

Genetics Conference Draws 300 Attendance

More than 300 field scientists and resource managers from Federal, State, and private sectors met for five days in Washington, D.C., August 9-13 to listen to two dozen of the world's leading geneticists and to consider the state of the art in managing natural populations, including the newest developments from the fields of evolution and genetics.

The international symposium and workshop was billed as "The Application of Genetics to the Management of Wild Plant and Animal Populations," and the actual proceedings hewed closely to the five workshop aims:

- to review the scope, magnitude, and sources of worldwide plant and animal species losses;
- to assess the economic, social, ecological, political, and strategic implications to the U.S. and other countries of a continuing decline in species diversity, particularly as it may relate to world food supply, energy demand, and industrial output;
- to identify and evaluate technologies, institutions, and scientific knowledge available for conserving biological diversity;
- to review the nature and effectiveness of U.S. government domestic and international policies and programs, and
- to recommend initiatives the U.S. should undertake to stimulate and assist an expanded worldwide effort in this area.

Each morning session consisted of five lectures by such authorities as Sir Otto Frankel, Paul R. Ehrlich, and Michael E. Soule; the afternoon sessions were given over to workshops on specific problems. The bringing together of people from a variety of communities — zoos, small state parks, huge National Parks — had much the same effect as a series of overlays, showing up the similarity of problems faced by all. If we choose to

interfere in natural genetic events, what measures are available to us? How can we find out more about the long-term effects of implementing these measures? For instance, what happens when historically isolated populations are mixed?

The week-long discussions pointed steadily to one conclusion: that the health or collapse of ecosystems frequently depends on management's ability (or failure) to foresee the vulnerability of populations and how various populations interact in the long time-frame.

General topics for the five days were (1) isolation of populations, (2) extinction of populations, (3) founding populations, (4) merging of naturally diverging populations, and (5) preserving the natural integrity of populations.

Christine Schoenewald-Cox, who organized and ran the conference, is presently compiling and editing a volume to be published by Addison-Wesley of Reading, MA 01867, scheduled for publication in May 1983 for about \$25 a volume. In addition to a compilation of the conference papers, with editorial inserts, the book will contain a complete glossary of terms, a set of exercises in genetics, and an extensive literature list.

Schoenewald-Cox observed that most of the park areas now in existence are relatively small, static ecosystem scraps, containing what are, in effect, enlarged captive populations. She suggested that what is most needed by managers is an understanding of their role in dealing with the problems of managing genetic material in small areas. "The reasons for this are two," she said. "First, the aesthetic (and possibly the moral) obligation to keep as many species as possible from disappearing. Second, the possibility that in some future time we might again be able to re-establish sustaining populations of the species we have kept alive."

The book that is growing out of this conference is envisioned by Schoenewald-Cox as "a reference/text, primarily for those interested in managing natural populations."

A mailing list of all those who attended is available from Schoenewald-Cox at the Natural Sciences Division, National Park Service, Department of the Interior, Washington, D.C. 20240.