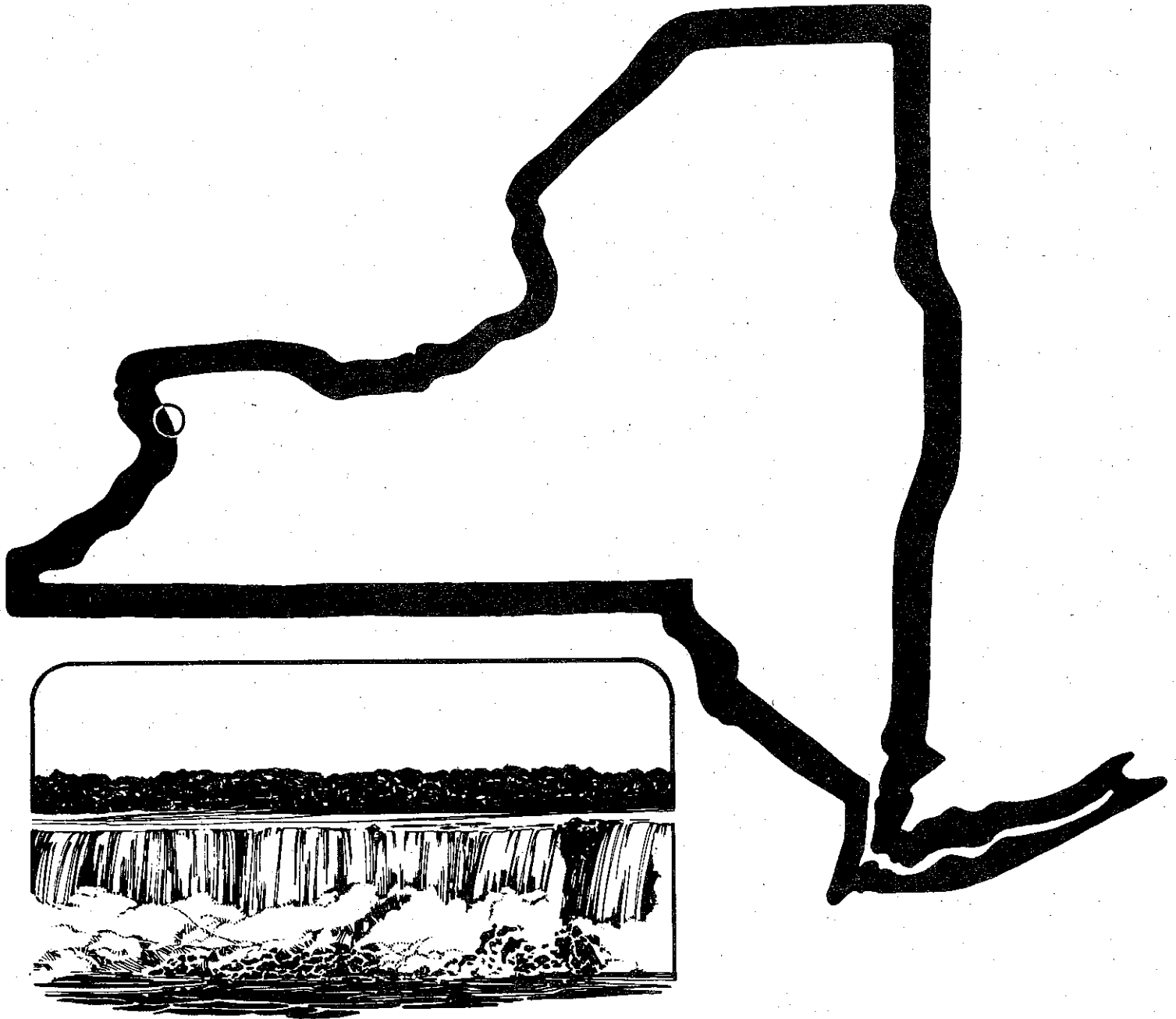


VOLUME 16, NO. 1 • MAY 1981

E. F. KARROW

NEW YORK GLACIOGRAM



DEPARTMENT OF GEOLOGICAL SCIENCES

State University of New York at Buffalo

Buffalo, New York 14226

EDITORIAL POLICY

The Glaciogram is intended to be a collection of informal notes concentrated on Quaternary work relating to New York either directly or indirectly. It is not a formal publication and is not circulated to libraries nor to individuals not engaged in Quaternary research. The information included is often of a preliminary and tentative nature and as such should not be quoted and certainly not without communication with appropriate authors. One of the charter contributors (Muller, v. 6(1)) has suggested that reference to information in the GLACIOGRAM be identified merely as informal communication; we agree with this suggestion.

Parker E. Calkin

Robert F. Black - Geology, University of Connecticut

Summer 1980 was devoted to field studies in the Aleutian Islands (ATKA) and west Greenland. A paper was completed during winter of 1980-81 on "Modes of deglaciation in Connecticut" for Lenon and Stone, 1981. Summer 1981 tentatively scheduled for field studies in Mexico and northern Alaska, then Antarctica in December.

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James E. Bugh - Geology, SUNY Cortland

The following is a student paper that may be of interest. McLean Bog is southwest of Cortland, on Cortland-Tompkins county line (Groton 7-1/2' Topo Sheet).

