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message, and how we will certainly have to continue evaluating each individual power plant site if we are to prevent the extinction of species which exist nowhere else but in a site proposed for a new power plant.

Ecologists are certainly many things other than those mentioned above, but it seems we should appreciate how diverse a science ecology is and that our activities and our associations with restricted peer groups of ecological specialists can actually have us participating in activities that oppose other equally well intentioned activities by ecologists whose training, interests, or perspectives are somewhat different from our own. The most important message to scientists and politicians to be taken from the A.I.B.S. meetings is that ecological theory remains so primitive that we often

The environmental concerns of the past decade have made ecologists painfully aware of how very little we know about the ecology of important groups and species of organisms—for instance the blue-green algae involved in cultural eutrophication. An important reason for our lack of understanding is that most ecologists, particularly in universities, lack the opportunity to observe organisms regularly year-round in locations where they are a problem as well as in those where they are not. The insights that can come from years of regular study are elegantly exemplified by the classic papers of John Lund (cf. Lund 1964, 1965) working at the British Freshwater Biological Association's Windermere Laboratory in the English Lake District on the diatoms *Asterionella formosa* and *Melosira italica*.

Very few academic ecologists have Lund's opportunities for extended regular observation and study of specific organisms in particular habitats. Scientists concerned with the routine monitoring of ecosystems for government and industry often do have such opportunities. Yet, because their concern is usually whether given environments are being degraded or improved, or whether industries comply with the requirements of their permits to use these environments, such opportunities are seldom fully exploited for scientific purposes.

It is, therefore, important that scientists engaged in routine environmental monitoring, some of whom are certain to have been among

cannot make accurate predictions about the results of human manipulations of natural systems. This seems to be the most convincing argument that more time and money must be spent on basic ecological research and development of theory.

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ROUTINE ENVIRONMENTAL MONITORING— AN UNEXPLOITED OPPORTUNITY

our students, be encouraged to make a much greater contribution to fundamental ecology. I suggest that it would be appropriate for a national organization (for example, The Institute of Ecology, or the Environmental Studies Board of the National Research Council) to convene a symposium of governmental, industrial, and academic ecologists and environmental scientists to explore ways in which routine monitoring operations might be utilized to solve fundamental environmental and ecological problems at the same time that they accomplish their more immediate practical objectives. It may be that a continuing, cooperative organization could then be set up to put scientists operating routine monitoring programs in touch with scientists elsewhere whose environmental and ecological interests could be served by collaboration in such programs.

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