploma awarded in 1988.

Working relentlessly for nature

Jean-Pierre Ribaut

Judgements on 30 years of activity by an international organisation are bound to differ, especially when that activity concerns the environment. Voluntary conservation groups and their like will point out that the situation of our biosphere is constantly deteriorating: depletion of the ozone layer, heavy metals in the soil, heating of the Earth's atmosphere, increasing amounts of increasingly toxic waste etc. Political leaders, on the other hand, will point to the diminution of sulphur dioxide and nitrogen oxide emissions, progress in waste recycling and energy saving ...

As usual, everyone will be right; but then, everyone's judgement is biased, having of necessity being formed with reference to past experience and personal commitment.

Is there such a thing as objective judgement? I think not, or rather that it is very difficult to achieve. I would add that in a field such as this, where change is so rapid, where it is so difficult to assemble all reliable basic data and where, more importantly, projections into the future are often extremely hazardous, objectivity may be a side issue. What counts is the global trend, the growing awareness of environmental problems that is discernible everywhere.

Come to the point, you will say: what has the Council of Europe really achieved in these 30 years?

Let us look objectively at our record:

- the Bern Convention;

- a hundred recommendations of the Committee of Ministers to member governments on subjects as diverse as the protection of water quality, heathland management or the campaign for freshwater fish;

- 36 resolutions of the Committee of Ministers accompanying the award of the European Diploma;

- studies and monographs on:

• threatened species of vertbrates and invertebrates, vascular plants, Bryophytas;

• characteristic European natural habitats: alluvial forests, peatlands, heathlands, dunes, hedgerow landscapes, calcareous grasslands, halophyte vegetation, the soil; not forgetting our legal analyses (on environmental impact assessments, for example);

- 30 seminars/colloquies/workshops/symposia (depending on the word in vogue at the time) on topical themes: agriculture and environment, the lynx, the educational role of museums etc.

How many thousands of acres of forest needed to be cut down to produce all these publications? And how many more for this periodical issued by the Centre Naturopa? One may well ask!

Seriously though, how is one to communicate without paper?

Early days

In 1962, when the seriousness of the situation was understood only by a handful of naturalists, the Committee of Ministers was prompted by an enlightened recommendation of the Parliamentary Assembly to study the impending environmental problems. Very soon our experts realised that they were likely to be preaching in the desert, so few people were showing any interest and words like "ecology" "the Greens" and "environment" were practically unknown. Hence the decision to alert public opinion in Europe by a vast information campaign: European Conservation Year 1970. And it is no idle boast to say that that particular event, organised by the Centre Naturopa, with its launching Conference in Strasbourg (9-12 February 1970) probably marks the point in time when nature conservation and the environment became political concerns in Europe. Acting on one of the Conference's recommendations six months afterwards, the United Kingdom appointed the first Minister of the Environment, followed by France in the spring of 1971. Lawyers and lawmakers everywhere set to work, and the voluntary organisations, after being isolated and even derided for decades, emerged at last to find their efforts recognised.

The only organisation to place the environment on its intergovernmental work programme, the Council of Europe began in 1962 to address practically all the major issues, not without success:

- the "Water Charter" was solemnly proclaimed on 6 May 1968;

- following the vast conference organised in the summer of 1964, the "Declaration of Principles on Air Pollution Control" was adopted in 1968;

- the "European Diploma" was instituted in 1965, and awarded to landscapes, nature parks and nature reserves with a good conservation record.

The emphasis very quickly came to be placed partly on nature conservation and partly on information, education and training. After the first Conference of European Ministers responsible for the Environment, which took place in Vienna in March 1973, this tendency to focus on the national heritage was greatly accentuated. In that same year, two environmental programmes were launched which later proved extremely important: the European Community programme and the

NSG Siebengebirge

Siebengebirge Nature Reserve (D) Diploma awarded in 1971.

programme of the Organisation for Economic Co-operation and Development (OECD). Having as their fundamental aim to curb pollution and put an end to economic and other anomalies, they soon became large-scale operations in view of the issues at stake. There developed a natural complementarity between the work of the OECD and the Community on the one hand and that of the Council of Europe on the other.

Following the initiatives of the first years of activity, the Committee of Experts responsible for the whole of the "nature" sector felt that a more methodical approach was necessary. Two basic study series where thus inaugurated:

- one concerning the various groups of wild species; this meant systematically identifying and later making a detailed study of all the threatened species of vertebrates, some groups of invertebrates, all the vascular plant species and the Bryophytas;

- the other reviewing the principal natural habitat types of our continent: heathlands, alluvial forests etc.

With this valuable information it was possible to establish a second network of protected areas (the first being the network of sites - currently 36 in number - receiving the European Diploma as a token of recognition). The two study series made it possible to identify, in Europe, those sites which harbour the threatened species and those which are particularly representative of one or other habitat type. Today, the European network of biogenetic reserves comprises 286 reserves (3,300,000 hectares in all) in 17 different countries.

It is indeed indispensable to preserve representative samples of our natural ecosystems for future generations, who have a moral right to enjoy the same natural resources as ourselves. But there are other problems to consider. "Nature under glass" is an out-of-date conception. It could be justified, or at least explained, in the days when economic development was all-powerful and nature lovers were on the defensive. The situation today is quite different. Even though, politically, development is still a priority political objective, we now know more about the other side of the picture: the volume of waste of all kinds and the number of pollutants are increasing almost daily, despite considerable progress in some areas. The idea that ecology and economy are irreconciliable is obsolete: true enough, but it would be wrong to think that a combination of the two automatically makes for a happy marriage. The major difference is that whereas ecology is concerned with the long term, economic considerations are usually confined to the immediate or medium-term future.

Does that mean that there can be no such marriage? Certainly not. It will be no love match but a good old-fashioned arranged marriage.

A new approach

This new approach has been put to the test by the Council of Europe in various fields, most significantly that of agriculture. This was not easy, however, and to get down to business with the Secretary General of the European Confederation of Agriculture - our partner in dialogue - I had to swallow my pride on a number of occasions (so did he) and learn to tell the difference between farmers and farming. But we succeeded, and our innumerable discussions and other concerted endeavours were crowned by an important colloquy on nitrates and land reallocation.

Although these two themes proved difficult to handle, agreement was reached on guidelines for the use of nitrates and the practice of land reallocation. True, there were, and still are, differences of opinion; but the point about this colloquy is that dialogue was generated sincerely, not between adversaries but between partners. The same is true of the World Conference in Rio: here too, the success of the event lay mainly in the participants' willingness to listen.

The problems of agriculture are obviously not settled, far from it! Soil conservation is today our main field of innovation, and work is going ahead to frame a European legal instrument for co-operation. Pesticides, fertilisers and heavy metals are so affecting the quality of the soil that this vital medium will become sterilised or poisoned unless we do everything in our power to stop it. There is no life without water, the first principle of the Water Charter reminds us: nor, alas, is there any life without a healthy soil.

The techniques of modern agriculture are having adverse effects on our landscapes, rendering them monotonous. The problems this poses are more important than one might at first suppose, since they added up to a significant impoverishment of biological diversity; a group of specialists is currently looking into them.

The mass of information assembled on the state of wildlife and the vast experience that the Council of Europe has accumulated in the management of natural habitats prompted the member governments to entrust the Organisation with the work of drafting a Convention to ensure better protection and management of Europe's natural heritage. The Bern Convention is an important step in the right direction and represents a new departure: new because it is the only international convention to cover simultaneously all the wild fauna and flora, the habitats and the landscapes of our continent. Being designed to move with the times, it includes appendices with lists of totally protected species with their habitats which may be modified and adapted comparatively easily as situations change. The Standing Committee, which brings together all the Contracting Parties, normally once a year, is a permanent forum for exchanging information and monitoring the application of the Convention's provisions. Non-member countries in Europe and Africa may accede, since the birds we see in Europe may have come from Siberia or be on their way to winter in Africa. Non-governmental organisations have an essential role:

- in co-operating on the scientific side in general, and keeping up a certain "pressure";

- in reporting cases of non-compliance, and so enabling the Committee to consider the important cases and bring its influence to bear on the country concerned, if it is desirable and necessary to do so.

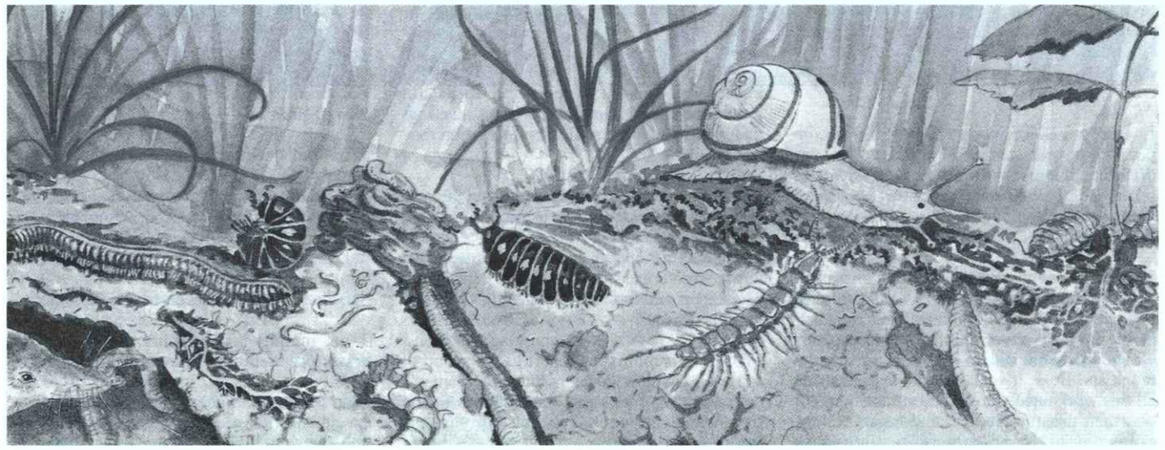
The convention is at present applied by 25 countries, and the great flexibility of its design means that there is much potential for initiative.

On balance, therefore, the Council of Europe need not be ashamed of its 30-year record of activity on behalf of the environment, helped by the sustained work of the Centre Naturopa in providing information and training.

But there is now a new challenge before us, and it is a major one: that of developing substantial co-operation with the countries of Central and Eastern Europe, not disappointing them, but finding ways and means of helping them resolve the considerable difficulties in their path. It is a challenge that must be met, and fortunately the Council of Europe is not alone in taking it up.

