

pollution, we could breed our domestic plants and animals to resist pollution and evade forever the responsibility and the expense of halting our accelerating rate of pollution. A moment's reflection on Dr. Cole's earlier remarks clearly demonstrates that we don't have this option.

We cannot permit the demise of large numbers of the earth's essential, but poorly known organisms. This is just not a possible course of action. A rather spine-chilling observation in this regard is that no man and no group of men right now can tell us which of the creatures that are on this earth are necessary to continue in good health the systems that sustain us and those that inspire us. There is no way at this moment to figure out what the irreducible biota for our biosphere is.

Mr. DADDARIO. Does that lead us to the conclusion that they all are important?

Dr. CANTLON. In the absence of positive information it is safer and more comfortable to assume they can all play a role.

It is rather interesting to note that it now costs something to keep 30-odd whooping cranes from becoming extinct. At what point do we shift each additional species to a special jeopardized species list and assume the burden of preventing its extinction?

Chairman MILLER. You ought to take that off the record because you will have some conservationists in here who value the whooping crane.

Dr. CANTLON. I would be on their side. Don't misunderstand me. I am not opposed to conserving species. I think this is a highly pertinent operation, but it is an expense we need not have to bear. We should not permit species to be driven to so precarious a position.

Mr. DADDARIO. Any concern about the ones being killed off without our knowing anything about it?

Dr. CANTLON. Very much so. The very large bulk of the organisms in the soil are as yet unknown. We not only don't know which forms are there, we don't know what impact herbicides, insecticides and chemical fertilizers are having on them. Nor do we know what the impact of smoke, smog, and changes in plant cover will be. We don't know what is happening to the biota of the estuaries, the Continental Shelf and the ocean in rigorous detail. We have no clue, really.

Now to think that we could breed resistance to any sizable list of pollutants (Dr. Cole mentioned a list of a half million chemicals going into the sea)—imagine trying to breed resistance in any sizable number of species to a half million, or even 50 pollutants.

Mr. DADDARIO. Don't you develop resistance every time you ride up the Jersey Turnpike?

Dr. CANTLON. I don't know whether it is resistance or resilience.

Mr. DADDARIO. It is certainly not tolerance.

Dr. CANTLON. You are right.

Chairman MILLER. I am glad you used that and not George Brown's Los Angeles area.

Dr. CANTLON. It is obvious that this idea of breeding tolerance is patently absurd as a fundamental pollution strategy. I referred earlier to a case of a competent scientist advising such a course of action to a group of people addressing themselves to pollution and environmental quality problems. How can we explain having a man that well educated and that ignorant? This is really a worrisome thing because the