

PROGRAM FOR NATURAL SCIENCES RESEARCH IN ECOLOGY AND ESTHETICS, NATIONAL
PARK SERVICE, DEPARTMENT OF THE INTERIOR

The national parks contain the finest examples of America's natural and cultural heritage that have been set aside and preserved for specific uses and enjoyments of the people. The natural areas should be a reasonable portrayal of the natural American landscape, and the geologic and biotic resources contained therein, as they would be were it not for the advent and impact of post-Columbian culture, technology, and activities. The historical and archeological areas should present the cultural essence of the time and peoples involved. The Parkscape program also includes the beautification of urban areas to improve the aesthetic condition in which everyday life takes place. To maintain or restore the ecological, cultural, and aesthetic integrity of these areas is the business of the National Park Service; but to be effective, the efforts must be guided by hard facts and sound scientific, historical, and archeological principles. Basic resources must be identified and understood prior to undertaking responsible management activities and interpretive efforts. A great deal of knowledge that is already available must be brought to bear upon existing problems. When sufficient knowledge is not available, additional knowledge is sought through the Service's research programs. Accomplishment of such research involves research biologists, archeologists, and historians employed by the Service, cooperative studies with other Federal and States agencies, universities, and other organizations. The spectrum is broad, involving botanical, zoological, geological, ecological, historical, archeological, and horticultural research. Major research programs have involved such nationally significant resources as the Mesa Verde ruins, Independence Hall, and the giant sequoia groves of California.

RARE AND ENDANGERED SPECIES

Since colonization of America, nearly 50 kinds of vertebrate animals have become extinct in the United States and its possessions as a result of man-caused changes in the environment and overhunting. At least 78 other species of mammals, birds, reptiles, amphibians, and fishes now are so rare that they, too, may be lost forever unless special efforts are exerted for their preservation.

Conventional wildlife management measures, though effective for many species, are not sufficient for certain less adaptable forms. Information is needed regarding their status, distribution, habits, habitats, and limiting factors before effective management measures can be devised.

A research station on endangered wildlife has been established. It is the headquarters for Federal research on rare and endangered wildlife species. The program is coordinated with State agencies, universities, and interested groups. The program includes ecological studies of threatened wildlife in their natural habitats, laboratory investigations of physiological, nutritional, genetic, pathological, behavioral, and other problems, and the propagation of endangered species in captivity for release to replenish wild populations. Nucleus populations in captivity will preserve basic stocks in the event wild populations are lost. Surplus animals reared in captivity will be utilized in living exhibits for scientific and recreational viewing by the public.

The economic benefits of wildlife to the human race are significant, but are dwarfed by the ethetic considerations. The enrichment of life is hardly confined to the billfold. The disappearance of a species is a permanent loss. This new program is dedicated to preservation for human good of such unusual animals as the whooping crane, California condor, Hawaiian goose or nene, blackfooted ferret, and many others.

MIGRATORY BIRD HABITAT AND PRODUCTION RESEARCH

Under the Migratory Bird Treaty Acts with Great Britain (for Canada) and Mexico, the Federal Government, through the Bureau of Sport Fisheries and Wildlife, is responsible for preservation and enhancement of the migratory bird resource. Increasing human populations and attendant cultural developments place mounting pressures on both the game (waterfowl, snipe, woodcock, doves, pigeons, etc.) and the non-game (songbirds) species. Inimical factors may be expected to intensify.

Major needs are to understand population dynamics, habitat requirements, and ecological relationships of the individual species as a basis for conservation planning and action programs. Seasonal distribution, behavioral traits,