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A Biological Survey of the United States

In this era of enhanced public awareness of the effects of acid rain, pesticides, industrial pollution, and other impacts of man on the environment, there is also a deficit of basic information on the composition of the biota of the United States. There has been considerable progress in the study of living organisms during the past two centuries, but no concerted effort has been undertaken to survey the entire U.S. fauna and flora. Less than one third of the organisms and their developmental stages that occur in this country have been described.

Most species surveys have been ad hoc and concerned with discrete groups of organisms in limited geographical areas. A few states (California, Florida, Illinois, New York, and Ohio among them) support biological surveys. The National Marine Fisheries Service publishes a series of identification manuals on the marine flora and fauna of the northeastern United States, and the U.S. Fish and Wildlife Service prints the *North American Fauna* on vertebrates. But most of the terrestrial flora and the terrestrial and freshwater invertebrates have not been described taxonomically, and identification manuals are rare or nonexistent even for many economically important groups.

Yet, without more extensive knowledge of the species components of the biota, it is virtually impossible to understand the effects of man's activities on natural habitats. Environmental impact statements are often superficial because many species encountered in a study area were previously unknown or recorded from only a few widely dispersed habitats; little or nothing is known about their true distribution and biology. Even information on the biota of our national, state, and local parks is limited principally to the conspicuous animals and plants; little or no data are available on the less visible but far larger portions of park wildlife. The 97th Congress was able to defeat all the proposed amendments to the Clean Air Act concerning acid rain because the legislators noted that more detailed information on the effect of this phenomenon was required. However, the basic taxonomic data needed to assess the effects are not available.

In 1977 the Canadian government initiated a biological survey in order to address such problems, and similar research has been done in other parts of the world. Countries where comprehensive surveys are conducted include Australia, Hungary, India, Israel, New Zealand, Saudi Arabia, South Korea, and the Soviet Union. Some of these surveys were begun more than 60 years ago.

The United States has yet to support a national survey, but a proposal for a Biological Survey of the United States (BISUS) has been presented to Congress. The program would (i) establish a survey to describe the plants and animals of the United States, (ii) fund basic taxonomic research on the biota, and (iii) produce identification manuals, species catalogs, atlases of biotic surveys, group classification systems, and other publications.

In 1982 and 1983, four national scientific organizations (including the AAAS) and two regional ones, altogether representing more than 150,000 members, passed or supported resolutions requesting that the federal government provide funds for a comprehensive biological survey. A proposal to initiate BISUS is now before the Senate Committee on Environment and Public Works. It is clear that agencies concerned with agriculture, forestry, fisheries, wildlife, and parks would benefit from BISUS. The public, science, and conservation programs would all be well served by such an important program.—MICHAEL KOSZTARAB, *Virginia Polytechnic Institute and State University, Blacksburg 24061*