

Saving endangered wildlife

In one way or another virtually all wild things have become the wards of man. They depend on what he does – or does not do – for their survival.

As a result, many species are facing extinction. Some are seriously reduced in numbers or their habitats have been decreased or destroyed, leaving them vulnerable to the threat of extinction. Others are so rare that a constant watch must be maintained to guard them from harm.

If there is a hope to save many of the world's threatened species it will be by satisfying their biological requirements within the world's changed and changing environments.

Conservationists, unfortunately, have not always realized this necessity. Too often actions have been guided by the belief that if a species is protected from hunting, and perhaps from other forms of predation, all will be well. It has taken a long while for those who take an interest in wildlife to learn that wildlife habitat must also be protected.

Wildlife managers have slowly accumulated knowledge about cover, food habits and animal diseases. Through the development of the science of ecology information has accumulated on food chains and their place in more complex food webs. It is now known that any species exists as part of an ecosystem in which all parts must function if the species is to survive.

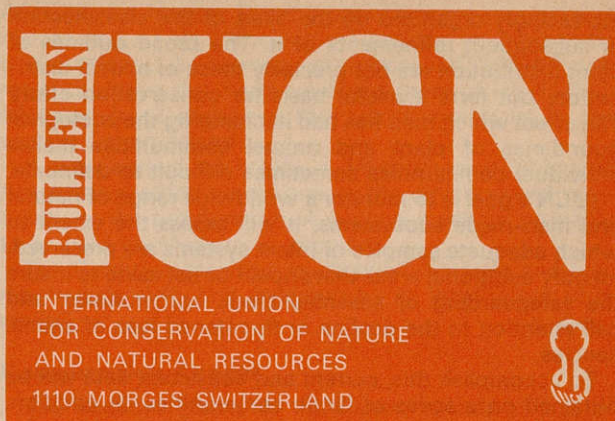
For more than two decades, IUCN has provided a forum for the development of a conservation philosophy which is based on the concept of an integrated environment. It has engaged in broad-range conservation action programmes to preserve unique areas as national parks or as strict nature reserves. These areas contain entire communities of plants and animals, with each unit influencing the survival of the others.

The world's threatened species have a doubtful future unless whole natural areas are preserved where life can flourish in all its complex variety. The need to preserve a wide range of such natural areas as a long-range goal, while taking immediate emergency action to halt the destruction of threatened species of plants and animals and to keep open options for continued diversity in the natural world, is a basic and central idea in the broad IUCN programme.

Based on these premises IUCN, through its Survival Service Commission, has been organizing the information necessary for the protection of threatened species. An equally important function has been to organize the known biology of each threatened species so as to determine its conservation needs. Particular attention is given to endangered species whose conservation needs are urgent and to species which have not fully recovered from past depletion or whose numbers may be declining at such a rate they might subsequently be threatened with extinction.

Among the reason why 132 mammals listed in the current edition of the IUCN Red Data Book, Vol. 1 are threatened with extinction and an additional 60 are either approaching that situation or have only recently escaped from it, direct reduction by man stands foremost and indirect action which has caused loss or degradation of habitat stands second. The two, however, are inter-related. Loss of habitat exposes a species to direct reduction. Animal species which have been over-exploited or persecuted by man or which depend on relatively undisturbed habitats, whether forests, swamps or savannas, are in difficulty through the world.

The natural associations of a plant and animal community are not a simple collection of separate entities, any one of which can be changed without regard for the others. Rather, they involve many intricate inter-relations in composition, function, and structure. Some animals can thrive in a wide variety of conditions and may be



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represented in a number of communities. Conversely, others are specialized and may be limited to a single community.

Protection and restoration of species threatened by over-exploitation or reduction campaigns may be a painfully slow process, but it is possible if their habitats have survived, if their niche has not been occupied by a hardier species, and if they have survived persecution in sufficient numbers to sustain genetic viability. Assuming there is intent, financial support, and cooperation between political jurisdictions where they are needed, these species can be saved from extinction. Enforcement of protective regulations and application of wildlife management techniques can be effective if they are vigorously applied.

There is risk, though, in too much reliance on management because it involves a certain amount of meddling with systems that we do not understand completely and where there is a great deal of uncertainty. Most of the endangered species will survive only if the ecosystems in which they live remain intact or if they can adapt to a changed environment. The concept of an ecosystem is a very broad one, based not on size or on the number of interacting parts, but on the functional stability for a given period of time. It is conceived as a dynamic rather than a static situation.