Let us hope that Maastricht does not overshadow the greater Europe - dare I call it the authentic Europe? - and that our brothers (and sisters) in Eastern Europe will not simply be passed over: for that, I fear, was their fate at Rio. ■

Dr. J.-P. Ribaut
Head of the Environment
Conservation and Management Division
Council of Europe



F. Schwebel

Soil

The 6th European Ministerial Conference on the Environment (Bruxelles, October 1990) asked the Council of Europe to undertake a step by step action which, starting with a recommendation, would set up a work programme implying concrete initiatives for soil protection and end up, if appropriate, with the elaboration of a framework convention.

In May 1992, the Committee of Ministers adopted Recommendation No. R (92) 8 on soil protection. No formal decision has yet been taken on the framework convention.

A group of specialists is currently drafting a manual on soil conservation. The manual will offer a set of generally accepted principles, harmonised methods and criteria applicable to soil conservation. Other issues covered will include the gathering of existing data, the setting up of a European database, harmonisation of the methods for monitoring soil deterioration, and the definition of thresholds and standards for the treatment of contaminated soils.

The manual is intended to be a practical guide for soil users; it will also be a useful tool for decision-makers.

Three future activities are envisaged:

- assessment of the vulnerability of soils in Europe;
- techniques for restoring damaged soil;
- the delayed effects of metal residues in soil. ■

European Diploma

Hector Hacourt

It is generally agreed that the main reason for the reduction in the number of plant and animal species is habitat depletion. Habitat depletion is due chiefly to the activities of modern society; more and more space needs to be cleared so that towns can expand and the infrastructures people need (harbour complexes, industries, motorways etc.) can be built.

It is crucial, therefore, to preserve natural habitats; this in fact is the purpose for which the Bern Convention, was framed.

The idea was, and still is, to establish areas, either natural or semi-natural, which are sufficiently protected against human activities and where all species can continue to live and breathe normally. Although the law responded very early to the urgent need to protect natural areas, it was not until the 19th century that the world's first national park was created.

In Europe, there was established a whole network of protected areas, which go by very different names: nature reserves (strict or otherwise); forest reserves; hunting preserves; nature parks; regional parks; national parks; not forgetting the natural monuments.

This excellent work was undertaken at several different levels, and now is the time to pay tribute to the governmental and especially to the non-governmental organisations whose members did so much to protect the fauna and flora. It soon became apparent that all this work needed to be co-ordinated, and it was then that the international organisations, governmental and otherwise, began to address what proved to be very complex biological and legal problems.

The Council of Europe joined in this effort in 1964; our Organisation explored the possibility of setting up, within the member States and other countries, a network of areas enjoying a high degree of protection and exemplary management.

Born in 1965

So it was that in 1965, Resolution (65) 6 of the Committee of Ministers of the Council of Europe inaugurated the European Diploma.

The European Diploma is a distinction awarded to areas of international value and particularly of European interest from the point of view of protection of the natural heritage, by virtue of their scientific, cultural, aesthetic and/or recreational quality. They must also be adequately protected areas. This is laid down in Article 1 of the Regulations governing the award of the Diploma.

The European Diploma is thus a mark of recognition attributed by the Council of Europe like a seal of approval, subject to conditions clearly specified in the Regulations.

Obtaining the Diploma

The award procedure and the procedure for renewing the Diploma once awarded are, understandably, similar. Even in this short space, it would be helpful to describe both.

It is the government of the country in which the area is situated that submits the application for the European Diploma. If the area lies across one or more national frontiers, the application must be submitted by all the governments concerned.

The Secretariat begins by considering the documents to decide whether the application is admissible, and if so presents it to a group of specialists specially appointed for the purpose. A representative of the applicant government may attend the group's meetings and give its members all the information they need.

If the documentary evidence is satisfactory, the group of specialists requests that an expert be appointed by the Secretary General to conduct an appraisal, and draws up exact terms of reference for the expert's guidance. The expert may not be a national of the country concerned.

The expert submits his report to the group of specialists which may in turn suggest one of the following four decisions to the Steering Committee with overall responsibility for the European Diploma:

- that the Diploma be awarded immediately;

- that the award of the Diploma be conditional on the adoption of additional measures;

- that the application be deferred pending receipt of further information;

- that the application be rejected.

The decision to award the European Diploma is taken by the Committee of Ministers in the form of a Resolution; this is recorded in the Diploma signed by the Secretary General of the Council of Europe. A ceremony then takes place during which the Diploma is handed over to the authorities directly responsible for the management of the natural area concerned.

But the European Diploma is awarded only for a period of five years. In the fifth year, the Steering Committee concerned considers whether the Diploma may be renewed for a further five-year period. The renewal procedure is very nearly identical with the award procedure.

Once a year during the five-year period, the management authorities send a report to the group of specialists which may then make any recommendations it considers necessary.

This may seem a lengthy procedure, but it is an indispensable one if the group of specialists, the Steering Committee and the Secretary General are to monitor the management of the area to which the Diploma has been awarded.

It also guarantees that the European Diploma continues to be regarded as a genuine seal of approval and not simply a document obtainable on request. Indeed Article 8 of the Regulations states precisely what the procedure is for withdrawing the European Diploma in the event of a serious threat to or deterioration of the area. Regrettably this provision had to be applied in one case, and the European Diploma was withdrawn from the area in question.

What has been gained?

Firstly, since the Diploma was first instituted, a network of well-protected natural or semi-natural areas of international scientific interest has been established in Europe. From 1965 until the present time, 36 areas situated in 14 member States have received the Diploma.

True, management problems exist in the areas to which the Diploma has been awarded, just as they do in any other protected area. But the comments made by the group of specialists after examining the annual reports and the conclusions of the five-yearly appraisal prior to the renewal of the Diploma, provide those responsible with a source of information which can help them in their day-to-day work.

These recommendations and conditions are offered in a constructive spirit, and since receiving the European Diploma some areas have had their budgets increased and their workforces augmented, in particular the number of wardens. Action undertaken on the spot, is often with beneficial effects, as when:

- construction work incompatible with the area's status is halted;

- gravel pits are rehabilitated;

- unsightly installations are camouflaged;

- inclusion in the zone of neighbouring areas;

- reserves are created within the area;

R. Rosolani

Maremma Nature Park (I) Diploma awarded in 1992.

- scientific research work into native species is stepped up;

- stricter regulations are laid down;

- certain, mainly sporting activities incompatible with the area's status are curbed;

- the use of chemicals in intensive farming is limited;

- a strictly protected area's status is reinforced;

- human activity in the peripheral zone is restricted.

This list is far from exhaustive; for instance, it does not mention the information and education campaigns which have been considerably expanded in recent years.

The way forward

It must not be forgotten that when the Committee of Ministers awards or renews the European Diploma, it invariably lays down conditions or makes recommendations, or both. Every five years in the course of the on-the-spot appraisals, these conditions and recommendations are examined jointly by the authorities responsible for the protected area and the Council of Europe expert, who see whether they have been taken into account and what progress has been made with the work done to put them into effect.

Similarly, international seminars for managers of protected areas are held fairly regularly in the European Diploma network. These provide managers with a unique opportunity to exchange information and discover what success their colleagues in other protected areas are having in their routine and experimental work.

On the other hand, the European Diploma has the effect of attracting visitors. In nearly all areas receiving the European Diploma, the authorities say that the number of visitors has increased, sometimes considerably, since the award was made. A doubtful benefit ....

The European Diploma is listed in the intergovernmental programme of activities of the Council of Europe as a permanent activity. It is even considered as one of the Organisation's priority activities where the management of the physical and natural environment is concerned.

It is a contribution to the task of safeguarding natural and semi-natural habitats, whose biological, ecological, aesthetic and recreational characteristics it is designed to preserve. The obligation to defend animal and plant life and enable it to survive is also a contribution to human well-being, for in these sanctuaries of nature - which is what the Diploma-holding areas are - people can find an antidote to the stress of daily living.

Only these natural habaitats will give them a quality of life that cannot be found in towns, industrial centres or any other place where modern civilisation rules.

By managing it properly and using it with intelligence and sympathy, mankind will pay the natural world its due tribute of respect and - on that condition alone - will receive in return all the benefits that nature holds in store. ■

Ing. H. Hacourt
Principal Administrative Officer
Council of Europe

J. Barbery

A new convention

Erik Harremoes

Protection of the environment is one of the key issues of the end of this century. There can be no sustainable development without concern for this essential factor.

The Council of Europe has completed preparation of a major Convention on Civil Liability for Damage resulting from Activities Dangerous to the Environment.

This convention ensures that everyone - operators, industrialists, environmental groups and ordinary citizens - has an irreplaceable part to play alongside the authorities.

It strikes a judicious balance between the demands of environmental protection and the needs of industry.

The legal mechanism of strict civil liability

In law, a person is traditionally liable for damage only if he or she has committed some fault; that person is therefore not considered answerable for accidental damage.

In environmental matters the risks attendant on some occupational activities are such that the traditional system of fault is clearly inadequate.

The convention consequently applies the mechanism of strict liability to a wide range of dangerous activities. Operators are thus considered liable in civil law for damage caused by activities they manage, even if they are not in breach of the law and have not committed any fault. As professionals, they assume responsibility for occupational risks in their branch of activity rather than shifting it onto others or onto the community.

Dangerous activities

The convention applies this system of strict liability to a whole series of activities that it defines as dangerous to the environment:

- activities which produce or use dangerous substances, such as toxic substances. A list of a hundred or so substances is provided, but it is not exhaustive;

- activities which make use of genetically modified organisms (GMOs), ie organisms in which the genetic material has been altered in a way which does not occur naturally;

- waste treatment activities and waste dumps.

Who is liable?

Under the convention, liability rests with the person who controls the dangerous activity.

This may be an individual or a public authority. A local authority operating a refuse dump, an industrialist manufacturing fertilisers, a farmer using them and a laboratory manufacturing GMOs will be liable for any damage caused by their activities.

Where several installations are implicated, all the operators concerned are jointly and severally liable.

Liable for what?

Operators are liable for damage arising from an accident - for example an explosion releasing toxic substances as at Bhopal in India or Seveso in Italy.

They are also answerable for creeping pollution: harmful substances deposited in a waste dump may seep into the ground and contaminate the groundwater and drinking-water collectors.

The long-term consequences of creeping pollution sometimes prove very serious.

What types of damage are covered?

The convention covers the following types of damage:

- personal injury,

- damage to property,

- damage by impairment of the environment,

- financial loss resulting from impairment of the environment (eg the tourist industry's loss of profit due to pollution of a beach).