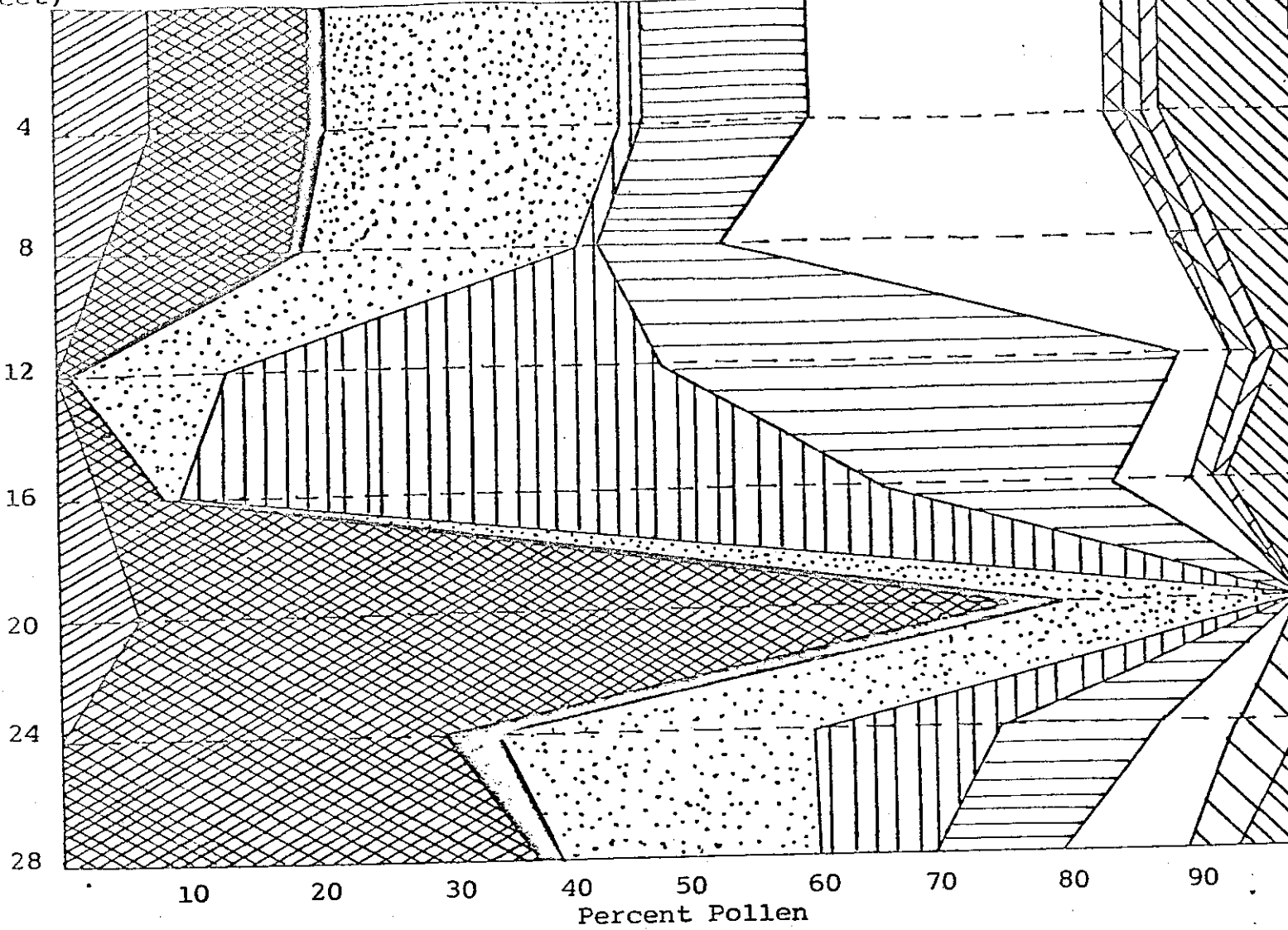
Pollen Analysis of McLean Bog


by Loretta Kohnken


Abstract-- Sediments were taken from McLean bog at depths of 8, 12, 16, 24, and 28 feet. Pollen analysis of these sediments revealed distinct vegetational zones. The bottom-most zone indicates a boreal forest existed at the site with Picea (Spruce) and Larix (Tamarack) as dominant trees, representing a cold and moist climate following the recession of the Wisconsin glacier, roughly 12,000 years ago. The zone consists of brown muds and extends from approximately 16-28 feet. Below 28 feet, the sediments are gray clays.


The pollen of the middle zone is typical of a deciduous woodland with Quercus (Oak) and Betula (Birch) as dominant species. The break in floral continuity between the bottom and middle zone indicates a significant temperature change. The change from cold to warm-climate species between these layers occurred very quickly. Therefore, this implies a change in climate rather than normal succession. This zone extends from approximately 8-16 feet.


Depth, below surface
(feet)





 Abies (Fir)


 Picea (Spruce)

 Pinus (Pine)

 Larix (Tamarack)

 Quercus (Oak)


 Betula (Birch)

 Gramineae (grass)

 Sedges

 Composites

 Ferns

 Tsuga (Hemlock)

Pollen Diagram of McLean Bog

