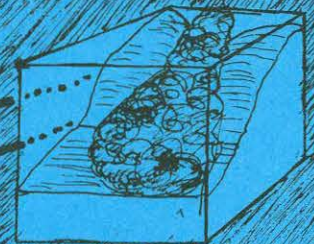
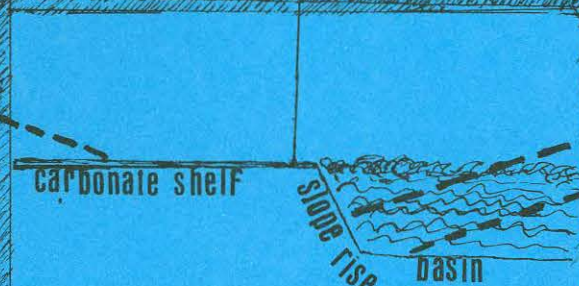
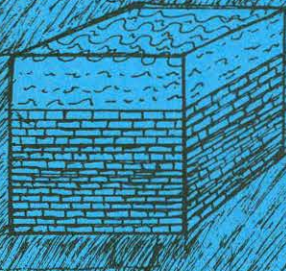
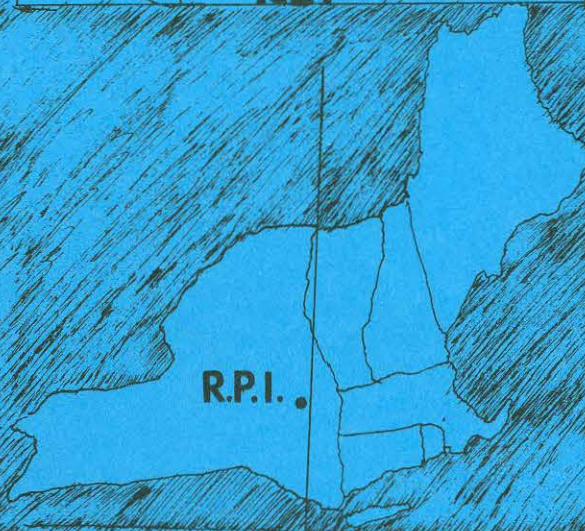
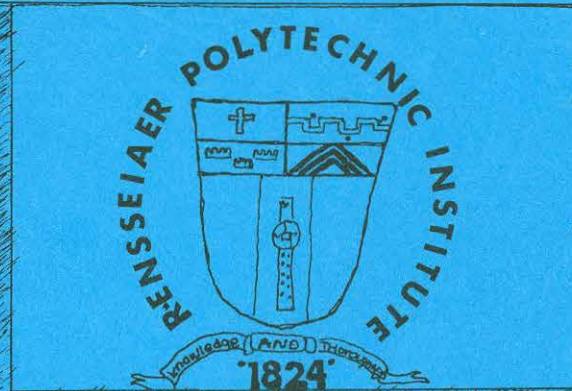


Rensselaer
Polytechnic
Institute

Guidebook

For Fieldtrips

New York State
Geological
Survey



New York State
Geological
Association

51st annual meeting

Joint Annual Meeting

October 5,6,7, 1979

New England
Intercollegiate
Geological Conference

71st annual meeting

E. Brown

JOINT ANNUAL MEETING OF
NEW YORK STATE GEOLOGICAL ASSOCIATION

51st Annual Meeting

and

NEW ENGLAND INTERCOLLEGIATE GEOLOGICAL CONFERENCE

71st Annual Meeting

TROY, NEW YORK

October 5, 6, and 7, 1979

GUIDEBOOK

Gerald M. Friedman, *editor*

Hosts:

Department of Geology
Rensselaer Polytechnic Institute
Troy, New York 12181

and

New York State Geological Survey
Cultural Education Center
Empire State Plaza
Albany, New York 12230