Successful conservation programmes cannot be based on a preoccupation with saving the animal by itself. Its total environment must be preserved. The complexity of this undertaking can be realized as one considers the fragility of some associations and appreciates the amount of tinkering that has occurred with most biotic communities.

Biotic communities are continually lost or changed as agriculture, industry and human habitation puts some areas which are essential to wildlife to other uses. Many of the changes thus brought about are irreversible. Vast areas which were formerly sparsely occupied by peoples who lived with nature have become thickly inhabited by agrarian and industrial societies and turned to exploitive uses. Continued and accelerating occupation seems inevitable for some time in the future.

The effect of these events in changing biotic and environmental factors which govern the distribution and quality of major ecosystems is of paramount concern to IUCN. In view of this concern, IUCN has been asked to take over operations of the Section of Conservation of Terrestrial Biological Communities of the International Biological Programme, which were to end in 1972. Some modifications of the IBP Check Sheet Survey of biotic communities are being studied with a view to adapting these data more closely to IUCN requirements in relation to endangered species and biotic communities.

Through the work of several of its commissions, IUCN is developing a system for compilation of data based on existing classifications of biotic communities. The compilation of information on threatened species will be

increasingly organized on the basis of this classification or subsequent refinements of it. The broad outlines of plant distribution are not precisely those of animal distribution, but form a useful basis for conservation effort. The effect which man has had in changing the ecological boundaries of plant and animal communities makes individual communities sometimes difficult to delineate.

IUCN's goal is to monitor a worldwide range of natural and man-made ecosystems. It will assess the extent to which adequate samples of intact systems are preserved, identify additional areas that should be set aside to insure the safeguarding of essential biotic communities, and call attention to the decline or threatened loss of animal species.

To accomplish this, current and consistent data will be obtained on a series of biotic communities. In addition, particular attention will be paid to endangered species and to vulnerable species whose survival might subsequently be threatened. For other species, the best that can be accomplished is the maintenance of a continuing surveillance of those biotic communities of which they form a part.

This continuing surveillance and review will guide the establishment of priorities for field research and conservation action. It will enable us to maintain a constructive conservation programme based on the best scientific data available.

But IUCN and all those who are working toward the same basic goals will need all possible help of all elements of the world conservation community to make it fully effective.

Progress on MAB

The second meeting of the International Co-ordinating Council of the programme on Man and the Biosphere (MAB) was held at Unesco in Paris, 10-19 April 1973. Election of the new MAB Bureau was the first order of business with the result that Professor François Bourlière (France) will again serve as chairman. Re-elected also was vice-chairman D. R. King (USA). New vice-chairmen are Dr. V. Sanchez (Chile), Prof. C. Olaniyan (Nigeria), and Prof. V. Sokolov (USSR). Prof. Ralph Slatyer (Australia) will serve as rapporteur.

It was agreed that work will proceed during the next two years by initiating a core programme consisting of those elements of Projects 1 (tropical forests), 3 (grazing lands), 5 (wetlands) and 6 (mountains) which require international co-ordination. Working groups will be established for these four projects and will begin meeting in 1973. The methodology related to Projects 12 (genetic and demographic changes) and 13 (perception of environmental quality) will be incorporated into each of the four biome-oriented projects. Overall co-ordination of the core programme will be provided by an expanded Bureau to be made up of the chairmen of each of the four working groups along with expert consultants in methodology, systems analysis, and the social sciences.

While the core programme is being developed work will continue, through meetings of panels of experts, toward launching those projects for which expert panels have not yet been convened. Of particular interest to IUCN is Project 8 "Conservation of Natural Areas and of the Genetic Material they contain". The panel of experts for this project will meet at IUCN in Morges in September, 1973. It was generally agreed that IUCN will have a major responsibility in carrying forward Project 8 in collaboration with FAO. Similarly FAO will have a primary responsibility, in collaboration with WHO, in developing Project 9, which is related to the use of pesticides and fertilizers.

Progress on MAB has been necessarily slow because of the elaborate intergovernmental machinery involved. Now, however, more than 50 nations have formed national committees for MAB and it seems likely that this major environmental research programme will move forward.

Conferences and Meetings

Ecology gaining momentum in tropical America

A series of meetings have been held recently in Latin America, notably in Colombia, Venezuela and Costa Rica, which all indicate a healthy trend towards the inclusion of ecological knowledge and ecological principles in various aspects of land-use management and decision making in general.

