

of these papers discussed the roles of metallothioneins and different classes of 'membrane-bound' biomineralized granules in the physiological processes involved in metal detoxication. The application of tests for the induction of metallothionein as an index of biological response to toxic metals appeared to show considerable promise for the future (S. G. George, Aberdeen; A. Viarengo, G. Zanicchi, M. N. Moore & M. Orunesu, Genoa, Italy; K. D. Jenkins, D. A. Brown, P. S. Oshida, E. M. Perkins, J.-L. Y. Palacio & A. Sassoon, Long Beach, California).

In chairing the final discussion-session, Dr A. McIntyre (Aberdeen) emphasized the pressing need for movement from the laboratory into the field; the importance of laboratory-based experimental investigations was also stressed, however, particularly in relation to the problems of deciding what are the 'normal' and 'abnormal' metabolic states, or perturbations from a reference condition, induced by pollutants. The general feeling was that progress has been made in spite of the immensity of the problems of environmental physical and chemical complexity, and that there is room for some cautious optimism in relation to the understanding of pollutant-induced stress and the development of biological indices of effect.

The proceedings of the symposium will be published in *Aquatic Toxicology* (Vol. 1, issues 3/4 and 5/6, 1981, Elsevier/North Holland Biomedical Press B.V.). The meeting was jointly organized by the undersigned and Dr C. S. Giam (of the Department of Chemistry, Texas A & M University, College Station, Texas).

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MEETING OF THE IUCN COMMISSION ON ECOLOGY, HELD AT THE INTERNATIONAL AGRICULTURAL CENTRE, WAGENINGEN, THE NETHERLANDS, DURING 9–13 JUNE 1981

This meeting of the IUCN Commission on Ecology was hosted by the Agricultural University of Wageningen with support of the Netherlands Ministry of Cultural Affairs, Recreation, and Social Welfare. The meeting was opened by Mr P. A. van Buuren, Deputy Director-General for Development Cooperation of the Netherlands Ministry of Foreign Affairs, representing the Minister for Development Cooperation. Mr van Buuren underlined the interest of the Netherlands Government in the work of the Commission, particularly in regard to its role in implementing the World Conservation Strategy.

Three major papers were reviewed by the Commission in first-draft form. A document written by Professor L. D. Pryor on 'Ecological Mismanagement in Natural Disasters', carried as its main message that improved management of vegetation is the most crucial issue in disaster prevention. The Chairman presented a draft report based on a large number of contributions from Commission members on 'Ecological Changes and Developments in the Science of Ecology', to be presented at the forth-

coming IUCN General Assembly in Christchurch, New Zealand. The third document, written by Professor R. Ricklefs, dealt in draft form with the 'Conservation of Ecological Processes'—one of the major issues of the World Conservation Strategy.

During the presentation of the reports of the various working groups, several draft IUCN position-papers were received by the Commission, such as ones on oil pollution, pesticides, and tidal mudflats. Others are in various stages of preparation.

The first results of the assessment of future hazards to species and ecosystems from the use of pesticides in crop production, vector control, exploitation of aquatic resources, and other land-use developments, in West Africa and Southeast Asia, were presented by Professor J. H. Koeman, Chairman of the Working Group on Environmental Pollutants.

Dr Bernard Salvat, Chairman of the Working Group on Coral Reef Ecology, illustrated by reference to the Coral Reef Newsletter No. 3, the guidelines for action of the Coral Reef Group. They include (a) a census of present coral-reef parks and reserves—an activity undertaken in conjunction with the IUCN Commission on National Parks and Protected Areas; (b) the study of available information on human activities that cause damage to coral reefs; and (c) the mapping of major degradations of coral reefs in the various parks in the inter-tropical zone.

A new Working Group on Mountain and River Basin Management was in the process of being formed by Professor Jack D. Ives.* Meanwhile, progress was reported by the Editors of the volumes on freshwater and coastal ecosystems of the Sourcebook of the World Conservation Strategy.

The Permanent Secretary of the Ministry of Environment of India, Mr N. D. Jayal, addressed the Commission on the subject of a land-use survey of the Andaman and Nicobar Islands. The Commission decided to set up a task-force under Professor I. Zonneveld to form a multidisciplinary team to deal with this matter, which would include studies of the coastal marine habitats and remaining tropical forests of these Islands.

The Commission visited the 'Oostvaardersplassen', an area that forms part of the last polder that was drained in the IJsselmeer in 1968. After the polder was reclaimed, a 'natural' area of about 6,000 hectares developed in it—of a kind that must have existed in many places in the Netherlands and elsewhere in northwestern Europe up to a few centuries ago. This circumstance made possible the return of plant and animal species which had disappeared from the Netherlands in former centuries. At its session on 12 June 1981, the Commission adopted a resolution recommending the full safeguarding of the ecological viability and potential of the Oostvaardersplassen.

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*President of the recently-established International Mountain Society, which he described on page 150 of our latest issue.—Ed.