

and members of teaching departments of biology, ecologists say that they deal with "the mutual relations between animals, plants, and their environment." That is, in studying environment, they are concerned with physical properties because they affect physiologies, but they usually place the emphasis on other animals and plants as the most *relevant* components of an organism's environment. But they also say that the subject as so defined is "environmental biology", and is not the whole of ecology. Man has an ecology too, but ecologists do not always place man in the center of the picture, and do not claim to be experts in everything under the sun.

I regret having to use so many words to define my subject, but any non-scientist who has heard of ecology and knows its importance is bound to ask, "Who are the ecologists? How many departments of ecology are there? How many students are being trained in ecology?" etc. And if I reply that so far as I know there is not a single "Department of Ecology" on any American campus, this non-scientist will suppose that professors are made, as usual. In fact a great deal of ecology is taught in most colleges and universities, but under so many names that it is almost impossible to describe the field for the university administrator or the Congress. A device that is being used on more and more campuses is an interdepartmental Institute of Environmental Studies, or some such coordinating program, and we know of at least 45 universities in which such institutes or faculty committees exist. At one university, where I spent last Saturday, an Institute of Ecological Planning is being created, with faculty positions for eight ecologists, who will be attached to the Department of Landscape Architecture.

Our program in the National Science Foundation is not called *ecology*, but *Environmental Biology*. We believe we are in close touch with most of the leading practitioners and graduate teachers in the field, because we support much of their research.

Our program will have awarded grants for Fiscal Year 1968 totaling about 6.4 million dollars to about 175 investigators, nearly all of whom are college teachers and many of whom have graduate research assistants—student trainees, that is—whose stipends and research expenses are carried on their research grants. The total number of active grants of this sort in our program is currently about 600. Our program is only one of ten in the Biological and Medical Sciences Division, which granted 54 million dollars in Fiscal Year 1967. Of this, Environmental Biology granted about 5.9 million for 170 projects, about a third of it for biological oceanography and limnology and about a tenth for studies of energy flow through ecosystems. Another 5.6 million was awarded to 220 projects in Systematic Biology, a different but related program which is of extreme importance to ecology as it is to all other kinds of biology. Another 4.6 million went to Facilities and Special Programs, which supports some ship operations, some museums, some marine and inland biological laboratories, and other relatively large centers or programs, a number of which are mainly devoted to environmental biology.

Outside the Division of Biological and Medical Sciences, much of what we can call ecology (which may include but does not emphasize the *biological* aspects of environment) is supported by the various programs in the Division of Environmental Sciences. We have particularly close relations, often involving joint funding of projects, with Programs in Meteorology, Geochemistry, Geology, Weather Modification, Oceanography, and with the Office of Antarctic Programs. Thus, when NSF was asked to describe its activities in pollution research by the Research Subcommittee of the FCST Committee on Environmental Quality (Dr. Buckley's subcommittee, of which I am a member), we were able to identify about 4 million dollars worth of research support (Fiscal Year 1967) as contributing more or less directly to understanding pollution, but of this amount less than half, or 1.9 million dollars, were provided within the BMS Division, nearly all the rest being from the Division of Environmental Sciences. The Foundation's contribution of basic research support was a part of that identified by Dr. Buckley's committee as "contributing to understanding of pollution but not deliberately undertaken because of pollution." Circulation studies in estuaries provide a good example.

Our 600 or so grantees in Environmental Biology are by no means the only people doing ecology. We of course think they are among the ablest of ecologists, but we have funds for only a fraction of the good proposals that we receive, and there are many other ecologists who do not come to our Program or to NSF for support. In fact our research support is only a fraction of that which we can identify elsewhere among granting agencies.