

**ILLINOIS, STATE GEOLOGICAL  
SURVEY, BULLETIN NO. 7;  
PHYSICAL GEOGRAPHY OF THE  
EVANSTON-WAUKEGAN REGION**

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**JAMES WALTER COLDTHWAIT & WALLACE W. ATWOOD**

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ILLINOIS  
STATE GEOLOGICAL SURVEY.

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BULLETIN No. 7.

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Physical Geography of the Evanston-  
Waukegan Region

BY

Wallace W. Atwood and James Walter Goldthwait

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Urbana  
University of Illinois  
1908

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PHYSICAL GEOGRAPHY OF THE EVANSTON-  
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UNIVERSITY OF ILLINOIS  
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## LETTER OF TRANSMITTAL.

STATE GEOLOGICAL SURVEY, UNIVERSITY OF ILLINOIS.  
 URBANA, ILL., OCT. 25, 1907.

*Governor C. S. Deneen, Chairman and Members of the Geological Commission:*

GENTLEMEN—I submit herewith a report upon the physical geography of the Evanston-Waukegan region, with the recommendation that it be published as Bulletin 7 of the survey. This report has been prepared under the direction of Professor R. D. Salisbury of the University of Chicago, consulting geologist of this survey. It forms the first of a series now in preparation of "Educational Bulletins." These have been called educational because their purpose is to put useful information concerning the geology and geography of the State, or some parts of it, before those who are not special students of these sciences. More particularly, their purpose is to put into available form such knowledge as will help those who are not geologists in understanding the common phenomena of their own regions. The bulletins are therefore intended to serve the citizens at large, rather than special students of geology, or special industries of the State which depend, directly or indirectly upon the mineral resources. Other and more technical publications serve this latter purpose.

Two classes of people are kept especially in mind in the preparation of these bulletins. These are: (1) Intelligent citizens whose attention, for one reason or another, has never been directed to geology. Among such citizens there are always some who are interested in understanding their home regions; and through the understanding of one region the general principles of geology may be grasped, much more easily. The knowledge thus acquired may be a source of much satisfaction to those who possess it. Furthermore, there is always the possibility that occasion may arise in the future when the information can be turned to account in economic ways. (2) Teachers of physical geography and geology. These sciences are now taught somewhat generally in high schools, and might be pursued with great advantage much more widely than now in the country schools. According to the improved methods of study at the present time, it is essential that the subjects studied be so illustrated and applied that the knowledge acquired becomes a part of the student's permanent equipment. His study of physical geography fails of its full purpose unless it puts him into possession of the ability to interpret

the surface of the land as he travels to and fro in after life. The best way to acquire this ability appears to be to make application of principles studied in the school to the phenomena of the region in which the school is located. Many of the principles of physical geography and geology are illustrated within easy reach of most of the schools in the State.

The second purpose of those bulletins, therefore, is to put the schools of the various parts of the State into possession of a general account of the principal geographic and geological features of their regions, which may be used as a sort of field book. This field study in physical geography serves the same purpose as laboratory work in physics and chemistry, in connection with those subjects.

It will be long before all the important regions of the State can be covered in this way. In the choice of areas selected for early treatment, three considerations have controlled. These are the following: (1). Areas of great inherent interest have taken precedence over those not so favored. (2). Areas of which topographic maps have been made take precedence over those not so mapped; and (3) areas where the bulletins are likely to be used, again have precedence. Topographic maps have as yet been made over but a relatively small portion of the State. Fortunately the lake shore from Chicago northward has now been mapped, the Waukegan quadrangle, immediately north of the Highwood and extending to the State line having just been completed.

This area, one of exceptional and varied interest from the point of view of physical geography, was chosen as the first to be reported on. Dr. Wallace W. Atwood of the University of Chicago, and Dr. James Walter Goldthwait of Northwestern University, already thoroughly familiar with the region, collaborated in the preparation of the accompanying report. It is hoped that the material here brought together will stimulate the interest not only of the citizens and students of the area, but that it may also enrich the teaching of physical geography throughout the State. The clear description of the action of the continental ice sheet which once covered the region, the fascinating history of Lake Michigan, and finally the analyses of the development of stream courses in the area should be of general interest. Incidentally the discussion of the water resources of the area is of practical importance to all residents of this thickly populated area.

The survey is under great obligations to Professor Salisbury and the authors of this report for its preparation. Acknowledgments should also be made to the U. S. Geological Survey for the use of figures 3 and 13, and to Director E. A. Birge of the Wisconsin Geological and Natural History Survey for the use of figures 11 and 12; fig. A, plate I; fig. B, plate VIII and fig. A and B, plate IX.

Others similar educational bulletins are being prepared and will be offered for publication as rapidly as circumstances will permit.

Respectfully,

H. FOSTER BAIN,  
*Director.*