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## PREFACE

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*This group of papers represents as wide a range of the ecological literature as could be encompassed within a reasonably sized volume. Although it is compiled as a textbook supplement for the beginning student in ecology, certain papers are suitable for college students in beginning biology or general science and for high school students in advanced biology. For the graduate student and research ecologist it provides an opportunity to become reacquainted with the sources of their endeavors.*

*With few exceptions, all of these papers have been used in my course in general ecology at Oberlin College because of the tremendous potential inherent in exposure to the original literature. Although I have used them largely in synchrony with textbook declamations, their real value lies in the excitement and flavor, and the relating of the adventure, hard work, and creativity which is science. There is ample testimony that these savors are experienced and that scientific literature is comprehensible.*

*The criteria which guided the filtering out of few papers from the myriad for my own students have operated in meeting the exigencies imposed by publication. The prime criterion is a paper which has made a highly significant contribution; this is fairly*

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readily attested by the frequency of its citation in subsequent literature. In most instances, this standard also placed in the list most of the ecologists who have given direction to their field. Other papers were selected as exemplary of good scientific procedure (trenchant analysis, incisive logical argument, stimulating theoretical discourse) and others to achieve an indication of the range of ecological investigation.

Each paper has been abridged (indicated by an ellipse, . . .) and had literature citations omitted primarily to conserve space. There are recognized dangers here, not the least is that the reader may not be made fully aware of the dependence of a scientist on his predecessors and contemporaries.

Noble criteria notwithstanding, there is the hazard of autocracy in compiling a set of papers, perhaps more so for so diversified a field as ecology. No two ecologists would likely develop identical lists nor present them in the order used here. Most would concur in certain papers having classic status, but at that juncture divergence of considerable magnitude would begin. There is an historic and functional reasonableness to both the selections and order used but not such as to deny great flexibility in selecting papers to meet individual requirements.

Because one's perspectives are always circumscribed and his hindsight wanting, the utility of this volume can be increased in the future through criticism, charitable and otherwise, by its users. I will appreciate receiving that criticism.

Each of my teachers, students and colleagues (in person and through the literature) has contributed in some way to the development of this volume. None is singled out since each is completely absolved from the final errors of commission and omission, all of which are mine. I do, however, acknowledge the cooperation of the authors and publishers whose permission made the volume possible, the translations by Mrs. Ursula Stechow and Dr. Lawrence Wilson, and the invaluable and diversified help of the library staff and facilities at Oberlin College, the South Branch of the University of Georgia, and the Savannah River Laboratory. I am continually grateful to my wife, Peggy, for her editorial assistance but more for her encouragement and understanding. A sabbatical leave from Oberlin (1963-64) provided the time to complete this undertaking.

EDWARD J. KORMONDY

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## INTRODUCTION

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*It has been said that ecology is as diversified in its scope and meaning as are the diverse Homo sapiens that call themselves ecologists. While this belies the situation, it does intimate the great disparity in orientation and approach to the field. One of the beneficial results of this diversity has been the accumulation of a wealth of data and interpretation providing fertile ground for the development of theory. Among the less salutary consequences of this protean posture has been the judgment that ecology is but a point of view rather than a scientific discipline. An anthology provides an opportunity for different ecologists to react indirectly to that criticism and in so doing to indicate the particular province of nature which they have carved out as their special area of inquiry.*

*Underlying the varied formulations describing ecology is the theme that it deals with the interactions of organisms and environment. Although Haeckel is usually credited with the event, Reiter appears to have been the first to combine the Greek words oikos (= house) and logos (=study of) to form the term ecology; this was in 1865. It was Haeckel, however, who in 1866 first gave definition to the term as "the body of knowledge concerning the*