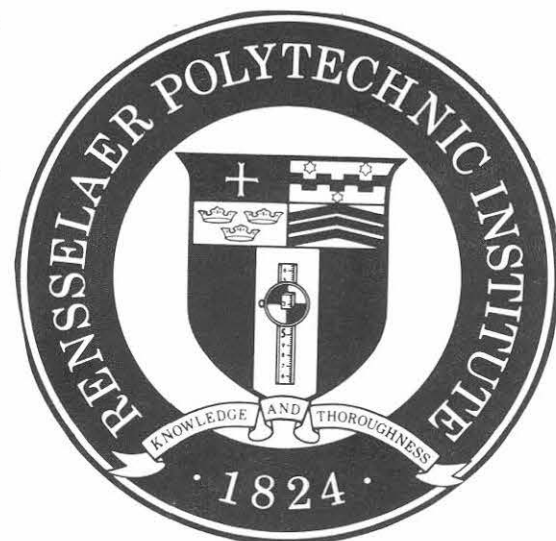


Table of Contents

Preface and Acknowledgements, by Gerald M. Friedman.....	v
Field Trips	vi
Geology at Rensselaer: A Historical Perspective. Address of the Retiring President of the New York State Geological Association, by Gerald M. Friedman.....	1
Devonian Stratigraphy and Paleoecology in the Cherry Valley, New York Region, by Donald W. Fisher.....	20
Sedimentary Environments and Their Products: Shelf, Slope, and Rise of Proto-Atlantic (Iapetus) Ocean, Cambrian and Ordovician Periods, Eastern New York State, by Gerald M. Friedman.....	47
Sedimentary Environments in Glacial Lake Albany in the Albany Section of the Hudson - Champlain Lowlands, by Robert J. Dineen and William B. Rogers.....	87
The Structural Framework of the Southern Adirondacks, by James McLelland.....	120
Microstructure of a Vermont Slate, An Adirondack Gneiss, and Some Laboratory Specimens, W.D. Means and M.B. Bayly.	147
Cleavage in the Cossayuna Area, as Seen at the Outcrop, by Lucian B. Platt.....	152
Thrust Sheets of the Central Taconic Region, by Donald B. Potter.....	167
Detailed Stratigraphic and Structural Features of the Giddings Brook Slice of the Taconic Allochthon in the Granville Area, by D.B. Rowley, W.S.F. Kidd, and L.L. Delano.....	186
Marine and Fluvial Delta Platform Environments of the Transgressive Clastic Correlatives of the Middle Devonian (Erian) Mottville Limestone Member of the Skaneateles Formation in Eastern New York State, by Fred Wolff, and Peter J.R. Buttner	243
Stratigraphy, Structure, and the Mineral Waters of Saratoga Springs - Implications for Neogene Rifting, by James R. Young, and George W. Putman.....	272
Economic Geology of the Hudson River Valley, by George M. Banino, and William E. Cutcliffe.....	292

Geology in State Service, by William Lilley, Robert Fakundiny, Kernan Davis, George Tounq, Frank Irving, and Peter Buttner..	310
The Building Stones of the Nelson A. Rockefeller Empire State Plaza, by R.H. Fickies and R.J. Dineen.....	321
Deglacial Events in the Eastern Mohawk - Northern Hudson Lowland, by Robert G. LaFleur.....	326
Stratigraphy and Depositional History of the Onondaga Lime- stone in Eastern New York, by Richard H. Lindemann.....	351
Field Guide to the Chatham and Greylock Slices of the Taconic Allochthon in Western Massachusetts and Their Re- lationship to the Hoosac-Rowe Sequence, by Nicholas M. Ratcliffe.....	388
Precambrian Structure and Stratigraphy of the Southeastern Adirondack Uplands, by Brian Buddington Turner.....	426
Late Wisconsinan - Recent Geology of the Lower Rondout Valley, Ulster County, Southeastern New York, by Russell H. Waines.....	447

PREFACE AND ACKNOWLEDGEMENTS

It is a pleasure to welcome all of you to the joint annual meeting of the New York State Geological Association and the New England Intercollegiate Geological Conference. A fine program has been arranged for you. Two overlapping sessions have been planned for October 5, a full-day Symposium on Sedimentary Strata and Tectonic Movements and concurrent workshops for earth-science teachers. Field trips have been scheduled for October 6 and 7 to classical sites of eastern New York State and adjoining New England. Have fun on your field trips.

I wish to extend my thanks to the authors and field-trip leaders for their contributions. Students and staff of the Department of Geology of Rensselaer Polytechnic Institute have given time and effort in preparing for this meeting. Credit for the success of this meeting goes likewise to the New York State Geological Survey, especially to R.H. Fakundiny.

Gerald M. Friedman, President
New York State Geological Association
Department of Geology
Rensselaer Polytechnic Institute
Troy, New York 12181

FIELD TRIPS

October 6 (SATURDAY)

The list below is that of the original schedule announced in April-May 1979. By the time this field guidebook comes off the press some of the originally planned field trips may have been cancelled. Please make sure that you join the field trip to which you have been assigned space.

