

dowed organization with strong governmental relationships, serves as an important focal point for both national and international programs in basic research and education in ecosystem-oriented ecology.

Within this context, Mr. Chairman, I should like to refer briefly to those elements within the Smithsonian Institution that have a distinct bearing on its capability to contribute to the quality control of our environment.

The Museum of Natural History is an international center for the biological specimens in the nation. The interests of the museum include all aspects of the natural sciences. Anthropology, botany, entomology, invertebrate zoology, mineral sciences, paleobiology, and vertebrate zoology are well represented. The scientific program of the museum consists of the efforts of over 100 research scientists. Although most of the research is collection-based, it also involves field observation and refined laboratory techniques. The ongoing investigations reflect a considerable diversity of interests, largely within the areas of systematic biology and biogeography. Studies of autecology and physiology are pursued primarily as pathways for determining phylogenetic relationships. The 50 million specimens provide not only a documentation of organisms in space and time but also information indispensable to the understanding of speciation and ecological relationships. Thus the Museum of Natural History provides a strong taxonomic foundation for ecosystem-oriented science.

The Information Systems Division of the Smithsonian is now in the process of computerizing the information on biological and mineral specimens. The development of computer-supported systems will enable the Smithsonian to manage better its information resources and to respond to inquiries with speed, accuracy, and completeness. It also provides increased capability for mathematical and statistical approaches to research, mathematical modeling, and the classification of plants and animals by numerical taxonomy. The Smithsonian's computer capacity is sufficient to initiate storage of ecological information pertinent to contemporary problems of environmental alterations.

The Smithsonian Tropical Research Institute (STRI) has been a component of the Smithsonian since Barro Colorado Island was transferred to the administration of the Institution in 1946. Barro Colorado provides opportunities to study tropical jungle (more precisely, lowland seasonal humid forest) with its characteristic community of animals. The Smithsonian Tropical Research Institute has also acquired a small tract of land on the mainland of the Canal Zone, in the "Navy Pipeline Reservation." It has, in addition, made arrangements to use areas in other parts of the Canal Zone, and the Republic of Colombia in the near future. These circumstances will permit scientists to study in different types of lowland forest, montane forest, alpine moor, grasslands, scrub, and marsh. It will also permit them to make experimental modifications of environments. Its status as a reserve precludes this activity on Barro Colorado. Two marine biology stations have been established in the Canal Zone, one on Naos Island on the Pacific coast and the other on Galeta Island on the Atlantic coast. The focus of marine research is primarily concerned with the evolution of isolating mechanisms in species pairs of marine shore fishes.

The objective of these studies is to determine the actual correlation between types of isolating mechanisms and factors such as morphology,