

Radioecology Symposium at Ann Arbor, Mich., to plan appropriate systems analyses for the total system studies and the contributing studies.

CONSERVATION OF ECOSYSTEMS

Far too much of the animal and plant life of the world is threatened with destruction, owing to population expansion, accelerated communication, industrialization of previously underdeveloped countries, and intensification of agriculture, forestry, and other land use. The threat to biotas exists in all parts of the world but is most pronounced in tropical and subtropical areas, where recent changes in land use have been especially drastic. Only the specialist fully realizes how extraordinarily restricted are the ranges of many species.

Registers of Ecosystems

The Conservation of Ecosystems Subcommittee proposes to encourage the establishment of a clearinghouse for collecting, collating, and disseminating existing and new information on the major aquatic and terrestrial ecosystems of the United States. These data will be published in the form of registers, which will include, for each area, a basic description, a statement of the purpose for which the area was established, a summary of policy guiding its management, and a list of facilities available for research. The first of these registers is being prepared by a committee of the U.S. Departments of Agriculture and Interior and will include research data from natu-

ral areas on Federal lands. Since some ecosystems extend beyond U.S. boundaries, Canada and Mexico will be invited to participate in developing and maintaining registers. The subcommittee will encourage and facilitate necessary expeditions and surveys to acquire needed information.

Establishment of Reserves

One of the goals of the Conservation of Ecosystems Subcommittee will be to establish within the U.S. and its possessions a comprehensive system of protected research reserves. The system will include samples of all major aquatic and terrestrial ecosystems that are needed for present and future research. Local specialists will be asked to assist in locating, describing, and justifying the establishment of areas. The subcommittee will provide information on the scientific basis for protection, advise on practical steps toward implementation, and, as appropriate, stimulate action to accomplish it. Not all needed reserves can be established at once. Consequently, a system of priorities, with appropriate criteria, must be set up somewhat as shown at the bottom of this page.

Wherever possible, new areas will be located on lands or waters already in public ownership. In other cases, efforts will be made to persuade appropriate public or private organizations to invoke zoning restrictions, easements, or covenants, or to purchase the area. Efforts will be made to identify public and private sources of acquisition funds. Once an area is designated, plans will be drawn up for its protection and management. The plans will specify the purpose for which it is protected and the uses to which it may best be put.

SYSTEM OF PRIORITIES FOR ESTABLISHING RESERVES

Criteria	Areas Affected
Degree of threat -----	Habitat types imminently threatened by destruction or damage.
Uniqueness -----	Areas representing unique habitat types or containing unique species.
Rarity -----	Areas representing rare habitat types that are unprotected or insufficiently represented in existing reserves.
Completeness -----	Areas representing habitat types not included in the existing reserve system; inclusion needed to insure that the system provides complete coverage.
Research needs -----	Areas required to protect examples of habitat types sufficiently large or numerous to satisfy need for research that involves manipulation and research confined to observation.
Unusual scientific significance -----	Areas having some special value for scientific purposes—for example, areas showing unusual juxtaposition or combination of habitat types, or areas having a long history of sound research, or areas particularly suitable as research facilities because of ease of access or a comparable attribute.
Typicalness -----	Areas that are representative of other widely spread ecosystems.