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## BIOLOGICAL IMPLICATIONS OF STRIP MINING<sup>1</sup>

### INTRODUCTION TO THE SYMPOSIUM

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Who would deny that sources of energy for the present and the future are major concerns of our time? In the United States, coal has been, and will continue to be, one of the major energy sources. Parts of our country, including Ohio, are prominent strip or surface coal mining areas, and stripping for coal is ever expanding to new areas. With these thoughts in mind, and with the further knowledge that reclamation of stripped areas often is difficult, the faculty of the Environmental Biology Program of The College of Biological Sciences of The Ohio State University decided to organize a symposium that would consider the biological implications of strip mining. The papers presented at that symposium in November 1974 are here printed with the desire that some of those who could not attend the symposium, and that those who did attend and wanted to have bibliographic details, would find them of value.

In the designing and implementing of the symposium, several organizations and individuals were especially helpful. The Ecology Committee of The Ohio Academy of Science, The Energy/Environmental Programs Office of Battelle Columbus Laboratories, and The Ohio Biological Survey were co-sponsors with The Ohio State University. Drs. Gareth E. Gilbert and Patrick R. Dugan helped me in many ways in addition to participating in the program. Representatives from The Ohio Power Company, The Ohio Power Siting Commission, The Ohio State University, and The Ohio Department of Natural Resources joined the symposium speakers in an informal, informative panel discussion with audience participation. Because the panel was informal, it has not been included here.

The major aim of the selection of speakers was to bring together knowledgeable researchers who are studying various biological aspects of strip mined areas ranging from the substrate-microorganismal level to the human level. By emphasizing the biological aspects, we believed that some understanding of the strip mined area as an ecosystem would begin to emerge. By providing a forum for discussion and by presenting various points of view, the talks did make it clear that a systems approach could have value. Interrelationships began to emerge once some of the levels of organization of organisms were considered. It was exciting for the audience as well as the speakers to appreciate the importance of the various parts of the biota of the ecosystem. This is a beginning that hopefully will stimulate future cooperative multidisciplinary research.

The reader should understand that the following papers were prepared to present current understanding of a particular biological aspect of strip mined areas as viewed through an author's own researches. Not all aspects could be covered, however, we hope that the papers will provide a framework upon which the reader can build. The damaging of our landscape and its biota by stripping presents a real challenge to the biologist to consider the best methods of restoring the land as rapidly as possible. We must ask difficult biological questions which require knowledgeable answers if we hope to treat stripped areas in a sensible way. We hope that this symposium will stimulate such questioning and initiate research to provide some answers.

<sup>1</sup>A symposium held November 15-16, 1974 at Battelle Memorial Institute, Columbus, Ohio.

This is the second Ohio Strip Mine Symposium to appear in the OHIO JOURNAL OF SCIENCE. A symposium, Strip-Mine Reclamation held August 13-14, 1962 at Wooster, Ohio appeared as Vol. 64(2), the March, 1964 issue of the OHIO JOURNAL OF SCIENCE.