

Editor's Note:

A whole new level of science and management is emerging in the preservation of genetic materials . . . the germplasm bank network that is forming up to meet such rising specters as monoculture disaster and species exhaustion, combining the efforts of Forest, Park, and Soil Conservation Services among others.

To feed and clothe and medicate a world of ever-increasing human density is putting unbearable strains on the few species that people have leaned so hard on since civilization began. The preservation of genetic material is "the cupboard" to which — if we don't allow it to go bare — we can go for such new properties as can be injected into old strains for added values, such as flavor, nutrition, and stamina, or simply to cut down on the labor involved in planting, tending, and harvesting. Improvements such as these can be accomplished through the collection, study, and use of new plant materials — research at its most basic.

How does all this involve the National Park System?

The dawning recognition, on a worldwide basis, of the need to catalogue, understand, and preserve the genetic materials that are in many cases slipping into extinction under pressures from human development, has brought into sharp focus what may well turn out to be one of the highest values of the National Park System — its preservation of untested plant and animal germplasm in its natural environment and the natural dynamics of the process of genetic evolution.

Last November (1981), the U.S. Department of State and AID co-sponsored a U.S. Strategy Conference on the Preservation of Biological Diversity. (Park Science, Vol. 2, No. 1, p. 18). Under Secretary of State James Buckley addressed the conferences on the worsening condition of what he called "the safety net" of global genetic diversity — the accelerating impoverishment of that resource, and the danger it represents for all life on earth. He suggested that these are resources "we are still too ignorant to understand" and likened them to "books yet to be deciphered and read."

At that conference, the call went up for improved germplasm repositories — better ways of collecting, holding, and using the materials we discover. The entire proceedings from the November 1981 conference is available from Bill Long, Director, Officer of Food and Natural Resources, Bureau of Oceans and International Environment and Science, Dept. of State, Washington, D.C. 20520.

Now comes the National Park Service in conjunction with other Federal, State and private organizations with a five-day international symposium and workshop on the application of genetics to the management of wild plants and animal populations. Purpose of the meeting was to provide guidance to the U.S. government on how to proceed domestically and through international channels to promote the maintenance of biological diversity.

In this issue (page 5) is a preliminary report on the August 1982 conference. In the previous issue (Vol. 2, No. 4, p.2) is an editorial about the World Biosphere Reserve conference at Kalispell, MT, in June 1982. The two approaches are destined to be tightly associated in any future where humanity is focusing on long-term survival.

Most of the scientific and management work we do today has its most profound meaning within the context of the whole earth. The proportions of our problems are irreversibly global and only a global context will do as a framework for our continuing efforts at research and management. The conferences of the kind that began in Stockholm in 1972 have been, in effect, writing the caption that goes with the blue marble picture of earth as seen from space.

But global problems almost never lend themselves to global solutions. Most of them are best solved by taking advantage of local situations and resources — marshaling them in ways that respect both the physical and the social environmental patterns of the locality. U.S. solutions do not apply to the countries of, say, Africa and Asia, and vice versa.

Pluralism and regionalism are interesting, powerful forces — a tremendous reservoir of creativity that matches, at the human social level, the genetic diversity we seek to preserve at the biological systems level. Within the enormous cultural range of responses to environmental issues there exist a myriad of undefined, untried capabilities for solving our various problems.

Man and the Biosphere's Project 14 — the establishment of a network of World Biosphere Reserves consisting of paired areas (natural and manipulated) that represent all the world's great biomes — is one of the promising moves toward an organized study, collection, and preservation of a retrievable inventory of genetic materials on a worldwide information basis.

So far as we know, we are the only speck of matter in the known universe that carries life. We human beings have risen to the awesome position of dominance that carries with it a Promethean choice: We can continue to destroy the precious germplasm that makes earth unique in all of Creation, or we can assume the role of Good Steward and unselfishly shepherd these tiny links with the future.

Genes have the longest life potential of anything alive. Essentially, the August conference asked: "Who among us short-lived beings has the right to eliminate any of this