- A-1 Early and Medial Devonian Stratigraphy and Paleoenvironments in east-central New York: leader, Donald W. Fisher, N.Y. State Geological Survey, N.Y. State Museum
- A-2 Sedimentary Environments and Their Products: Shelf, Slope and Rise of Proto-Atlantic (Iapetus) Ocean, Cambrian and Ordovician Periods, Eastern New York State: leader, Gerald M. Friedman, Rensselaer Polytechnic Institute
- A-3 Sedimentary Environments in Glacial Lake Albany and Its Successors on the Albany, Delmar, Niskayuna, and Voorheesville 7 1/2 minute quadrangles: leaders, Robert J. Dineen and William B. Rogers, New York State Geological Survey, New York State Museum & Science Service
- A-4 Structural Framework of the Southern Adirondacks: leader, James McLelland, Colgate University
- A-5 Microstructure of a Vermont Slate, an Adirondack Gneiss, and Some Laboratory Specimens: leaders, W.D. Means, SUNY, Albany, and M.B. Bayly, Rensselaer Polytechnic Institute
- A-6 Studies of Cleavage and Strain in the Shaly Rocks of the Cossayuna - Salem Area, Washington County, New York: leader, Lucian B. Platt, Bryn Mawr College
- A-7 Thrust Sheets of the Central Taconic Region: leader, Donald B. Potter, Hamilton College
- A-8 Detailed Stratigraphic and Structural Features of the Giddings Brook Slice of the Taconic Allochthon in the Granville Area: leaders, D.B. Rowley and W.S.F. Kidd, State University of New York at Albany
- A-9 Sedimentology of a Transgressive Clastic Wedge Within the Marcellus Formation (Middle Devonian) in Southeastern N.Y.: leaders, Fred Wolff, Hofstra University, and Peter Buttner, New York State Department of Parks and Recreation
- A-10 Faults, Stratigraphy, and the Mineral Waters of Saratoga: Implications for Neogene Rifting: leaders, J.R. Young, State University of New York at Albany, and Dunn Geoscience Corp., and G.W. Putman, State University of New York at Albany

October 7 (SUNDAY)

The list below is that of the original schedule announced in April-May 1979. By the time this field guidebook comes off the press some of the originally planned field trips may have been cancelled. Please make sure that you join the field trip to which you have been assigned space.

- B-1 Economic Geology of the Hudson River Valley: leaders, G.M. Banino and W.E. Cutcliffe, Dunn Geoscience Corporation
- B-2 Stratigraphic and Paleoenvironmental Problems of the Middle Ordovician Black River - Trenton Limestones in the Eastern Mohawk Valley, New York: leaders, Barry Cameron and Ewa Newman, Boston University, and D.W. Fisher, Geological Survey, New York State Museum (CANCELLED)
- B-3 Eurypterid Horizons and Stratigraphy, Lower Devonian, Eastern New York State: leader, S.J. Cieurca, Jr., Rochester (CANCELLED)
- B-4 Sedimentary Environments in Glacial Lake Albany and its Successors on the Albany, Delmar, Niskayuna, and Voorheesville 7 1/2 Minute Quadrangles: leaders, R.J. Dineen and W.B. Rogers, New York State Geological Survey, New York State Museum & Science Service (CANCELLED)
- B-5a Geology in State Service: leaders, William Lilley, New York State Department of Public Service, Robert Fakundiny, New York State Geological Survey, Peter Buttner, New York State Dept. of Parks and Recreation, Kernan Davis, New York State Dept. of Environmental Conservation, George Toung, and Frank Irving, New York State Dept. of Transportation
- B-5b The Building Stones of the Nelson A. Rockefeller Empire State Plaza: leaders, R.H. Fickies and R.J. Dineen, Geological Survey/State Museum
- B-6 Stratigraphy of Glacial Lakes Albany, Quaker Springs, and Coveville, and Relationships to Late Woodfordian Mohawk and Hoosick River Discharge History: leader, R.G. LaFleur, Rensselaer Polytechnic Institute
- B-7 Stratigraphy and Depositional History of the Onondaga Limestone in Eastern New York: leader, R.H. Lindemann, Skidmore College and Rensselaer Polytechnic Institute
- B-8 Structural Framework of the Southern Adirondacks: leader, James McLelland, Colgate University (Repeat of A-4)
- B-9 Microstructure of a Vermont Slate, an Adirondack Gneiss, and some Laboratory Specimens: leaders, W.D. Means, SUNY, Albany, and M.B. Bayly, Rensselaer Polytechnic Institute (Repeat of A-5)

- B-10 Thrust Sheets of the Central Taconic Region: leader, Donald B. Potter, Hamilton College (Repeat of A-7)
- B-11 Recent Structural Investigations in N.W, Massachusetts for the New Bedrock Geologic Map of Massachusetts: leader, Nick Ratcliffe, U.S. Geological Survey, Reston
- B-12 Precambrian Structure and Stratigraphy of the Southeastern Adirondack Uplands: leader, Brian B. Turner, George Mason University
- B-13 Late Wisconsinan - Recent Geology of the Lower Rondout Creek Valley, Ulster County, Southeastern New York: leader, R.H. Waines, SUNY, College at New Paltz
- B-14 Faults, Stratigraphy, and the Mineral Waters of Saratoga: Implications for Neogene Rifting: leaders, J.R. Young, State University of New York at Albany, and Dunn Geoscience Corp., and G.W. Putman, State University of New York at Albany (Repeat of A-10)