

*Assessing Biological Diversity in the United
States: Data Considerations*

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Assessing Biological Diversity
in the United States:
Data Considerations

Background Paper #2



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Preface

Biological diversity is crucial to human welfare. To maintain biological diversity requires an understanding of the components of biological systems and how they interact. Such an understanding is possible only if data are available to document the species, communities, and ecosystems that make up the biological systems. In recent years increasing efforts are being made to collect biological data in the United States. While enormous quantities of biological data now exist, several factors limit the data's usefulness in the task of maintaining biological diversity. Various laws require or authorize Federal agencies to collect biological data or to maintain biological databases, but few of these mandates apply directly to biological diversity. Consequently, maintaining diversity is seldom a goal of data collectors. Furthermore, there is no overall institutional coordination of biological data-collection efforts, which means that data are scattered, maintained in various forms, and stored in different—often incompatible—systems, even within one agency. There are gaps and overlaps in coverage, and it is difficult to ascertain what data are available.

This background paper outlines how data can be used in maintaining biological diversity; describes primarily the Federal institutions that collect biological data; provides an overview of existing Federal biological databases; discusses technical aspects of collecting, storing, and retrieving biological data; and suggests ways to improve biological databases so that they can be better used to help maintain diversity of this Nation's plant and animal life.

This paper is part of the Office of Technology Assessment's forthcoming assessment of *Technologies To Maintain Biological Diversity*. A concurrent background paper, *Grassroots Conservation of Biological Diversity in the United States*, illustrates the contributions of a growing number of individuals and citizen-based groups to the maintenance of biological diversity. This assessment was prepared by OTA in response to requests from the House Committee on Science and Technology, Senate Committee on Foreign Relations, and the Senate Committee on Agriculture, Nutrition, and Forestry, and supported by the House Committee on Foreign Affairs, House Committee on Merchant Marine and Fisheries, and House Committee on Agriculture.

OTA wishes to thank those individuals in the Federal agencies who helped the OTA staff identify existing biological databases, and the advisory panel and numerous other individuals who provided helpful reviews of the document. In particular, OTA wishes to acknowledge the contribution of the Congressional Research Service in providing a synthesis of Federal legislation to conduct biological inventories. As with all OTA reports, however, the content is the sole responsibility of OTA.

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