NEW ENGLAND INTERCOLLEGIATE GEOLOGICAL CONFERENCE

GUIDEBOOK

57th ANNUAL MEETING

October 8 - 10, 1965

AT

BOWDOIN COLLEGE

BRUNSWICK, MAINE

NEW ENGLAND INTERCOLLEGIATE GEOLOGICAL CONFERENCE

Guidebook to Field Trips in

Southern Maine

Arthur M. Hussey II,

Editor

57th Annual Meeting
October 8-10, 1965

held at

Bowdoin College
Brunswick, Maine

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LEADERS:

Harold W. Borns, Jr.	Professor of Geology, University Maine
Marc W. Bodine, Jr.	Professor of Geology, Harpur College
Dabney W. Caldwell	Professor of Geology, Wellesley College
Roy W. Farnsworth	Professor of Geology, Bates College
Frank Perham	West Paris, Maine
John Hogan	Geologist, Black Hawk Mining Co.
D. J. Hagar	Professor of Geology, Univ. Mass.
Richard A. Gilman	Professor of Geology, Fredonia State College
Arthur M. Hussey II	Professor of Geology, Bowdoin College
Robert G. Doyle	State Geologist, Augusta, Maine
Lester Greenwood	Geologist, Black Hawk Mining Co.
Kost A. Pankiwskyj	Professor of Geology, Univ. of Hawaii
Jeffrey Warner	Harvard University, Dept. of Geology

EDITOR AND CONFERENCE ORGANIZER
Arthur M. Hussey II

NEIGC MEETINGS, 1965, BRUNSWICK, MAINE

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INTRODUCTION

In organizing the field trips for the 57th Annual Meeting of the New England Intercollegiate Geological Conference an attempt has been made to present a variety of field trips appealing to many different geological specialities. Five of the field trips deal principally with the stratigraphy and structure of the metamorphic rocks of southern Maine and reflect detailed work undertaken in recent years in anticipation of or as a direct result of compilation of a new geologic map of the state. The intensive work in the area during the past 8 years has resulted in a fairly thorough understanding of the rock types, stratigraphy, and structure of the metamorphic belt of southern Maine, and correlations of stratigraphic units to the fossiliferous sequence already known in the Waterville area (Perkins and Smith, 1925, Osberg, in press) gives us now a much firmer understanding of the age relations of the rocks throughout the area. It is anticipated that the new map of the state will be available early in 1966, and these trips will afford the participants a first hand glance at the geology of some of the areas where concentrated effort has been made. It is hoped that participants will have a fuller understanding and appreciation of the general relations which will be shown on the map, and of the efforts that have gone into the compilation.

Two trips deal with surficial geological relations which have been the subject of recent investigations. In deciding what areas to include, our principal aim has been to select those areas which have not been visited in the past few years--to present fresh geology. In consequence of this, one of the two trips involves considerable travel and assembly at a point (Waterville) 50 miles from the Conference headquarters in Brunswick. It is hoped that the newness of the geology to be seen and the very interesting geological relations to be examined will be more than adequate compensation for the greater distance that has to be traveled to and from the field trip area.

One trip affords the opportunity to examine and discuss the relations of the small complex funnel intrusion of gabbro, the Cape Neddick Complex, at York Beach, Maine. Superb exposures permit detailed examination of the relations of the units of the complex, and the different types of layering within the units. Also to be examined are the relative age relations of three spacially close igneous rock suites--the gabbroic complex, alkaline felsic intrusives of the Agamenticus Complex, and the diabase dikes which are very common in the surrounding metasediments.

Of interest to mineralogists will be the trip to four currently operated pegmatite quarries in the vicinity of Greenwood, Maine. Included is the famous Harvard Mine.

Finally, since Blue Hill, Maine is the center of the newest major mining operation in the northern Appalachians, and the first significant metal mining operation in Maine's history, it is highly appropriate to include a visit to this property during this Intercollegiate Conference. At the time of this writing it is not known whether underground facilities can be visited, but surface facilities and equipment and local geology will be examined.

I wish to thank James Stacy Coles, President of Bowdoin College, for permission to invite the Conference to this campus, and for his continuing interest in the preparations for the Conference. To the field trip leaders Harold W. Borns, Jr., University of Maine, Orono, Maine; Richard A. Gilman, College of the State University, Fredonia, New York; Marc W. Bodine, Harpur College, Binghampton, New York; Robert G. Doyle, State Geologist of Maine; Dabney W. Caldwell, Wellesley College, Wellesley, Mass.; Frank Perham, West Paris, Maine; Roy W. Farnsworth, Bates College, Lewiston, Maine; D. J. Hagar, University of Massachusetts, Amherst, Massachusetts; Kost A. Pankiwskyj, University of Hawaii, Honolulu, Hawaii; Jeffrey Warner, Harvard University, Cambridge, Mass.; and Lester Greenwood and John Hogan, Black Hawk Mining Company, Blue Hill, Maine; go my sincerest thanks for the effort they have put into the preparation and leadership of their respective field trips.

I wish to thank Stanley Perham for his kind offer to allow participants to visit active quarries presently being operated by him. I am grateful to the management of Black Hawk Mining Company for their permission to visit the mining facilities at the Blue Hill Property.

Donovan Lancaster, Director of the Bowdoin College Moulton Union, and Orman Hines, Manager of Food Services, have given considerable of their time and advice in the planning and operation of the many administrative facets of a conference such as this one. The guidebook stencils were typed by Mrs. Pamalee Labbe, Departmental Secretary. The effort of these people on behalf of the 57th Annual Meeting of the New England Intercollegiate Geological Conference is gratefully acknowledged.

Professor John Rodgers of Yale University has given most welcomed advice during all stages of preparation for the Conference. For this and his assistance in mailing the announcements, I wish to express my thanks. I am grateful to James Skehan, S. J., Boston College, who so kindly shared with me some of the secrets of success of the 56th Conference last year, and

pointed out some organizational pitfalls to avoid.

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