

to these problems than most biologists in the country today. I refer you to specific aspects of our program as presented in the addendum to our written testimony.

The realm within which we should be concerned with the International Biological Program is a vast, rather formless, dirty area of biology. It is dirty in the sense that it represents the kind of problem which most biologists do not like, because it is not clean and tidy. The vast concern, the vast thrust, you might say, to use a popular word, of biology today is toward experimental biology which is performed under more or less controlled conditions in laboratories. The vast concern of the biological profession today, then, is to get away from large, dirty, formless, intellectually highly complicated problems having to do with the general environment. And yet at the same time, unless we can concern ourselves with our general environment within which we live, this thin shell, as Dr. Revelle calls it, we will inevitably be called to a reckoning in the future which, ostrich-like, I think most people are tending to avoid.

I would hope that this problem could be thought of in its real context.

Dr. Revelle and others have talked about the population pressures in the world and our consumption of natural resources. These are things which all of us read about in headlines every day in the newspapers. Strangely enough, human nature is such that we do not really get concerned about it until the war is on us, in effect.

I think perhaps that to many biologists this general program seems diffuse. They are concerned with immediate research problems in their own laboratories, they are concerned with their immediate careers, they are concerned with grantsmanship, promotions, activities in their universities or laboratories which are entirely personal to them, and so their reaction to the program is much the same as the man on the street's: That it is something that is not quite going to concern them in their time.

It is particularly difficult to come to grips with broad environmental problems; many of them sound overly intricate, highly theoretical. Some of the ecologists who work on these problems are people who are concerned with such things as mathematical models, and various sorts of stochastic processes in biology which are fringe-like; they are not really central to the main efforts in biology today, and they certainly have no large political voice within the scientific establishment.

I have been, as I say, somewhat depressed by the lack of response and interest of the biological fraternity in general in this really basic and highly necessary program.

I speak for the Smithsonian because this Institution in the 19th century pioneered with other Government agencies in the exploration of our frontiers in the West.

This in a sense is a 20th-century version of that, and the Smithsonian represents one of the few voices in the Government that can speak to this issue and that today is carrying on with frontiers of information about biological organisms around the world.

There is still a vast frontier, particularly in the tropics, which consists of attempting to delineate and understand the populations of organisms, plants and animals, many of them still undescribed and still unknown to science.