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A BIBLIOGRAPHY OF RESEARCH CONDUCTED AT THE FRANZ THEODOR E STONE LABORATORY, AND ITS PREDECESSOR, OF THE OHIO STATE UNIVERSITY FROM 1895 TO 1968

COMPILED BY
JAMES P. ABRAMS AND CLARENCE E. TAFT
Battelle Memorial Institute, Columbus, Ohio 43201
and
Academic Faculty of Botany, The Ohio State University, Columbus, Ohio 43210

ABSTRACT

A comprehensive bibliography has been compiled of 580 citations that represent more than 70 years of research in the biological sciences and related fields at The Ohio State University's Biological Sciences Laboratory on western Lake Erie. Of these, 430 citations are from more than 70 domestic and foreign journals. The remainder refer to theses, dissertations, and unpublished manuscripts prepared under the auspices of the Laboratory and included for their research data, and available in the Botany and Zoology library at The Ohio State University.

INTRODUCTION

The Franz Theodore Stone Laboratory is the biological field station of The Ohio State University located at Put-in-Bay, Ohio, on South Bass Island in Lake Erie, with a teaching and research program administered by the College of Biological Sciences. The station was originally established in 1895, at Sandusky, Ohio, and has been operated continuously since that time. It was moved to Cedar Point in 1903 and then to the State Fish Hatchery building at Put-in-Bay in 1918. The University acquired Gibraltar Island in 1925 and there built the present building, which was dedicated as the Franz Theodore Stone Laboratory in 1929.

Throughout the years, the station has been a focal point for the training of hundreds of undergraduate and graduate students in aquatic biology. Research there has contributed to the granting of more than 90 graduate degrees. The station has also provided facilities for visiting professional biologists and other investigators whose research was best conducted in the environs of the western basin of Lake Erie.

The nature of the considerable body of research which has been conducted wholly or in part at the Laboratory is reflected by the titles in the following bibliography. The reader will be aware of the many phases of aquatic biology, as well as those of related sciences, that have been investigated. Most of the research has been concerned primarily with problems associated with the western basin of Lake Erie and its islands. Some research has been done elsewhere, though the computation of data and the preparation of manuscripts was carried out by graduate students or staff members under the auspices of the Laboratory Administration and therefore was included in the bibliography. The research has been reported in more than 400 papers published in better than 70 domestic and foreign journals. The published papers listed here are supplemented by a number of unpublished theses and dissertations, as well as by some unpublished manuscripts. The manuscripts represent work conducted by staff members or visiting scientists at the Laboratory, copies of all of which are located in the Botany and Zoology Library, The Ohio State University, Columbus, unless the location is unknown, as indicated by an asterisk (*).

1Manuscript received January 30, 1970.

Bibliographies that have included papers from the Franz Theodore Stone Laboratory and its predecessor have been published by Herbert Osborn (1930), Ethel Miller (1932), Thomas H. Langlois (1949), James L. Verber (1955), John Van Oosten (1957), and David Gerrick (1968). However, with one exception, none dealt specifically with papers that originated at the Laboratory. The exception was a selected bibliography of research published by T. H. Langlois, a former Director. None of these bibliographies, however, is complete for the publications from the Laboratory.

Students, staff, and investigators who are doing research on western Lake Erie at Stone Laboratory have dual problems. The incompleteness of the existing bibliographies and the wide dispersal of references in journals here and abroad make it difficult to know what has been done and when. The present bibliography is in part an attempt to provide Laboratory personnel with a more complete and accurate reference guide. The compilers are aware that absolute accuracy and completeness covering a period of more than 70 years may be, and probably is, impossible. The compilers will welcome information about any omissions.

Dr. Langlois' 1949 publication, and an unpublished manuscript of his on the bibliography of Lake Erie and its islands which was found following his death, constituted preliminary guides. A thorough search in the existing bibliographies was followed by cross-checking literally hundreds of technical journals and books. This was necessary to verify that research upon which a paper was based was, or was not, done at the Laboratory.