The uppermost zone contains pollen of a mixed forest. Here, Larix (Tamarack), Abies (Fir), Picea (Spruce), Betula (Birch), Tsuga (Hemlock) and Gramineae (Grass) are dominant. This mixed forest, which occurs in the top 8 feet of the bog sediment, may be due to natural succession or human influences. The dominant vegetation consists of the common bog flora presently found at the site.

Parker E. Calkin - Geology, SUNY Buffalo

Pierrette Turcotte-Roy (Ph.D. candidate) and Brenda Gagné (M.A. candidate) are trying to make stratigraphic sense of all till exposure in the Cattaraugus Valley. Pierrette will then attempt to trace drift sheets (no matter how thin) of the equivalent Pleistocene rock stratigraphic units, northward to the lowlands through the system of partly buried stream valleys. Hopefully Pierrette and I will also have time to work on the eastward draining L. Co. Worcen problem of Muller and Wilson.

Tom Lowell (Ph.D. candidate) with Dale Becker (M.A. candidate) will begin compiling the Pleistocene data for northwest Maine. Tom hopes to pin down the elwine late Wisconsin ice cap (mass?) flow reversals in that area.

I'll be working on Holocene glaciation in the high eastern Brooks Range in July with Jim Ellis and two other graduate students. We'll attempt to utilize some early recon work of Loffing well (1911) on valley glaciers in that area.