Improvement of man and his rural environment

The Colombian "Instituto de Integración Cultural" organized an international meeting, held near Medellín, on the theme "Improvement of Man and his Rural Environment in Colombia". Several international conservationists were invited by the Colombian authorities, including Dr. Bengt Lundholm from Sweden, Dr. Richard Evans Schulthes, noted ethnobotanist from Harvard and Dr. Gerardo Budowski. Many outstanding Colombians were present.

The purpose of the meeting was to bring together specialists from many disciplines, all related to environmental planning but with emphasis on the management of rural areas and the improvement of the living conditions, focussing in particular on the delicate balance that must exist between man and natural resources. It soon became very clear that such a balance is dangerously imperiled over a wide area in Colombia and that nothing less than a drastic change is needed to counter-balance on-going destructive processes. The meeting, somewhat paradoxically, was highlighted by addresses of local decision makers of an older generation for whom the solution was, above all, new roads, more Government subsidies for practically everything, more opening of virgin lands, etc. It became quite evident that the gap was extremely wide between ideas of traditional development and the idea that the group had at the end of the meeting on what should be ecologically acceptable solutions. Not surprisingly, the final declaration included strong statements on the need for family planning and improved education programmes for the rural population, as well as development of agricultural, animal husbandry and forestry systems on sound ecological bases, through policies and development of techniques more compatible with natural processes. The Proceedings will be published.

IBP Sponsored Meeting on Tropical Ecology

Hosted by the Venezuelan Institute of Scientific Research (IVIC), the 2nd International Symposium on Tropical Ecology took place in Caracas, 6-10 February 1973, to focus on various ecological aspects related to the tropical environment such as productivity, management and conservation. More than 300 scientists were registered, with large representations from various tropical countries, notably Brazil, Mexico, Costa Rica, Panama, as well as from several African and Asian countries, the latter mainly European and American investigators who had been engaged in environmental research. Over 40 communications were presented on such themes as diversity, stability and maturity in natural and man-made ecosystems and strategies for the management of such ecosystems. IUCN was represented by Dr. Gerardo Budowski, who gave a paper in Spanish on "Management of natural and cultural areas for conservation; a valid alternative for land-use". The proceedings will be published.

Tropical forestry

Under the initiative of the Inter-American Institute of Agricultural Sciences, through its programme on utilization of the wet tropics (based in Belem, Para, Brazil), an international meeting was held in Maracaibo, Vene-

zuela in March 1973. Particular emphasis was placed on tropical forestry development and a large number of tropical foresters and land-use specialists participated. The proceedings are to be published.

Research priorities in the ecology for the Latin American Tropics

Sponsored by The Institute of Ecology (TIE), a workshop with specialists in tropical ecology was held at the Tropical Science Centre of the Inter-American Institute of Tropical Sciences in Turrialba, Costa Rica, on tropical ecology, 24–31 March 1973. Over 100 participants of the meeting, all well known authorities in tropical American ecology, were requested to provide their input in outlining what they considered top priorities in research linked with ecological aspects in such matters as population control, ecosystem structure and functioning, ecosystem recovery from disturbance, local and regional impact and mechanisms for carrying out programmes. A large number of participants were United States scientists who have had an important involvement in ecological research in Latin America. Funds towards the arrangement of this meeting, as well as previous consultations held in Latin America and in the United States, were provided by the National Science Foundation of the United States. The results of the various workshops are to be published soon and should provide a blueprint for the kind of research most needed in the tropical American region.

Development of Southern Venezuela

The latest of a series of related meetings labeled "First Venezuelan Journeys for the Development of the South", was held in Caracas, Venezuela, 23–26 May, and dealt with the planning of an area of 242,000 square kilometers but which now has fewer than 50,000 inhabitants out of a country of 9.5 million people. The meeting was organized by the prestigious Venezuelan Association of Engineers and was to focus on integrated development, infrastructure, human and natural resources and prospects of economic developments. A publication of the results is anticipated.

Focus on conservation in the Canary Islands

More than 70 scientists from 30 universities in 13 countries attended a first international botanical meeting held at Las Palmas de Gran Canaria. The Congress was sponsored by the Island Council (Cabildo Insular) and took place between 13 and 18 April 1973.

Twenty seven conferences were given on such subjects as flora, conservation, herbaria, and inventories. The texts of these conferences will be published in the forthcoming issue of "Monographiae Biologicae Canarienses". During a joint excursion participants were introduced to the main plant communities existing on Gran Canaria.

