The tropics are where the rich harvests are, and science is not conscious of national boundaries. Because the Smithsonian has a backlog of tropical experience it may be well enough qualified to help stimulate the growth of indigenous science in tropical areas and to guide and assist other temperate institutions and individuals to take their first steps, or to develop their research interest in the tropics, as well as to broaden and intensify its own work there.

By bringing together the conclusions of paleontology, especially paleoecology and paleobotany, and the data of present-day biogeography, we are reasonably certain that at least before the mid-Tertiary Period tropical conditions extended over the larger part of the earth. The differentiation of the main groups—families and even genera—of organisms took place under these conditions. Something at least resembling the great tropical vegetation formations, the rain forest, the monsoon forest, and perhaps even the savanna, must have been much more widespread over what is now the temperate zone during those earlier epochs. Many of our best biogeographers consider the lowland rain forest, or Urwald, of the tropics to be the oldest of all existing vegetation formations and to have been the great reservoir from which emerged, or were differentiated, the faunas and floras of the present temperate and montane regions of the world. The present richness and diversity of tropical biotas, as well as the fossil record, lend good support to this theory.

Some of the most fascinating problems of biology are those of the evolution and spread of the groups of plants and animals, and the communities they make up, over the earth. This applies equally to those of land and sea. Although we know much about the evolution of subspecific entities and can even experiment on it, this is not true of the larger groups of plants and animals. These must be studied by observation and comparison of the plants and animals in their natural habitats and in our museums. Since the cradle of the phenomena we are interested in is in the tropics, or in areas that were once tropical, it seems clear that a great amount of work must center in the tropics, if we are to arrive at any adequate understanding.

The enormous diversity of organisms in the tropics has been known for a long time. Some biologists have speculated on why this diversity exists, but so far their suggestions are only guesses. Recent findings and deductions are giving leads, and the whole subject of availability of resources and diversity of riches, as well as the enormous amounts of time available in the history of a tropical biota, are fertile fields for investigation.

To the ecologist, this great diversity of faunas and floras is the basis of the richest and most complex ecosystems in the world, as well as those which are least known. In at least the wet tropical ecosystems conditions are extremely favorable to life. Hence, the usual and obvious adaptations to severe physical environment and less common, but the more subtle, adaptations to living with other organisms are outstanding. Competition is rigorous and takes multitudinous forms. The struggle here is most intense among the components of the biota rather than between them and their nonliving environment. Incidentally, under modern, civilized circumstances, this is, in a way, the situation in which human beings find themselves; the adverse physical aspects of their environments have largely been ameliorated. The struggle is now between human beings rather than against a hostile environment. Even more is this so in the tropics than in cooler zones.

Both as a matter of intense scientific interest and as one of practical concern, it seems essential that we develop some understanding of such ecosystems. As scientists, we are not able to ignore the fascination of these problems. As practical people, concerned with the continued existence of man as a part of these ecosystems, we cannot afford to neglect them.

In the past, resources have been so abundant, human communities have been scattered and relatively few and isolated, that mistakes were not too likely to result in disasters. This period is passing rapidly. Man is so filling up the world that errors are too likely to produce chain reactions. We now must know what we are doing before we do it. A thorough understanding of the tropics, as well as the rest of the world, is a necessity.

The final and, to me, the most urgent consideration is one that follows from our filling up the world. Most of the fascinating things that draw us to the tropics are vanishing with a rapidity never before even imagined. The tropical forest is falling before the combination of superior tools and too many people more rapidly and more finally than before any forest fire or other natural