I am distressed to learn of the death of our Newark Host for NYSGA - Steve Averill (See Walter Newman this number and Vol. 15(2) p. 2).

Don't miss NAGT Meetings - Brockport, 5-7 June 1981 (See Dick Young entry), NYSGA Meetings - Binghamton, 18-20 September 1981 (See Don Coates' entry). NYSGA 1982 in Buffalo, October 9-11.

Donald R. Coates - Geology, SUNY Binghamton

The first order of business is to describe briefly the work of the glacialists working under me at Binghamton.

David Ozsvath is beginning his PhD mapping which will be study of the western Catskill Mountains.

The following are all Masters students. Their work is in varying degrees of completeness. Several will be finished this May and I will enclose their abstracts for the fall issue of Glaciogram.

James Braddock is using geophysical means, such as gravity surveys, to trace bedrock conditions and depths of the Susquehanna Valley in the Binghamton area.

Amy Altman is studying a glaciated area near Riverhead, Long Island from a land use planning viewpoint.

Peter Murdoch is studying the geochemistry of two Adirondack lakes with emphasis on problems of acid rain. One lake is undergoing acidification and the other is not. The character of glacial materials as buffering agents is being examined.

Kevin Phelan has studied the glacial features of the east Vestal area. He has mapped three ribbed moraines and done quantitative studies of the till. Binghamton drift of the valley changes to Olean drift in the uplands, and he has carefully documented the transitional zone.

Tim Stone has completed his assessment of the quality of sand and gravel deposits as related to their environmental setting and landform characteristics. Ice contact deposits such as kames and eskers have lower exotic percentages than outwash. This is important when considering economic values of the materials.

Carol Terrane continues her work on the character and origin of soft sediment deformation in glacial deposits. Her field localities are in the upper Susquehanna Valley and the St. Lawrence region.

I have just returned from the 21st Anniversary meeting of the British Geomorphological Research Group. The conference was titled "Large Scale Geomorphology". Although my paper on Land Subsidence was not very glacially oriented, many of the papers were. G. Boulton presented a new model for large scale glacial processes. H. Walker discussed the Arctic with many references to the periglacial regimes. D. Drewry provided new insights into the evolution of ice at Antarctica. He presented the view that East Antarctica had been considerably larger during glacial maximum, but that West Antarctica was only slightly larger. The proceedings volume will be published by Oxford University Press.

On May 22,23, 24, 1981, York University, Toronto, Canada is hosting a symposium on Quaternary Dating Methods. W. C. Mahaney is the Director, and this is the fourth one he has conducted with themes related to glacial topics. My paper on "Landforms as Measures of Relative Time" will include several references to glacial landforms and processes as to their potential for determining time parameters.

A rather immodest amount of my time is spent writing and editing books. Although my ENVIRONMENTAL GEOLOGY finally got into print in January, John Wiley is already asking me to start on a second edition. A editor of the new "Environment, Energy and Society Series" (being published by Methuen) I currently have 13 authors writing paperbacks in the series. The first will be published this summer on soils, written by Gerry Olsen. If there are any aspiring authors in the wings who would considering writing a book in the Series, please let me know. Ultimately we hope to have more than 30 books.

Hope to see many of you at the Friends meeting in Massachusetts!

Robert Dineen - NYS Geological Survey, Albany

I extended the Oakhill-Middleburg ice margin down the east flank of the Catskill Mountains. I have a C14 date for the disintegration of the Middleburg Ice, based on Great Bear Swamp, of 11,295 (QC 14a) for the base-of-organic mud. I've calculated that the base of the core has an age of 13,850 ybp, using the Davis (1969) technique. This suggests that the Middleburg=Rosendale.