Although the principal purpose of the meeting was to bring together all botanists whose work and interest, directly or indirectly, relates to the vegetation of the Macaronesian Islands, and to review progress of the "Flora Macaronesica" project, conservation of the vegetation with its high percentage of endemics received considerable attention.

The urgent need to protect the large number of endangered species and to preserve unique communities and landscapes on the islands gave rise to the preparation and approval of a general "Appeal" (see below). This will be widely circulated and brought to the attention of institutions and governments concerned. The on-going conservation programmes were reviewed in detail, notably through the active participation of the representatives of local governments and institutions, such as the Cabildo Insular, the Universidad La Laguna, ICONA (Instituto Nacional para la Conservación de la Naturaleza),

ASCAN (Asociación Canaria para Defensa de la Naturaleza) and ATAN (Asociación Tinerfeña de Amigos de la Naturaleza). A communication from IUCN/WWF was read, informing the members of the grant of US \$3,000, allocated for a survey of the natural resources in the eastern Canary Islands.

It was agreed to create a Macaronesian Botanical Association which would ensure the direction and continuity of the programmes. A second meeting, probably to be held on Madeira, is planned.

The Congress received much public interest and was reported on daily and at length by all local information media.

G. Kunkel.

Conservation Appeal

The endemic plants of the Canary Islands as also of Madeira, the Azores and the Cape Verdes are a unique, precious and irreplaceable heritage of the people of these islands which needs to be safeguarded on scientific, cultural and historic grounds for the enjoyment, interest and use not only of the present but of future generations.

Due to evergrowing population and demand, to rapid exploitation and subsequent exhaustion of natural resources, and because of common misunderstanding of basic natural and ecologic laws, a large number of species and entire plant communities are endangered. Their actual survival is only a question of time and little hope and no guarantee can be given for the safety of these units. Even in the Macaronesian Archipelagos a considerable number of species have been entirely exterminated in certain places. The number of specimens of some endemic taxa amounts to less than 50.

Considering the unique value of native and/or endemic plant species, the high number of little-known local endemics, and considering the human need of wilderness and recreation parks and landscapes, the members of this "I International Congress pro Flora Macaronesica" propose to local authorities and to the Governments of Portugal and Spain

to form a bilateral, international Study Commission to prepare an inventory of remaining natural resources in the Azores, Madeira and Salvages, Canaries, and Cape Verdes;

to establish and enforce a strict code of protection in all Macaronesian Islands and to preserve selected ecologically intact or otherwise valuable countrysides, even before the results of the above mentioned survey are given;

to urge educational programmes in schools and in public information media, in order to increase general awareness for the need of conservation.

Both Governments concerned might be assured of technical assistance from all scientific institutions involved or that are otherwise interested in the natural history of these islands. If found desirable, the members of this meeting will second any application for special programmes aided by UNESCO and IUCN/WWF.

Las Palmas de Gran Canaria, 17 April 1973

Swiss zoologists urge caution on introduction of exotics

The annual Assembly of the Swiss Zoological Society, which took place in Lausanne on 7 and 8 April 1973 under the Presidency of Professor H.-A. Guénin, discussed the introduction and release of exotic animals in Switzerland. Such measures have increased alarmingly during recent years, without any attempts being made to consider their effects on indigenous wildlife.

In consequence, the Swiss Zoological Society is urging the Federal Authorities to ensure that Article 6 of the Federal Law on hunting and protection of birds (10 June 1925 and 23 March 1962), and Article 23 of the Federal Law on the protection of nature and landscapes (1 July 1966) are implemented; and to issue introduction and release permits only after ecological studies have been carried out and the views of competent zoologists heard.

Rumanians organize education meeting

An international course for training youth and children's leaders in environmental conservation and education will be held 16 to 23 July 1973, in Bucarest and Victoria, Rumania.

The course is organized by Virgiliu Radulian, President of the "National Council for the Organization of Pioneers" of Bucarest. Its purpose is to review the methods for environmental conservation work and involvement developed by constructive programmes and projects within youth organizations and groups and to exchange experience on the various efforts in this field.

International Workshop on Environmental Education Related to Mountain Environments

This international workshop, which is to be held in Aosta, Italy, 4-15 September 1973, is being convened to seek agreement on priorities for conservation education in mountain environments and to produce, through consensus of the various groups involved, a methods book for use in connection with conservation education in mountain environments.