In particular, the convention requires operators to take any reasonable measures designed to restore and reinstate the damaged environment (cleaning up a river, reintroducing fauna that has disappeared).

Financial security

Where some particularly dangerous activities are concerned, states will have to require operators to take out compulsory insurance as soon as the environment-insurance market is sufficiently developed.

What can the victim do?

To obtain compensation, the victim must prove:

- that he or she has suffered damage,

- that the damage was caused by one of the activities covered by the convention.

The main difficulty very often lies in establishing the causal link between a given activity and the damage. To make this easier to prove, the convention provides that:

- anyone may have access to information on the environment held by the authorities (eg results of tests on water, air and soil around a factory);

- persons who have suffered damage may request, through the courts, that the operators concerned provide them with the specific information they hold, for inclusion in their files with a view to possible legal proceedings.

The role of voluntary organisations

The convention assigns a key role to environmental groups.

They may request the courts to:

- prohibit a dangerous activity which is unlawful;

- order an operator to take measures to prevent damage;

- order an operator to take reinstatement measures.

The convention thus relies on the vigilance of environmental groups to protect the environment, our common property.

A convention for greater Europe and beyond

The environment is not a matter for the wealthy countries alone. The devastating effects that reckless industrial development can have on public health are well known. Industry's lack of preventive and safety measures in some countries causes a variety of diseases in adults and children. False economies on the environment are paid for by excess hospital costs, absenteeism at work and premature illnesses.

Now that the former communist countries are opening up to a market economy, protection of the environment has become a component of economic development.

The convention is open to all European countries and to countries outside Europe which apply to accede to it.

Pollution knows no frontiers. If environmental protection is to be effective, it must be international. ■

Dr. E. Harremoes
Director of Legal Affairs
Council of Europe

How is a convention "produced" ?

A Convention is a contract between two or more States. Each State accepts a given number of obligations in return for undertakings on the part of the others.

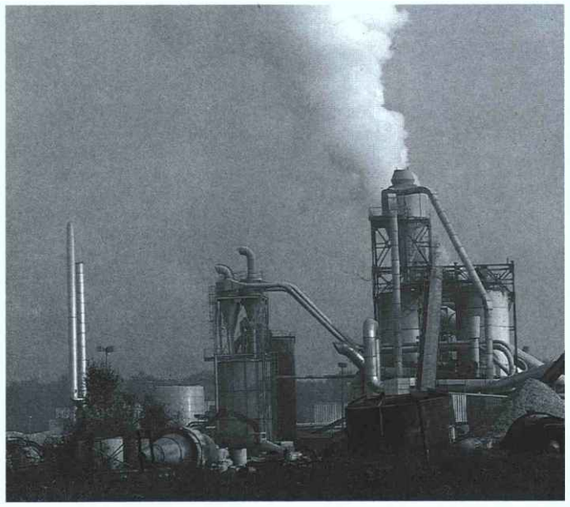
In order to reach agreement, the governments send specialists to Strasbourg to hold a number of meetings and negotiate the clauses to be included in the Convention. Each word and each proposal are discussed, amended, and then adopted or rejected. Discussions are conducted in French and English.

On completion, the text of the Convention is submitted to the European Committee on Legal Co-operation for finalisation.

Lastly, the Committee of Ministers conducts the final negotiations and decides on the adoption of the Convention, which is then ready to be signed by the governments. It comes into force when three countries have ratified the Convention, ie once three national parliaments have approved the signing by their governments.

The Convention on Civil Liability for Damage resulting from Activities Dangerous to the Environment necessitated 15 meetings of the Committee of Experts on Compensation for Damage caused to the Environment. ■

The manufacturer will be responsible for his product, from the factory to the rubbish to the dump.



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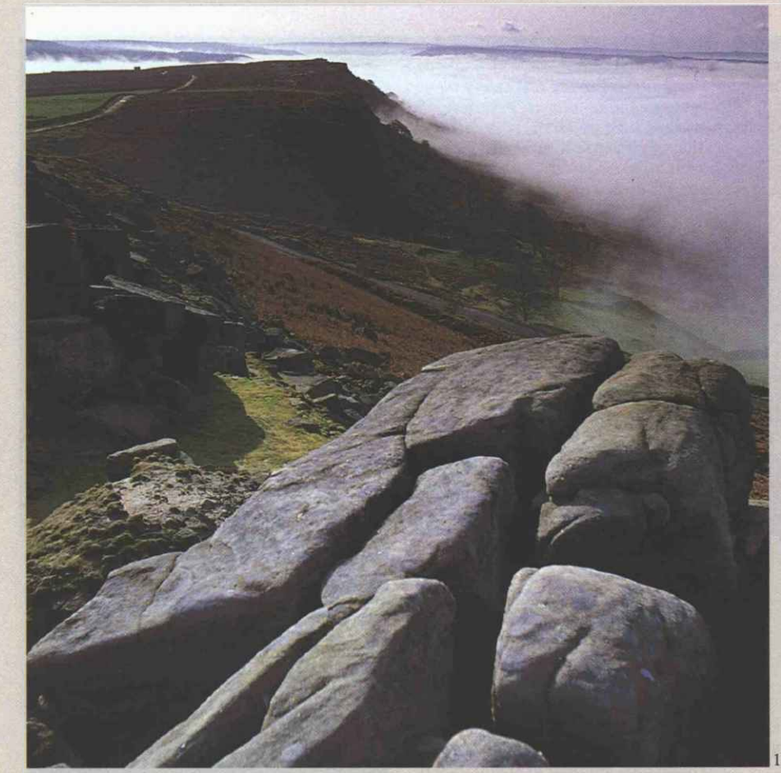

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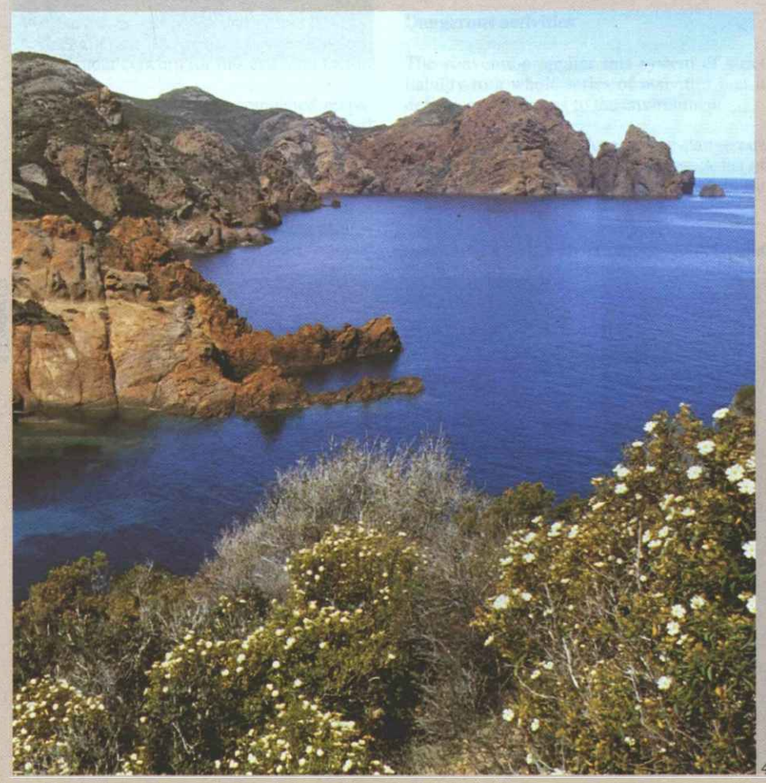

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Council of Europe
Conseil de l'Europe

This area has been awarded the
European Diploma
of the Council of Europe

The European Diploma and the Network of Biogenetic Reserves are both proof of the interest shown by the Council of Europe in the environment.

To further this interest, the Council of Europe is preparing European Nature Conservation Year 95 which, under the theme "nature reserves are not enough", will aim at drawing attention to nature conservation outside the areas already protected.

An immense programme which will need the support and participation of everyone.

Our fauna

Hervé Maurin

For thousands of years, human action had only a marginal impact on the natural evolution of species. Things began to change a century or two ago, and for the past 30 years the effect on wild animals and wildlife habitats has intensified catastrophically. Not only are more and more major ecological accidents occurring with far-reaching consequences. According to the scientific community, a number of adverse trends are gathering momentum: serious destruction is being inflicted on hitherto undamaged ecosystems; habitats are becoming threadbare while the range of distribution of numerous species is being fragmented and the diversity of biocenoses is diminishing at the expense of opportunist species. Creeping degradation is a feature of the whole natural heritage: the state of animal life is just one indicator.

Preservation of biological diversity was proclaimed at the Rio Conference as a world priority; at the same time we are witnessing increasing competition for land use with wildlife being pushed further and further aside, an illustration of the way mankind defeats his own ends. 30 years ago the Council of Europe set itself the ambitious task of preserving a delicate balance, and in this it had the support of scientists and naturalists everywhere, the other international organisations, the non-governmental organisations, and to an increasing extent, public opinion itself. But one of the essential keys to efficiency in both the framing and the application of regulatory measures will remain out of reach until all species, the fauna in particular, are properly documented.

Disparate data: the "sow's ear" of inventory policies

Since the 1960s, very nearly all the member countries of the Council of Europe have enacted outline legislation on nature conservation; its application is the responsibility of the government departments concerned with the protection and management of wildlife and natural habitats. But if what they do is to be taken seriously, they must start by learning exactly what it is that they are managing. Many countries have therefore put in hand a policy of recording all the features of the natural heritage. Despite the relative paucity of Europe's fauna by comparison with other continents, not enough investigative work has yet been done. There are still sizeable gaps on the map. The same applies in regard to systematics, as there are whole groups which have hardly been studied.

The distribution of the vertebrate groups - some 1,000 species - is starting to be satisfactorily documented; this is not true of the invertebrates, however, because:

- the number of species is huge: the insects alone account for 60,000;
- there are problems of classification, and the number of specialised taxonomists is dwindling dramatically;
- there are fewer data collection networks;
- there are numerous terrestrial and marine invertebrate groups for which the conventional concept of geographical distribution does not reflect the ecological facts. Ways of acquiring detailed knowledge of their ranges must be found, as patchy data may lead to wrong conclusions as to a taxon's status and so cause inappropriate decisions to be made.

For the vast majority of species, the invertebrates especially - and this is a situation which will persist for some time - users have to be content with information which is less than precise: a reference to a single sighting in a paper on fauna, possibly dating back some years; inventories of distribution with grid squares to indicate the occurrence or absence of particlar species; population assessments in semi-quantitative classes or by numbers of known sites.