Jane L. Forsyth - Geology, Bowling Green State University

Jane Forsyth writes that she doesn't have any major work to report on, but that she did have a real education when she tried to map the glacial deposits in a two-square-mile area of woodlots and cornfields, with Wisconsin till everywhere at the surface and no well logs or useful exposures. Work in this area, owned by The Dawes Arboretum east of Columbus, where she was invited to be "scholar in residence" and to look at the glacial features, was frustrating but educational and, after two weeks of walking the area, finally resulted in mapping (modified from her earlier county report) with which she felt remarkably comfortable. End moraines follow zigzag courses among till-capped sandstone hills, oriented generally north/south (here on the east side of the Scioto Lobe), and synthesis of this record with the history of a small, temporary, ice-dammed lake whose drainage had been diverted through these hills, creating a deep bedrock gorge, strengthened the interpretation.

Work on the terraces along the Maumee River valley by graduate student Jack Klotz, referred to in an earlier GLACIOGRAM, has been completed. He was able to show that the Maumee River in Ohio began when the level of the Erie-basin lake dropped from that of Lake Whittlesey, and that there are four well-developed terrace systems, with levels (1) correlated with Lakes Warren I and II (690-680'), (2) correlated with Lake Wayne (660'), (3) correlated with the Grassmere level of Lake Lundy (640'), and (4) tied to bedrock control. It was a good study, well executed.

Jay Fleisher - Geology, SUNY Oneonta

Over the winter I completed a Geology, Soils and Hydrology Study for the Environmental Board in the City of Oneonta and came up with an interesting spin-off involving applied Quaternary geology.

From a detailed Soil Map, I produced a Soil Association Map that illustrates soil series grouped together on the basis of parent material. Since parent material is a dominant factor in local soil development, the Soil Association Map turned out to be very similar to my Quaternary Map. Furthermore, the physical properties and engineering characteristics of the soil series can be correlated with Quaternary Map units (landforms and materials). The potential applied value of this correlation lies in the use of detailed Quaternary maps in lieu of a soil map of comparable scale. This would facilitate decisions involving land-use planning and at a fraction of the cost.

If your research or consulting activity has been along these lines, I would like to compare notes and share thoughts.

Dick Goldthwait - Geology, Ohio State University

Busy working on the GSA - Cincinnati glacial geomorph. trip for Oct 30-31-1, 1981 (with Perry Stewart and others). Come see the stratigraphy as of now! Hope to get George Crawl and Bob Choate going on the glacial geology of Delaware County, Ohio, this year -- a missing link in our story.

Stephen R. Hicock - Geology, University of Western Ontario

In the November, 1980, Glaciogram Aleksis Dreimanis reported his official retirement from this department. He is still very active, however, with supervising Quaternary graduate research and teaching, and representing Western at various international meetings. I completed my Ph.D. under Aleksis in 1980 and taught the undergraduate Quaternary course here in the 1980-81 academic year.

Our Interdisciplinary Quaternary Discussion Group still thrives, now under my direction, and accomodated a busy schedule of talks over the last year. Thirteen speakers from our own campus (Geology and Geography), the Ontario Geological Survey (Toronto), the University of Windsor, and the University of Quebec at Montreal, presented sixteen informal discussions on Quaternary topics.

Paul Karrow - Earth Science, University of Waterloo, Ontario

Paul Finamore, M.Sc. student, will map the Fenelon Falls area this summer for the Ontario Geological Survey. The area includes the Kirkfield outlet of Lake Algonquin.

John Coakley, Ph.D. student from CCIW in Burlington, will study the Late Quaternary history of Long Point in Lake Erie.

Jim Richard, M.Sc. student, will map an area near Hearst in northern Ontario for OGS. His thesis will focus on the Cochrane event and the southern extent of the Missinaibi interglacial beds.

John Cronin, M.Sc. student, will also work for OGS mapping the Penetang and Christian Island areas. His thesis will deal with the Algonquin-Nipissing shorelines of southeastern Georgian Bay and tie in to earlier work by Stanley and Deane.

Bill Fitzgerald is writing up his M.Sc. thesis on the postglacial history of Minesing area, west of Lake Simcoe.

Barry Warner worked with me for several months on pollen and plant macrofossils from a subsurface interstadial site on our campus. A study of Corry bog, Pennsylvania, with Barry and Peter Fritz is now being written up. