main (and vitally important) function is to promote interchange of scientific ideas between scientists. Those who expect it to restructure its own organization "to meet the needs of science in the 20th century" simply do not know scientists, or understand how science is done. Some of the best-endowed learned societies in the U.S. have strong organizations and central offices but do not *conduct* scientific researach, though they sponsor a great deal of it, and publish much more. Neither can the Ecological Society accept corporate responsibility for research that it sponsors, evaluates, or publishes. Still less can it be placed in any nonscholarly stance involving political advocacy, "educating the decision makers", or many of the action programs some of its critics would like to undertake.

It follows that in recommending and in effect sponsoring a national institute of ecology, the Society neither changes its own role nor becomes legally or even scientifically responsible for the institute's organization or program; it expects to remain free to criticize, to publish, or not to publish ecological research done by or under the auspices of the national institute. Thus, if its Study Committee's recommendations are followed, the Society's position will be that of godfather, not parent, and it can only hope that the relation will be one of which it can be proud.

Similar considerations apply to the National Academy of Sciences. Through its study groups, the committees and boards of the National Research Council, the Academy would be bound to take notice of the existence of a national institute of ecology. It would often be obliged to appraise its programs, recommend or perhaps contract for new ones, or (a function which seems imperative to ecologists) refer many environmental problems to the national institute for study and advice. The Academy's National Research Council, however, is not an "operating arm", as research councils are in other countries. It evaluates, stimulates, and sponsors research projects, but it owns no institutes and conducts no research in its own name. There is no reason to expect it to own a national institute of ecology.

In 1962 the Academy issued a report (NAS/NRC Pub. 1000A) that said, in part, "It seems vital to establish without delay a broad-gauged agency charged with the continuing examination, identification, and assessment of changes in the natural resources picture, and of their potential effects upon each other . . . Such . . . an intelligence agency (would) be able to feel the pulse of the ecosystem, as it were, and to register and assess incipient developments before they have reached critical dimensions . . . The contemplated agency should not, however, be given powers of decision or enforcement, and it should steer clear of the political arena." Noting that this sounds remarkably like a national institute of ecology, the Study Committee assumes that the NAS/NRC will look with favor on its own efforts to bring such an agency into being.

Mr. MOSHER. Mr. Chairman.

Mr. DADDARIO. Mr. Mosher.

Mr. MOSHER. One of the practical examples mentioned in the testimony is the disastrous effects of the Welland Canal on Great Lakes fisheries. I don't want a long dissertation on that, but I would like two or three further sentences. What are you talking about there?

Dr. COLE. I might qualify that to the extent to say that the original Welland Canal opened in 1833, I believe, and if this started the disastrous effects, ecologists couldn't have predicted it. The present canal was opened in 1932 and then they could have been predicted.

What happened was little forage fish, the alewives, moved through the canal into the upper Great Lakes and the sea lampreys moved in. They are predatory on trout and similar fishes. The sea lampreys increased in numbers until they wiped out the white fish industry in Lake Michigan and Lake Huron and they damaged it in Lake Superior.

Now the trout were apparently keeping down the alewives by preying on them. With the demise of the trout as a result of the sea lampreys, the alewives could multiply without limit, essentially. Consequently last year we had the situation of Chicago and Milwaukee beaches just littered with piles of dead alewives.