Principal information sources and their limitations

The conventional sources of information are national or regional distribution atlases in which the information is presented in map form with grid squares to indicate the occurrence or absence of particular species. The size of squares generally depends on the system employed and whether the inventory was compiled by geographers or cartographers. In some cases, administrative or ecological divisions (ecozones) are used.

Much of the work of compiling map collections and inventories is done at the request of the Ministry responsible for the environment by specialised networks of voluntary nature conservation organisations under the scientific direction of volunteer research workers. Thousands of unpaid workers put all their enthusiasm into furthering knowledge and protecting the natural heritage. This movement, which began some 30 years ago, has produced a large number of national compendia of distribution maps, first for birds and later for all vertebrates and some groups of invertebrates. The rate of production has been increasing steadily, with closer attention been given to geographical detail.

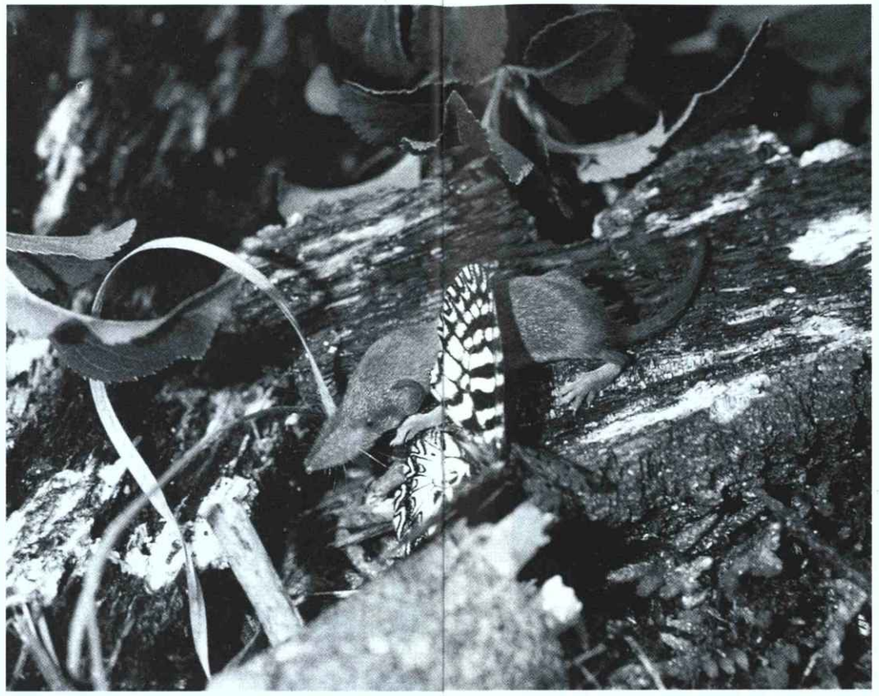
Atlases showing the distribution in Europe of the terrestrial vertebrate groups and some invertebrate groups have also been compiled. Where other groups - freshwater fish for example - are concerned, maps have been based on biogeographical areas and are less accurate.

For the past 20 years, work has been in progress to synthesise heritage statistics; this is done by means of compendia or tables of figures showing, more explicitly in some cases than in others, the state of the environment. The Red Books on threatened species published in many countries are essential source material, and more and more are currently being produced on a national and regional scale to meet the demand. Europe-wide, a number of organisations have begun producing such reports: they include OECD, the UN Economic Commission for Europe and the Commission of the European Communities. Collating the various data offered in these publications is no simple matter; they do not all cover the same geographical sectors, and the figures frequently conceal major discrepancies, not least in methodology.

Some discernible trends

Among the vertebrates, the freshwater fish are still insufficiently documented. The number of fish species described as threatened varies from 10% to 70% depending on the country, showing just how widely levels of knowledge can vary. In addition to the traditional sources of danger to fish considerable confusion has been generated by the introduction and interbreeding of species.

While few reptiles and amphibians are in immediate danger of extinction, nearly all the species that make up these two groups are threatened to varying degrees. Being vulnerable and not very mobile, their lives are closely dependent on their habitats. The pressures to which they are subject are comparatively well known, and will be stepped up in the years ahead. As a group, the amphibians are the animals most in danger, and this is true throughout the world. Our current knowledge of these groups comes essentially from the existing national and regional distribution maps and from the work of the Cartography Committee and the Conservation Committee of the Societas Europaea Herpetologica (SEH). Under the auspices of the IUCN and the Council of Europe, special studies are currently being made of marine turtles in the Mediterranean whose status has given cause for alarm. There is very little in the way of quantitative data concerning reptiles and amphibians.



R. Antonini/Panda Photo

The butterfly gives an idea of the minute size of the Etruscan shrew (Suncus etruscus), the smallest known mammal.

Birds constitute the group most comprehensively covered by studies, conservation campaigns and regulations over the past 30 years. Despite some gaps and some differences of view on matters of evaluation, the general state of knowledge is largely satisfactory except perhaps in the case of the commonest species. 30% of Europe's avifauna may be assumed to be threatened, especially the wetland species and the larger raptors. Pesticides continue to take their toll, although regulations restricting their use have brought about a marked reduction. Pollution of the marine environment gives more and more cause for concern as one spill follows another.

Mammals form the most heterogeneous group, ranging from the minute Etruscan shrew (weight 2 grammes) to whales weighing 100 tons and more. At present, it is the conservation of the largest terrestrial and marine species that gives rise to the most acute problems; a European distribution map collection is currently being compiled in addition to the national and regional atlases. A certain volume of quantitative and semi-quantitative data is already available for some of the hunted and severely threatened species, thanks to the work of the field sports and nature study organisations. Although figures vary from one country to another, one may assume that 40% of all European mammals are threatened. The number of hooved mammals may be generally increasing, but for the bear, the wolf, the lynx and other such carnivores the situation is not so favourable. They are frequently in conflict with man owing to their habit of taking the occasional farm animal or game species. The other threatened carnivores are the wetland species, which include the otter and the European mink. Bats make up an important proportion of Europe's mammal fauna. Pesticides and products for the treatment of roof-beams are among the main causes of their sharp decline, another being habitat loss. Only a worldwide ban on whaling will put an end to the startling regression of the large Cetacea.

The invertebrates and their many groups are very unevenly documented. The few maps that are available for Europe are limited to myraipods, lepidopterans, nematodes. There is also a dearth of national maps and Red Books. These shortcomings prompted the Council of Europe to commission various general studies on the invertebrates covered by the Bern Convention. In putting the proportion of threatened invertebrates species at 20%, it was making only a rough estimate. Within one of the best known groups, the Lepidoptera, regression appears to be a feature of the large majority of species. This general regression is caused primarily by habitat destruction. The use of pesticides and the taking of too many specimens are, of course, aggravating factors; on the other hand, much harm can be done to butterfly populations through the closing of their habitat when certain agricultural practices are discontinued.

Putting the facts on record

A full and ongoing record is needed of the state of Europe's fauna. A method of stock-taking must be found that will make it possible to exploit all the available knowledge rationally, with the emphasis on certain priorities; to obtain factual data covering the whole of Europe while concentrating on existing cartographic material and on population assessments of species under biological surveillance; and to update systematically the base-line maps and quantitative data, notably on the basis of indicators which permit all developments to be analysed and monitored. In putting such a strategy in place, much reliance will, of course, have to be placed on the campaigns currently in progress at the European level; but another requirement - and a vital one - is all the work currently being deployed nationally or regionally, sometimes in a disorganised manner, be co-ordinated.

One field that must be greatly extended is that of the evolution of the fauna in time, regression or extension. In the case of the best documented groups, experience has shown that the origin of many present-day trends can be traced to the beginning of the 20th century, or even before. Over the past 30 years there has certainly been a direct link between cases of accelerated decline or extension and the impact of human activity on the species concerned and their habitats.

The systematic exploitation of the available scientific heritage, that is to say that immeasurable fund of knowledge contained in the literature, specialised or otherwise, and in the natural history collections, here assumes vital importance. This is a long-term undertaking which needs to be well organised. Priority must be given to the species protected under the international conventions and community directives. Priority must be given for species protected under the international Conventions and Community Directives. National centres for the processing of heritage data have been or are about to be set up in a number of countries with just such priorities specified in their terms of reference. Proper coordination is, however, needed on the methodological side if the full value of the collections and the literature is to be extracted and a coherent overall result achieved.
But the historical knowledge that can be obtained from the scientific papers of the past is often uneven, in terms both of geography and of taxonomy. This being so, it is indispensable to assemble recent data in addition in order to produce valid descriptive and quantitative base-line material. Such operations however raise a number of methodological and technical questions; the concerted work which the Council of Europe launched a few years ago with the aim of devising common basic standards must be continued. It is no exaggeration to say that the survival of certain European species will largely depend on the degree of co-operation and information exchange maintained between the existing centres for the processing of heritage data and the national and international NGOs. Although certain priorities have already been set, a huge volume of work remains to be done which could be shared out more easily if resources and ideas were pooled.
With the basic factual data established, the next stage is to see how the fauna can be monitored. This will mean finding a way of updating the base-line material in an organised fashion. As this is demanding, time-consuming work, it is essential that the heritage data centres should all play an active part in the process, as in the case of the project relating to birds, and offer their own permanently updated files for inspection. Any additional fieldwork will then be directed only towards repairing geographical omissions. For the species under biological surveillance, there have to be a special programme of continuous monitoring in which all centres take a share. Campaigns to review the progress of the commonly occurring species should also be envisaged.
As an exhaustive knowledge of the species is unattainable, it is necessary to have available a common core of statistical indicators representing the general evolution of the European fauna. In choosing indicators, one must think in terms of responding to the needs expressed by numerous potential users. The papers produced by the scientific community on the concept of "biological indicator" should serve as a guide in assessing the relevance and feasibility of the statistical indicators selected. This is work which the European Environment Agency and structures of a

J. Barbery

Bufo viridis: more than ten years' work was necessary to produce the first atlas of amphibians covering the whole of Europe.

similar kind will be well able to do; so will the monitoring bodies that already exist in some countries.

Data processing and information exchange

The recent development of data base management systems combined with geographical information systems has revolutionised data processing. These aids to the acquisition and use of knowledge have become indispensable for informing natural heritage conservation, management and development policies. However, a new range of hitherto unknown methodological, technical, legal and ethical problems arise in connection with their use. Before data collection networks can be shared, methods harmonised and the circulation of information improved, attitudes clearly need to change. Now that certain situations are becoming critical, with governments intervening to apply the regulations in force, the tide may at last be turning. Public opinion, too, seems to have become attuned to the idea of handing on the natural heritage from generation to generation in the same way as the cultural heritage.

The opportunity should therefore be seized and efforts be deployed to integrate individual action more and more with a joint action programme. Co-operation agreements for the collection and organised processing of baseline heritage data should be concluded at the national level between all the major partners concerned with the conservation of the wild fauna. This is happening now in France in an experimental scheme which shows that the pooling of knowledge and skills can be a source of greatly improved efficiency, even if controversy and disagreement show occasionally in the interpretation of the findings.

An example: the Atlas of European reptiles and amphibians

The Atlas European reptiles and amphibians is a good example of international scientific co-operation responding to a need. In 1983, the SEH observed that some sizeable gaps still remained in its knowledge of the distribution of European amphibians and reptiles. It therefore appointed a Committee on Cartography to compile a distribution atlas for the 70 amphibians and 120 reptiles concerned. One of the Committee's first acts was to set up a network of herpetologists composed of national coordinators and assistants who, in the early stages, covered all the countries of Western Europe. In 1986, the project was extended as far as the Urals at the express request of Eastern European herpetologists. From the outset, the SEH decided to rely on the experience and logistics of the Fauna and Flora Secretariat (SFF) of the National Natural History Museum in Paris, specialised in the processing and mapping of heritage data. To improve the project's chances of success, the Committee on Cartography decided to adopt a simple method based on the use of data assembly forms adapted to each participating country, of which there were about 30. This enabled the national co-ordinators or their assistants to transcribe without any particular technical difficulty the information synthesised on a UTM 50 x 50 km square from the basic data at their disposal. Permanent consultation was necessary to settle difficulties of a scientific or technical nature as they arose. The SFF produced five successive cartographies of the state of progress for examination by the Committee on Cartography which pointed to various inconsistencies and shortcomings and redirected efforts towards certain priorities; 65,000 items of synthesised data were collected in this way by the network, of which 36,000 concerned the amphibians and 29,000 the reptiles. The coverage obtained is fairly satisfactory except for the regions where specialists are in short supply or where there is serious political conflict. The atlas is now in the final stages of completion and publication is expected any time after the end of 1993. This first base-line statement will thus have taken some ten years to produce.

Using the data on fauna

Compiling a European atlas represents a sizeable investment for the scientific community. It must therefore have as diversified a potential for application as possible.

The atlas will be used primarily for furthering scientific knowledge as a basis for research into the biology and ecology of species. Knowledge of ranges of distribution, for example, makes it possible to define potential areas within which research and conservation efforts may be concentrated.

Particular recommendations may be formulated for the attention of states which harbour endemic species, species at the limit of their range, or sensitive or fragmented populations, for which they have a major share of responsibility. Conservation priorities are usually decided with reference to the available national Red Lists; with a European view of the distribution of species, opinions may be weighted and a degree of coherence introduced into the collation of the different lists. This is vital when it comes to formulating international regulations.

Atlases may also help in evaluating the impact of major future development projects Europe-wide. Consulting an atlas does not absolve the user from carrying out more detailed studies, but it does highlight the areas where special research is needed into a project's impact. Areas which are particularly rich in species are those most likely to be concerned.

Cross-referencing of species and spaces

Numerous programmes are at present concerned with documenting areas of major biological interest. The data files so obtained can be a useful guide for creating new protected areas or monitoring the management of the most representative sectors and those of greatest biological richness. It is indispensable, provided that all the ethical rules are respected, to cross-reference the chronological data (ie. those concerning distribution) or the semi quantitative data provided by the atlas with those of the data files compiled in the process of documenting zones and sites of major biological interest. This is primarily a way of enhancing and enriching the existing data files in relation to each other and thereby adding to the general fund of knowledge concerning species. The population estimates available in certain files also help to remedy, to some extent at least, the absence of quantitative data for numerous fauna species.

A number of interesting possibilities also exist by the superposition of distribution data or area data with the ecozone maps produced in the context of the Community's CORINE land-cover programme. The establishment of potential areas of distribution for the fauna would be greatly facilitated by this procedure.

The use of computer techniques appropriate to such operations, managed by processing centres specialising in this activity, has therefore an essential part to play in the advancement of knowledge at the present time. But here too, common sense must prevail and brush aside a certain reluctance to exchange data. Now that we have the technical resources for making rapid progress in the conservation of Europe's fauna in the years ahead, why should they not be used to the full?

What future for Europe's fauna?

To establish a satisfactory balance between maintaining biological diversity and developing human activity may seem like an unattainble ideal for the coming decades. In all probability, certain factors detrimental to animal life will bring increasing pressure to bear. Examples include the expansion of the leisure industry, in particular along the Mediterranean coasts, in mountain areas and close to the urban centres. As to other likely developments, from climate change to the consequences of setting aside farmland, it is impossible to say exactly what their impact on the animal world will be.

On the other hand, it may be possible to give new direction to the conservation of threatened species, the restoration of vanished species and the management of common species or species under biological surveillance. Techniques associated with ecological engineering, genetic engineering and simulation or modelling methods come to mind in particular. For optimum performance, all these modern tools require a full dose of homogenous, reliable information to be rapidly available throughout Europe. Action of any significance requires that all available or future knowledge be presented in an organised and usable form. There is a priority here of which the countries of Europe and the European organisations must be made constantly aware. ■

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Bern Convention and wildlife

The work of the Convention's Standing Committee aimed at protecting endangered wildlife is being pursued through the following activities:

• *Specialised groups of experts*

Two groups, one on amphibians and reptiles and the other on invertebrates, have been set up and meet on a regular basis. They study problems specific to these groups of animals and propose urgent measures where required. They also make proposals for the inclusion of certain species in the appendices.

• *Seminars*

The Standing Committee regularly runs seminars on endangered mammals. Experts propose management strategies for endangered wildlife, and the Committee usually adopts these strategies in the form of Committee recommendations. The most recent seminars concerned the wildcat (*Felis silvestris*) and the different species of lynx (*Lynx lynx, L. pardina* and *L. caracal*).

• *Studies*

Studies of the status of the different wildlife groups in Europe are regularly carried out.

• *Agreements*

On a Standing Committee initiative, the Secretariat is preparing, in conjunction with that of the Bonn Convention, agreement on the protection of small cetaceans in the Mediterranean and the Black Sea.

• *Investigation files*

Whenever the Secretariat receives information suggesting that the population of a species protected under Appendix II of the Convention is endangered, the Standing Committee opens a file and conducts and investigation. Field visits enabling experts to establish the facts can be organised, and the Standing Committee may subsequently make recommendations to the government of the country concerned. ■

H. Hinterstoisser

The aim of the Rosswald Alpine Forest Reserve (A) is to preserve trees aged 180 years or more. Dead trees are left standing offering shelter and food to a multitude of xylophagous species.

Biogenetic Reserves

Marie-Aude L'Hyver-Yésou

In Europe at present, natural habitats are becoming degraded and disappearing at an alarming rate, wetlands especially. Europe's landscapes are becoming increasingly monotonous, with expanding human settlements and vast acreages under intensive cultivation. As a result, not only are the natural balances of the planet Earth at risk: we are losing valuable cultural and aesthetic assets and impoverishing our heritage.

One means of stemming this dangerous trend is to establish protected areas. Two networks of protected areas have been created by the Council of Europe: the European Diploma Network and the European Network of Biogenetic Reserves, founded in 1965 and 1976 respectively.

The European Network of Biogenetic Reserves is a programme for the conservation of representative samples of natural habitats of various types as a means of protecting the fauna and flora of Europe. The member States engaged in this action undertake to co-operate in order to identify and protect natural habitats which are of particular value for nature conservation in Europe. The network offers member States an international framework in which to co-operate and co-ordinate their policies regarding the creation of protected areas, so that these may assume a complementary and mutually reinforcing role in this survival of Europe's biological diversity.

The Network is one of the key aids to the direct implementation of Article 4 of the Bern Convention, one of the principal nature conservation conventions applicable to Europe. Article 4 enshrines the obligation of governments to conserve the habitats of wild flora and fauna species, in particular those listed in Appendices I and II as being strictly protected.

The objectives of the Network are set out in Resolution (76) 17 of the Committee of Ministers of the Council of Europe. Every biogenetic reserve must:

- contribute to the maintenance of the biological balance and the conservation of representative samples of Europe's national heritage;

- act as a living laboratory for research into the operation and evolution of natural ecosystems. The scientific knowledge thus required can then be put to use in campaigns to generate public interest in environmental issues and provide information and instruction.

Habitat conservation

The purpose of a biogenetic reserve is to preserve habitats or ecosystems, terresterial or aquatic. As a rule, the areas concerned must be *natural* but they may also be *semi-natural*; a semi-natural area may be one which has been derelict for a long time, or one which is biologically rich despite being man-made and still in use. In some cases, environmentally benign human intervention may be necessary to maintain the area in its original state. This is often the case with wetlands, where the reeds have to be cut down at regular intervals in order to prevent water levels from sinking over a period of time.

There is no limit to the *size* of a biogenetic reserve. A small patch of dry grass on which a rare plant subsists would qualify: so would a vast zone of maquis, peatland or tundra. The size of a reserve must simply be appropriate to the objectives that have been set for the conservation of one or more ecosystems and/or particular species. In the case of very small reserves, a buffer zone may sometimes prove necessary.

The selection of biogenetic reserves is generally made on the basis of two criteria:

- their value for nature conservation;
- the effectiveness of their protection status.

The *value* of a biogenetic reserve for nature conservation is judged by the degree to which the habitats it encompasses or the species that take refuge there are *typical, unique, rare or endangered.*

The *protection status* of a reserve must be sufficient for its long-term conservation or its management in accordance with the proposed objectives. Every country has its own terminology of protected areas, but Resolution (73) 30 of the Committee of Ministers of the Council of Europe shows how to establish correlations and gauge the degree of protection afforded to each type of area. But in every case the protection status of a reserve must be compatible with the conservation objectives assigned to the area.

Two complementary approaches

In selecting biogenetic reserves, there are two complementary approaches.

The directed approach: this is an endeavour to establish a common European policy in the light of the priorities laid down by the competent intergovernmental committee. Priority may, for example, be given to the conservation of heathlands, dry grasslands, flood plains, peat bogs, dunes etc. This approach is revised periodically.

Under the directed approach, the Council of Europe commissions experts to compile European inventories of sites in the member countries which match the agreed conservation priorities. Existing national and international inventories provide the basic raw material from which selections are made according to the Network's rigorous criteria. The site lists thus obtained enable proposals to be made to the member States. Sites whose protection status is already sufficient may be directly integrated with the Network upon application being made by the country concerned. Sites which are of European importance but do not yet benefit from any protection are drawn to the attention of goverments via the inventories and may be included in the network once their protection status is satisfactory.

The non-directed approach: governments may offer for inclusion in the Network any adequately protected site of European importance for nature conservation which matches the criteria of biogenetic reserves without necessarily being the biotope or habitat of what would, under the directed approach, be recognised as a priority species.

The governments notify the Council of Europe of the sites they wish to have included in the network by supplying the Organisation with *detailed descriptives cards*, of which a model is appended to Resolution (79) 9 of the Committee of Ministers. Each application is accompanied by a map showing how the reserve fits into the landscape.

At its annual meeting, the Intergovernmental Committee examines each candidature carefully and decides which to accept for inclusion, which to defer and which to reject. Inclusion in the network is normally for an unlimited period. However, the governments undertake to notify the Committee of any alterations which might undermine a site's biological value, and to provide updated information at five-yearly intervals.

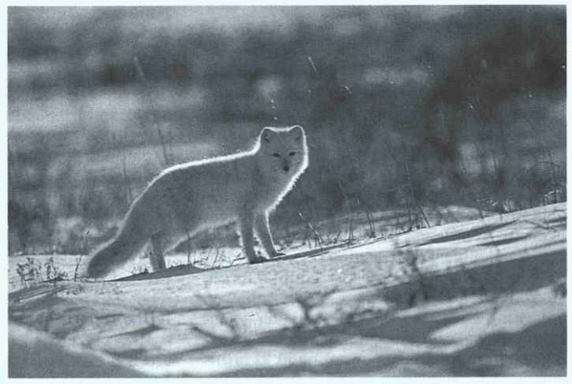
In January 1993 the Network comprised 286 reserves (3,300,000 hectares in all) in 17 member countries of the Council of Europe. With new proposals coming in from European governments year by year, the Network continues the work of protecting Europe's national heritage, by acting as both a stimulus and a reward. ■

M.-A. L'Hyver-Yésou
Administrative Officer
Council of Europe

The Network of Biogenetic Reserves stimulates and reinforces protection of biological diversity by laying equal stress on species and their habitats.

G. Lacoumette (2)

R. Humler



S. Cordier

Flora conservation

Vernon H. Heywood

Plant life in Europe has been more extensively studied than that of any other continent. This is not surprising if one considers the social, economic and political development of Europe over the centuries, leading to the creation of an amazing diversity of scientific and cultural institutions concerned with plants and the environment, such as university departments of botany, botanic gardens and arboreta, museums, herbaria, botanical societies, and many amateur bodies. The cradle of scientific taxonomy was in Europe and the roll call of distinguished European botanists, both professional and amateur, is almost endless. This is reflected in an almost bewildering diversity of floras and handbooks and other botanical publications in some 30 or more languages. Many ecological ideas have their birth in Europe and much pioneer work in nature conservation has been undertaken here such as the development of national parks, nature reserves, regional nature parks and other forms of protected area.

On the other hand, no other continent has been subjected to so much environmental change: for thousands of years its natural vegetation has been massively altered by human action such as deforestation, transhumance, grazing, agriculture, fire, plantation forestry, urban and industrial development, tourism, pollution and population growth. As a consequence many of the landscapes are made up of a mosaic of natural and semi-natural vegetation, protected areas, agricultural land, plantations, industrial and urban developments.

Few samples of natural or near-natural ecosystems remain and much of the vegetation is man-made such as the chalk downlands of southern England and the matorral and other scrub formations in the Mediterranean. A complication from the point of view of species conservation is that these habitats house many of the species whose conservation concerns us. For example, many orchid species occur in grasslands which are threatened by the abandonment or reduction of grazing, leading to their recolonisation by scrub or forest. Conservation in such cases is best achieved by setting aside land and continuing in a controlled manner the human intervention that is needed to maintain the vegetation in its artificial or successional state.

Leisure pursuits may threaten mountain habitats such as the Sierra Nevada where the development of ski slopes and all the accompanying installations devastate large areas of natural vegetation and the pollution caused by drinks cans and plastic bags needs to be seen to be believed. Clearly education is a vitally important factor in planning conservation strategies.

Relatively poor in species

The flora of Europe is relatively poor - some 12,500 species of flowering plants and ferns - and most species are to be found in central and southern Europe, especially in the mountains. A considerable proportion of Europe's endemic plants grow in the mountains such as the Alps, Appennines, Pyrenees, Carpathians, Baltic chain and Balkan peninsula, which are recognised as major areas of diversity and endemism by the World Conservation Union (IUCN) and the Worldwide Fund for Nature (WWF). Some of these mountains have very considerable concentrations of endemics such as the Sierra Nevada, just mentioned, which houses about two-thirds of Spanish plant endemics and Mount Olimbos in Greece which has 26 endemic plant species.

Surprisingly, despite these extensive depradations, relatively few plants or animals have become totally extinct in the wild. For higher plants, the total number of extinctions recorded for Europe is only 27, although it has to be noted that more than 2,200 species are recorded as endangered, vulnerable, rare or indeterminate according to the IUCN categories of threat.

For a continent so divided into political units, it is not surprising that efforts for the conservation of the flora are highly diverse, with each country responsible for its own system of protected areas, production of red data books and lists and legislation. At an institutional level, too, there is a multiplicity of departments, institutions and organisations involved, both governmental and non-governmental. There are, for example, 540 botanic gardens and arboreta in Europe alone out of a world total of 1,600.

Co-ordinate efforts

In the light of this institutional diversity, it soon became evident that some form of co-ordination of effort and harmonisation of standards was needed. In fact the Council of Europe pioneered action by setting up a mechanism for co-operation at a technical level on the conservation of wild flora and fauna through negotiations initiated by its Council of Ministers in 1976, leading to the Bern Convention which was opened for signature in 1979 at the 3rd European Ministerial Conference on the Environment.

The Bern Convention, which came into effect in 1982, has been seen as a major instrument in European conservation despite its broadly based goals, its focus in practice on producing the lists of species to be included in the Appendices and revising these, as opposed to looking at their habitats, has somewhat limited its effectiveness. Currently over 500 species are listed in Appendix I (Strictly Protected Plant Species) and it is likely that this will be increased in the light of the report of a working group on Macaronesian species to the Standing Committee. Further species will inevitably be added to the Appendix as the number of member States in the Council of Europe increases as is indeed envisaged. Indeed the more complete the coverage of Europe, especially in the east, the more effective is conservation planning likely to be.

Recent political and sociological upheavals in eastern Europe have brought home how fragile many of our institutions are and vulnerable to change. It is tragic to hear of botanic gardens without fuel to heat their greenhouses, thus putting their collections at risk, and plant genetic resource collections threatened with closure. One of our priorities must be to organise emergency action to meet such situations. Unless the key institutions involved in conservation survive, it is hardly likely that plans to conserve habitats and species in these countries will succeed.

The European Community's role in plant conservation is also very important and initiatives include CORINE, aimed at developing a methodology for the collection, storage and analysis of environmental data throughout the member States of the Community,

F. Gohier /Jacana

Saxifraga longifolia: is there still room for endemism elsewhere than in mountain regions?

and the recently agreed Habitats Directive. Clearly there is a need for co-ordination of the conservation programmes of these two bodies so as to ensure that the limited resources available are deployed as effectively as possible.

A Group of Experts on Plants was established by the Standing Committee of the Bern Convention in 1991 and significantly this works in association with the European Community which is represented on it, thus helping to assure a closer working link between the two organisations at least in planning activities in plant conservation.

Ensure the future

It is a truism that the conservation of Europe's threatened plants is best achieved in the wild but there are situations where this is not possible or sufficient to ensure their survival. For example, the populations of some narrowly endemic species may not reproduce properly or be so reduced in numbers as to be no longer viable. In such cases alternative approaches to conservation have to be considered.

The threats to which the species are exposed include human-induced alterations such as land drainage, changes in farming practice, pollution, industrialisation and urbanisation and tourist development. Some habitats such as the Parque Nacional de Doñana in Spain are threatened by a combination of such factors. *In situ* conservation of species populations usually requires some degree of monitoring or active intervention in addition to the management of the ecosystem or habitat as a whole.

In addressing these problems, the Council of Europe's Group of Experts of Plants has proposed a series of actions, including the preparation of recovery plans for the species listed in Appendix I, especially those that are judged to have priority importance. The preparation of such recovery plans is a complex procedure and a set of guidelines has been commissioned. It is, in fact, surprising to realize that the number of plant species for which such plans have been implemented or published is around 200 worldwide, so that there is a lot of truth in the statement that we are good at producing lists but not at taking action.

Integrated strategy

Effective conservation requires the adoption of an integrated strategy. In practice this means that we should employ whatever approaches, techniques and methods that are judged appropriate after a thorough study of the situation of the species concerned. The approaches therefore include *in situ*, *ex situ*, reintroductions and reinforcement of populations. For *ex situ* conservation a whole series of techniques have been established for crop plants and these can be modified or adapted for wild species. Botanic gardens have a major role to play in this approach - in undertaking the research needed into propagation techniques, seed storage, reproductive biology, as well as in the essential tasks of growing and bulking up the material, maintaining conservation collections, seed banking and tissue and cell culture. Fortunately, as we have seen, Europe is well supplied with botanic gardens and some of them are actively engaged in conservation action for endangered local species. There is, however, no overall co-ordination at a European level, a matter which Botanic Gardens Conservation International is addressing.

Another area of plant conservation where the Council of Europe has initiated action concerns the conservation of the European progenitors of plants that are cultivated in Europe. Following a colloquium in Strasbourg in 1989, a group of experts on biodiversity and biosubsistence was established and this has organised a series of workshops on the research and techniques involved in the conservation of these crop relatives, the first of which was held in Faro in November 1992.

Nothing to be overlooked

In our understandable emphasis on rare and endangered species, we have tended to overlook the threats to local populations or races of species which are as common as threats to the survival or species as a whole, if not more so. The frequent exclusion of subspecies or varieties in conservation lists or legislation risks the loss of important variation because attention is not drawn to it. It has to be remembered too that one taxonomist's species is another's subspecies or variety. Attention should also be drawn to the need to conserve variation in wide-ranging species which are not themselves at risk. This is particularly important in forest tree species, such as the black pine (*Pinus nigra*), and others of economic importance. It raises the important point too that the time to start taking conservation action is before species become threatened.

This brief review of plant conservation in Europe has concentrated mainly on higher plants, yet there is an increasing awareness of the need to consider the conservation needs of other groups such as bryophytes and fungi which are decreasing at an alarming rate. In the case of bryophytes, action is being undertaken in several European countries and red data lists are being prepared. At present, the protection of bryophytes is mainly through the conservation of protected areas, but many species occur in microhabitats which are not represented in such areas, so that specific conservation plans for endangered species or populations need to be prepared by local specialists.

What of the future for the conservation of European plants? The necessary instruments are now in place, our knowledge of European plants is greater than that of any other continent, we have the institutional resources, the people and the know-how. All that is needed now is the will to succeed. ■

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Wild relatives

A winning card for the Council of Europe

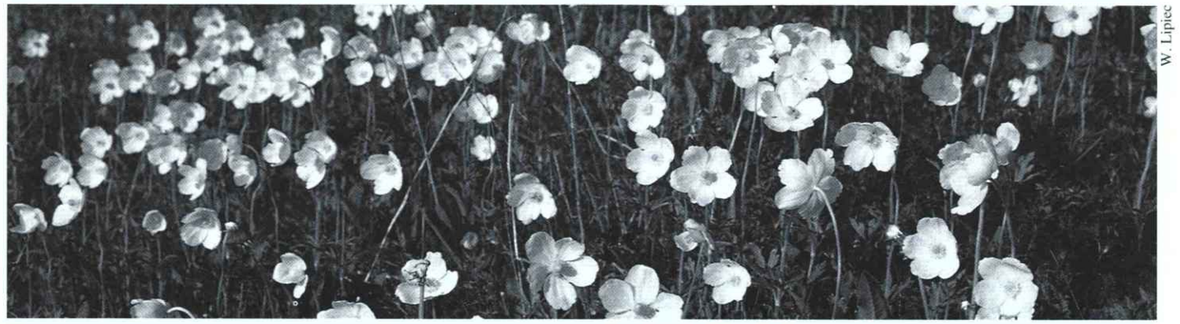
In the Rio Formosa Reserve at Faro (Portugal), the first Council of Europe workshop on "Conservation of the wild relatives of European cultivated plants: developing integrated strategies" was held from 8 to 11 November 1992. It was organised by the Council of Europe and the Portuguese authorities.

The Council of Europe had previously organised a colloquy on the conservation of wild progenitors of cultivated plants. At that time - November 1989 - the main intention was to draw the intention of policymakers and the scientific community to the consequences of genetic erosion and the diminishing diversity of both cultivated plants and of their wild relatives. Habitat loss, the deterioration of the natural environment and increasing landscape uniformity are inescapably causing wild species to disappear, while at the same time farmers are reducing the numbers of cultivated plants in their endeavours to achieve higher yields and greater rationalisation. Local and ancient varieties are abandoned, seeds are more and more systematically controlled and selected. But although gene manipulation and the recent advances in genetic engineering offer untold opportunities for producing new parasite-resistant varieties adapted to difficult growth conditions and to the demands of producers and consumers alike, these "miracles" cannot occur without recourse to existing living material. We know how to recombine genes, but we do not know how to create or recreate the individuals containing those genes.

Genetic selection is the process of taking the genetic material and characteristics that one wishes to transfer to the newly created varieties from the array of existing living species. Thus the wild species constitute the sole gene bank for our future needs (remember Phylloxera).

Responding to the need to preserve genetic diversity in the wild, the Council of Europe brought together scientists from all the disciplines relevant to this problem area (biologists, systematists, ecologists, conservation specialists, managers of protected areas, directors of gene banks etc) in order to consider which wild species should be preserved as a matter or priority, and how much we know and do not know about their biology and the principles of their conservation.

Other organisations and agencies have been working actively in this field. But the need now is for co-ordination of effort and research in order to integrate the methods of *ex situ* conservation (seed banks, etc) and *in situ* methods. Since this first workshop, the participants have been able to highlight those crucial areas about which not enough is known. A second workshop will be held in 1993, at Neuchâtel in Switzerland. ■



W. Lipiec

Bern Convention and flora

When the Convention was signed in 1979, its Appendix I (strictly protected flora) covered 119 higher plant species. The list was far from complete, and the Standing Committee decided to revise it in 1990. The new list adopted by the Committee covers 499 species, including 19 species of fern and 26 species of bryophyte. The Standing Committee has also set up a group of experts on conservation of plants which is working on the following questions:

• *Extending Appendix I to the countries of Central and Eastern Europe*

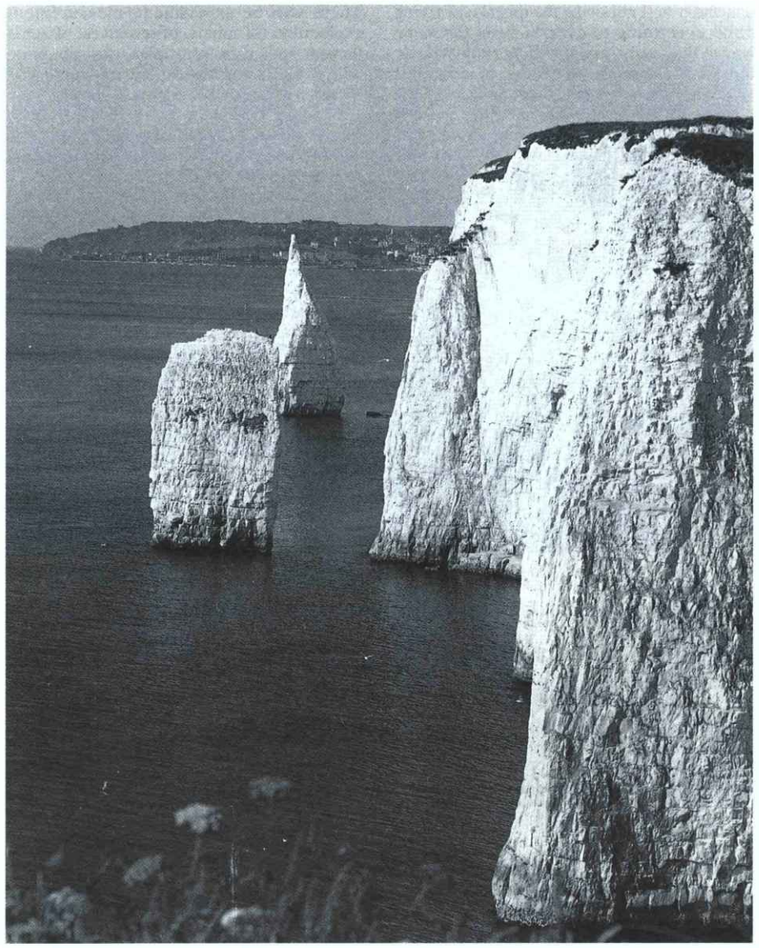
The participation of new Central and Eastern European democracies in Convention work means that Appendix I will have to be revised. In 1993 a number of consultants will study the flora of Bulgaria, Hungary, the Czech Republic and the Slovak Republic and make an initial selection of species which could be added to the Convention's appendices.

• *Devising plans for the conservation and reserve of particularly endangered species*

The group of experts is identifying species requiring urgent protection measures so that priorities can be defined. A report laying down guidelines for plans to rescue these species has been published. The group of experts is also working on plants threatened by commercial exploitation and on the effects of the spread of exotic plants which are introduced and thrive at the expense of protected native species.

• *Regional groups of experts*

Two regional expert groups have been set up, one on Macaronesian flora (ie of the Portuguese and Spanish Atlantic islands) and the other on the flora of Central Europe. They will study the specific problems involved in protecting the flora of these two regions. ■



R. Tarr

Purbeck Heritage Coast (GB), Diploma awarded in 1984.

A great idea for 1995

Mike Henchman

Scattered across the landmass of our family of nations are oases of land and water, of varying size, of a diversity of plants and animals, and in locations that range from the very hearts of our towns and cities to those empty wildernesses, seldom seen by humans. All have one thing in common: they are reserves set up by people to safeguard threatened elements of what we call nature. And in this nature are not just plants and animals, but landscapes and landforms dating far back into pre-history.

These are jewels in our collective crowns, but they must never become an end in themselves. If they do they bear a disease that will doom them to disaster.

Nature reserves, on their own, can never fulfil the partnership that must exist between us and the rest of nature, the part we regard as wild and which has wilderness as an almost unquantifiable component. Nature reserves on their own run the risk of being perceived as alien, relics of the past, irrelevant to today's needs and values. Or what is far, far worse, being seen as "enough" in terms of fulfilling a dimly perceived need to save the natural.

So many opportunities are lost by adopting such a viewpoint - and so many misconceptions encouraged - that it could be argued that a better course might be to abolish nature reserves themselves!

Of course reserves must remain our crown jewels, of course they will always be needed, in particular as refuges for communities or species unable to compete without help or for features unique and under threat; of course they will have a special role for gaining knowledge and experience; of course they will always be able to take us back to a time when human activity was a far less dominant feature of the world around us.

Oases

But they can achieve little of this if they remain oases in a wildlife desert - or if their unique properties are corrupted by the routine activities of our daily world. The contrast may have impact, but the content and quality will progressively diminish.

No-one could pretend that the everyday world could become one huge nature reserve and still fulfil the legitimate need and expectations of our populations. Who after all are as natural as nature itself and have as many rights as the rarest bird, plant or even geological feature! What humanity has, however, that the rest of nature lacks (other than in the long term, or through cataclysm!) is power to cause damage and to cause this damage massively, rapidly and, too often, irreversibly. But from that power derives responsibility, in particular the responsibility to maintain a balance of mutual benefit.

The balance we should be seeking is one that comprises a wildlife-friendly matrix which is capable of sustainable development, and is responsive to the needs and requirements of its many parts. In such a world, nature reserves will still play their unique role - but in the land and water that surrounds them wildlife will add values that are both tangible and intangible and are perceived, wanted and enjoyed by all who live, work and play in these places.

This will never be achieved in any lasting form by dictat, by law, by force, by restriction, by any negative or prohibitive approach. It will be achieved by fulfilling needs and wants, even though these needs and wants are yet but latent and in need of shaping, development and release. Unless this reality is perceived, and with it the associated reality that it is local communities that ultimately shape all that happens, the essential state of balance and harmony for human and non-human nature will never be achieved.

Continuous campaign

All of this is at the heart of what those of us associated with Centre Naturopa regard as a continuous campaign. More than 20 years ago we launched European nature conservation with European Conservation Year 1970. In the years since we have mounted campaigns ranging from the particular to the general. Soils, wetlands, farms, the water's edge are but a few. And in 1995 our hope is that the communities of Europe will join us once again and help demonstrate that a wildlife-friendly countryside is something both wanted and achievable.

Whilst our broad aims remain the same, the 1990s require a different approach to that of the 1970s and even the 1980s. The centrally-led, didactic and autocratic approach is no longer attuned to modern requirements. The market and its forces are more clearly understood and perceived as the primary determinant of how cultures develop. Needs and perception are given the weight they must have. We do things *with* people, because we are part of that people; we no longer do things *to* people. These precepts we will adopt.

We recognise too that peoples, societies and environments have different requirements and expectations and have more or less resources that can be deployed in the interests of wildlife conservation. We also recognise that richness derives at least in part from variety and that uniformity will never best serve our joint and several ends. And as a humbling reminder of reality we will remember that, though nature conservation is better supported and understood than ever before, the dream that human-nature and wild-nature can thrive in harmony seems as difficult to achieve as ever.

Centre Naturopa, under the umbrella of the Council of Europe, has -in a manner peculiar to itself - brought together a community with a huge potential to achieve these ends through understanding, agreement, persuasion and shared knowledge. And most of all through working together.

Sharing the tasks

ENCY '95 would fail were it to become a centrally-directed and monolithic dinosaur. Because of its nature however, it will not do this and it will not make the mistake of trying to do everything to everybody in the same way at the same time. It will be responsive to those issues, needs, demands, perceptions, values and understandings that modern nature conservation requires. Its member nations will work together when appropriate on matters of common concern and they will take this action of their own initiative. They will tailor their action to the special needs of their communities and they will concentrate on local communities and the special role this vital group plays. None will feel they must adopt or enforce approaches alien to their particular situation; the opposite will apply. And if it is felt that a particular issue should be pursued, one that in global terms may not be perceived as large or all-embracing, then ENCY '95 will provide a cloak to shelter, a banner to follow and a stage on which to show understanding, pride and common concern.

In the days and months between now and 1995 national governments will be exploring how they can best contribute to and benefit from this initiative. Mutual involvement, sharing, understanding will all be watchwords. There will be assessment, measurement, exploration (of minds, of resources, of achievement and of failure); plans for our future will be built upon this experience and relative values will be considered and weighed.

Out of this will emerge a clearer vision of the wildlife-friendly countryside and how it is to be achieved.

The last five years have banished the spectre of mutually assured destruction. Let us hope that 1995, in terms at least of the relationships between human and wild nature, will see the birth of mutually assured benefit. ■

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Centre Naturopa

At a time when environmental problems are taking centre stage among the great issues troubling our societies, the Council of Europe's Centre Naturopa has already celebrated its 25th anniversary. It has spent a quarter of a century gathering and distributing information and encouraging us to reflect on better ways of managing our common natural heritage. This wealth of experience is a formidable asset in today's situation: we now realise that a more detached view is essential if we are properly to understand the subtle interactions which determine the survival of our ecosystems.

Leading the way

As early as the sixties, the Council of Europe's voice was one of the first to state clearly that mankind could only achieve balanced development if the natural environment was protected.

The first intergovernmental co-operation body - the Committee of Experts for the Conservation of Nature and Landscape - was set up in Strasbourg in 1962, and the Council of Europe has since worked ceaselessly for the protection of the environment and, more particularly, for nature conservation.

The Council of Europe's activities in the sphere of the environment centre on its contribution to conservation policies, in the form of the adoption of a large number of recommendations on a great variety of subjects, the most recent example being the European conservation strategy (1990); the drafting of conventions, such as the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Conservation), the aim of which is to protect at-risk species of flora, migratory species, their habitats and endangered natural habitats; the promotion of protected areas throughout Europe, the best examples of which have been awarded the European Diploma.

No action to protect the environment can be effective, however, unless it has the informed support of the circles concerned and, indeed, of the general public: the Centre Naturopa is the Council of Europe's means of increasing public awareness of Europe's environment and promoting schemes to protect it.

An international structure

The Centre Naturopa is first and foremost a widespread European forum for collecting and distributing information on nature conservation and management. Its own heritage grows as our knowledge of this extremely complex area expands.

Besides its Secretariat at the Palais de l'Europe in Strasbourg, the Centre's strong point lies in its network of National Agencies covering the 27 Council of Europe member States and including correspondents in many other countries.

There is a constant flow of information between the Secretariat and National Agencies, among the Agencies themselves and to relevant organisations or individuals. It reaches out to the whole range of bodies interested in nature conservation, from voluntary associations right through to governments.

Comparing notes and maintaining dialogue thus enables better use to be made of the know-how acquired on Europe's natural environment, the measures taken to protect it and the results they produce.

A fund of knowledge open to all

The Centre Naturopa makes its know-how available to the public in many different ways:

• The magazine Naturopa, which covers specific topics, is published three times a year in six languages. Its success has long since exceeded the expectations of its initiators. Examples of topics covered recently are freshwater fish, Europe's coastline, the pan-European environment, the Parliamentary Assembly's work for the natural environment, the Assembly's "Freshwater Europe" campaign, environmental regulations in Europe as of January 1993, etc.

• Naturopa-Newsletter is published fourteen times a year in ten languages. This newsletter, which enjoys a large following, aims to inform Europe's citizens about nature conservation activities in the various countries and about the development of attitudes and thinking in this field.

Council of Europe (2)

On 4 March, in the presence of numerous personalities and members of the CDPE, the Forestry Office of Baden-Württemberg dedicated 25 hectares of forest to the Centre Naturopa's 25 years of activity.

• Environment Features is an annual series of six articles published in the Council of Europe's two official languages (English and French). The articles deal with topical subjects and are more specifically intended for the specialist regional and national press and the Centre Naturopa's correspondents.

• Posters, stickers and specialist brochures are produced regularly in accordance with the Centre's activities.

• The Centre Naturopa also contributes to another major Council of Europe activity through a collection of documentation and information containing some 5,000 books and 400 journals, which are all available to the public and experts. It also publishes a two-monthly library bulletin.

Finally, since 1970 the Centre Naturopa has launched numerous information campaigns on key areas of European environmental protection such as soil, freshwater resources, wetlands, wildlife and the natural environment in Europe, shorelines, relations between agriculture and wildlife, and the protection of the Mediterranean. These campaigns are organised at European and regional levels as appropriate.

Following the political changes in Central and Eastern Europe over more than the last three years, the Centre Naturopa has established official contacts with the various government departments, researchers and individuals with a view to setting up a technical assistance programme for those responsible for managing the natural environment in the countries concerned. This programme included exchange visits for experts, colloquies and introductory courses. ■

At the end of 1992, on the occasion of its 25th anniversary, the Centre also produced a greetings card.


T. Ashworth

At the Council of Europe

CLRAE and the environment

The environment work of the Council of Europe's Standing Conference of Local and Regional Authorities of Europe (CLRAE) is entrusted to one of the CLRAE's dynamic and specialised committees, ie its Committee on the Natural and Built Environment (current President: Antony Haggipavlu of Cyprus).

Plenary Session

The Committee prepared two reports for presentation to the 28th annual Plenary Session of the CLRAE, which took place in Strasbourg from 16 to 18 March 1993.

These reports, debated in a session devoted to environmental questions are concerned with the role of local and regional authorities in combatting the greenhouse effect (Rapporteur: Horst Lässing, Germany) and the environment policy of municipalities and regions in Europe (Rapporteurs: John Harman, United Kingdom and Dimitri Manaos, Greece).

In respect of the first report on the greenhouse effect, local authorities will be urged to take a number of measures including circulation of information to their constituents about the causes of ozone depletion; the encouragement of alternative energy resources and energy-reducing measures; the reduction of the use of fossil fuels and their replacement by renewable energy sources -solar, water and wind power.

Particular attention will be devoted to measures to reduce CO_2 emissions through transport measures and reduction of chlorofluorocarbons (CFCs).

After the Session, the Standing Conference prepared a guide for local authorities on the effect of the greenhouse effect and local authority measures to combat it.

In respect of the report on municipal environment policies, identification is made of the particular responsibilities of this level of authority, ie: the application locally of national environment guidelines; taking steps to ensure the protection of their own environment; stimulating local awareness about environmental protection.

Particular emphasis is placed on the development of an overall management plan for local authorities, which favours an inter-related approach between different sectoral policies affecting the environment; encouragement of environmental education; the need for partnership with NGOs, local environment agencies and the private sector.

Strong emphasis is placed on the specific situation of Central and East European countries, where national governments are asked to ensure that the newly-elected municipal authorities have the necessary legislative framework to deal with their often severe environmental problems and that local transfrontier environmental agreements be developed in areas of major environmental damage or threat.

Both reports and accompanying draft Resolutions will stress the need for adequate monitoring of the implementation of the agreements made at the UNCED Conference in Rio in June 1992, particularly the encouragement of European municipalities to develop their own programmes for sustainable development as called for in Article 28 of Agenda 21.

In addition to these two reports, the Committee drew up in March 1993 its work programme for the next three years. This is likely to include a particular focus upon environmental questions in Central and East European countries; coastal management and protection; local authorities and the disposal of industrial domestic and toxic waste; local fiscal measures for encouragement of environmental protection.

The Committee's emphasis on the urban component of its work will be upon the distribution of the European Urban Charter, accompanied by a call to European towns to adopt the principles contained within it.

The Committee also decided how it could best contribute to European Nature Conservation Year 1995. ■

Pan-European Conference

The pan-European Conference which is to take place in Strasbourg from 24 to 26 November next is intended to serve as a scientific forum for the interchange of ideas and information on the potential long-term ecological impact of the dissemination of genetically modified organisms (GMO), and to provide insights into the state of the art from three standpoints: knowledge, theory and experience.

The conference papers and the debates will take their main subject-matter from the Council of Europe report entitled "Ecological impact of genetically modified organisms". This report describes an approach which may be adopted in endeavours to find out more about the long-term ecological consequences of releasing organisms into the natural environment, and the underlying interactions. A number of case studies are presented as a guide to strategy for future work.

It is expected that the conference will come up with conclusions aimed at assisting and augmenting risk assessment and risk management procedures and contributing to research in this field. ■

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