The present staff and as many former staff members and students as possible were contacted for listings of their publications, theses, dissertations, and manuscripts based wholly or in part on research conducted at the Laboratory. We have drawn freely on all applicable information in this attempt to compile the research work conducted at, or in association with, the Laboratory since its establishment in 1895.

It would be impractical to refer by name to all persons who have contributed to this bibliography. The response of the scientific community to the project was most encouraging and is deeply appreciated. In particular, the suggestions of Dr. Ronald L. Stuckey were especially helpful. Special thanks are extended to Dr. Loren S. Putnam, Director of the Franz Theodore Stone Laboratory, for his continued encouragement and cooperation.

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LITERATURE CITED


Teachers of courses in "Plant Biosystematics" or "Experimental Taxonomy" should welcome this book, if for no other reason than that it is the only text on the subject suitable for classroom use. As the author points out, "...most systematic books adequately cover the morphological and anatomical techniques used by the plant systematists, but cover in much less detail the genetical, cytological, chemical, and statistical approaches used in systematic work."

The contents are divided into two parts, the first dealing with the process of speciation and the second with methods for studying species. The seven chapters in the first part treat the Introduction and Historical Background, Synthetic Theory of Evolution, Patterns of Phenetic Variability, Breeding Systems, Speciation, Hybridization, and The Species Problem and Classification. In the second part the chapters focus on discussions of four techniques: Genetics, Cytology, Chemistry, and Mathematics and Statistics.

The introductory paragraphs of each chapter are excellent for providing the necessary conceptual framework for the student-oriented material, and the summaries at the ends of the chapters are concise and effective. In the glossary at the back of the text, some of the definitions are not clearly worded, and they may turn out to be more confusing than helpful. The illustrations throughout the text are good; particularly valuable are the operational flow-charts for each of the techniques described for studying species.

Most of the chapters are well written, but the chapter on chemical techniques is limited and, in my opinion seems to be the weakest part of the entire book. There is a good discussion of the informational content of all types of molecules, but, except for a brief treatment of phenolic compounds, the specific emphasis centers entirely on macromolecular data. More consideration should have been given to other secondary metabolites, particularly monoterpenes, which are often more useful in systematic studies than are phenolic compounds. Comments on alkaloids or betalains also could have been included without markedly enlarging the text.

Errors exist in Solbrig's book that should have been eliminated. Most are trivial, such as the misspelling of Dithyrea on page 137, or the lack of labels on the bottom photograph of Fig. 8–7. However, one more serious error caught my attention; the comment in a footnote on page six that "Linnaeus is a Latinization of the name Linné" is a misconception; actually Linné is a shortened version of Linnaeus (cf. W. T. Stearn, 1966, Botanical Latin, p. 201). In all fairness, however, these oversights do little to mar the total presentation.

In summary, Solbrig's book has many good points that make it a desirable and welcome volume for the library of all teachers of systematic botany. I believe the text will be best utilized in the classroom when supplemented with additional literature readings and appropriate background material. It is in this fashion that I intend to use the book myself.

TOD P. STuessy


This, the first of a two-volume treatise on the mammals, brings together a great amount of useful information about this group that previously has been scattered and difficult to find. It is written in a style that is, unfortunately, not common in scientific books; it is easy to read and the contrived words so frequently substituted for the mother tongue in technical writing are absent. Technical terms are kept at a minimum and it is surprising how little they are missed. Because of this, the interested amateur will find this a most informative and useful source book. Zoologists will find the lucid descriptions and explanations a delight. Occasional interjections of the author's refreshing philosophy and wit add to the pleasure of reading.

No one with a serious interest in mammals can afford to be without this book in his library. I know of no other that covers the material included here. Although there is another estimable book by the same title, this volume represents an entirely different approach. It has a bibliography of 171 titles and is well indexed. One must wait impatiently for Volume II.

E. E. Good