
Proceedings of the Conference on Changes in the Physical Aspects of Lakes Erie and Ontario

Edited by Robert A. Sweeney
Bulletin of the Buffalo Society of Natural Sciences,
 Vol. 25, No. 3, 1975, 93 p.
 \$4.00

Reviewed by Robert M. Quigley
Faculty of Engineering Science
University of Western Ontario
 London, Ontario N6A 5B9

The proceedings of this conference, or more accurately, invited seminar, consist of three invited papers followed by discussions with about 34 invited participants from New York, Ohio, Ontario and Michigan. Featured authors were: - 1) S. B. Upchurch, Michigan State University, speaking on "Impact of coastal dynamics on man in Lakes Erie and Ontario"; 2) C. E. Herdendorf, Ohio State University, speaking on "Shoreline changes of Lakes Erie and Ontario"; and 3) N. Arno, U.S. Army Corps of Engineers, speaking on "Protecting shorelands against erosion damages in Lakes Erie and Ontario".

The paper by Upchurch devotes itself to a qualitative discussion of shoreline processes followed by a discussion of planning alternatives and problems in selection of priorities for research and land protection. A section devoted to relevant references on shoreline processes including erosion on both the Canadian and U.S. sides of Lakes Erie and Ontario was particularly interesting. The sections dealing with planning alternatives, priorities, land usage and protection and political jurisdiction apply chiefly to the United States but nevertheless point out the tremendous complexities of future shoreline management projects.

The paper by Herdendorf devoted itself to circulation and current patterns in Lakes Erie and Ontario followed by descriptions of shoreline drift and erosion/accretion patterns from point to point around both lakes. Although emphasis is placed on the U.S. shores, brief reviews are given for the Canadian shorelines also. No specific reference is

given to the authorship of work done in each drift area, however, the paper coupled with that of Upchurch provides a very useful qualitative overview of the processes operating in Lakes Erie and Ontario.

The paper by Arno is a good, short, but perhaps too simplified review of approaches to be taken in planning shore protection schemes. Reference was made on several occasions to the Corps of Engineers, North Central Division brochure entitled "Help Yourself" which this reviewer agrees is an excellent guide for the small landowner with erosion problems. The problem created by large jetties (Federal, state or private corporations, etc.) did not receive mention even though they create truly enormous changes in regional erosion patterns by creating permanent stable headlands.

In summary, this reviewer enjoyed reading the proceedings booklet and would recommend it as a library holding for anyone working with the shorelines of Lakes Erie or Ontario. It is particularly useful for "beginners" and non-technical planners, zoners and politicians interested in a sound but elementary grounding in shoreline processes.

MS received February 20, 1976.

The Work of the River

By C. H. Crickmay
American Elsevier, 271 p., 1974.
 \$29.50

Reviewed by B. R. Rust
Department of Geology
University of Ottawa
 Ottawa, Ontario K1N 6N5

This book is not, as the title might suggest, a general account of fluvial processes, deposits, and landforms. Rather, it is mainly concerned with the formation of landscapes by fluvial erosion, a topic to which the latter half of the book is devoted almost exclusively. It reviews the theories of Davis, Penck, and other giants of the past (about 130 out of 150 references are pre-1960), and presents the author's views on landscape evolution. The first half of the book gives a more general account of fluvial activity, but leaves much to be desired.

Data are given without references, equations without explanation of all the symbols used, and key concepts such as "wasting" are not defined. The illustrations are inadequate; many captions are incomplete, for example Figure 2.1: "Discharge frequency of a large river. (An American example)". In this figure discharge is labelled as cusecs or m^3/s ; we are not told which. Imprecise statements abound, such as: "Coarse grit in clear water at medium temperature falls about 0.15 m/s; . . ." The author expresses aberrant views on terminology, for example: "Alluvial fragments should be referred to truthfully as grains of fragments, or descriptively as mud, silt, sand, pebbles, or boulders - never (without good reason) as clasts, and absolutely never as particles". Strange techniques are described: a grain size analysis ("From an American River" again) expressed in terms of a X2 scale in inches, with clay and mud sized particles measured under the microscope.

The most striking deficiency of this book is the lack of discussion of the stratigraphic organisation of fluvial deposits, especially in view of the considerable progress made in this area recently. The only allusion to bedforms concerns Gilbert's discussion of 1914;