The project is under the joint sponsorship of IUCN, WWF, Union Internationale des Associations d'Alpinisme, Italian National Federation Pro Natura, Société de la flore valdotaine and the Government of the Autonomous Region of the Aosta Valley. Invitations to speakers have been sent out and the preparations for the workshop are well advanced.

Seminar on the Improvement of Cultural Landscapes

An international seminar on the problems of creative conservation and the dynamics of the development of cultural landscapes in Central and Eastern European countries was held 4-9 June 1973, at Constanta in Rumania. It was sponsored by the Rumanian Academy of Sciences. About 40 people participated in the seminar in order to focus attention on associated problems and their impact on nature reserves; to formulate research projects on the subject; and to recommend methods for avoiding or minimizing the negative impact of development on nature reserves and outstanding landscapes.

"Tourism builds a better environment"

With this ambitious title the large Pacific Area Travel Association (PATA) organized an important workshop in Kyoto, Japan, to precede its General Assembly in Tokyo last February. The driving force behind this effort was Laurence W. Lane, Jr., a well-known American publisher.

The theme was to constitute a major effort by the tourist industry to express its concern about environmental degradation and, hopefully, to lead the tourist industry towards more environmentally oriented action programmes. The workshop heard various papers by leading conservationists from throughout the world, notably Tetsumaro Senge from the National Parks Association of Japan, Richard Piesse from the Australian Conservation Association and Dr. Edward L. Towle from the Caribbean Conservation Association. Dr. Gerardo Budowski from IUCN gave the keynote paper on the subject: "Tourism and the conservation of nature; conflict, coexistence or symbiosis". The proceedings are to be published soon.

At its general conference, PATA approved the resolutions of the workshop and voted certain credits towards environmental work, notably in relation to educational projects.

Two IUCN-sponsored meetings postponed

The International Seminar on Environmental Conservation for Engineers, scheduled to be held in October in Prague, Czechoslovakia, has been postponed until next year because of insufficient response. The House of

Technology and the Technical University of Prague now plan to hold the seminar in the first quarter of 1974, with the same programme as announced in the March IUCN Bulletin. Details will be published when they are known.

A second international working meeting on teacher training in environmental education and conservation, planned as a follow-up of the International Course for Teacher Training in Environmental Conservation Education which was held at the Draper's Field Centre, Wales, U.K. in August 1972, has been postponed until 1975. It was to be held at the Draper's Field Centre in Rhyd-y-Creuau, Betws-y-Coed, Caernavonshire, Wales, UK, from 1-11 August.

Conservation Notes

Swem heads Alaska planning

Theodor R. Swem, vice-chairman of IUCN's International Commission on National Parks, has been appointed chairman of an inter-Bureau Alaska Planning Group within the U.S. Department of the Interior. The Bureaux involved are the National Park Service, Bureau of Outdoor Recreation, and Fish and Wildlife Service. Swem is an Assistant Director of the National Park Service.

The group will be responsible for the planning and coordination of efforts among these three Bureaux in response to the Alaska Native Claims Settlement Act. Studies are being conducted of approximately 80 million acres in Alaska set aside for possible additions to the National Park, Forest, Wildlife Refuge, and Scenic Rivers Systems.

Finland signs Wetlands Convention

The Convention on Conservation of Wetlands of International Importance, open for signature at Unesco in Paris, was signed on behalf of Finland in April. The action is subject to ratification.

Finland's is the second signature to the Convention. Iran signed earlier, subject to ratification.

The Convention enters into force four months after seven States have adhered to it.

Atoll set aside for science

With the approval of the French Polynesian Government, William A. Robinson of Papeete has made the atoll of Taiaro in Tahiti available as a scientific sanctuary. A governing committee of scientists is being formed to screen applications of scientists who want to work on the atoll. Sir Hugh Elliott has been appointed as the IUCN representative on the government committee.

Honours

New Zealand scientist knighted

We are pleased to note that Dr. Robert Falla, chairman of the New Zealand Nature Conservation Council, was knighted on January 1 in the Queen's New Year's Honours List for his contributions to conservation during his long career. Sir Robert, a specialist in the Antarctic, marine science and ornithology, was a member of the Executive Board in the early days of IUCN, then known as IUPN.

Dasmann honoured

Dr. Raymond F. Dasmann, Senior Ecologist of IUCN, was honoured with the Honorary Membership award of The Wildlife Society during the 38th North American Wildlife and Natural Resources Conference in Washington, D.C. in March. Dasmann, a past president of the Society, served as chairman of the International Affairs Committee during the last year.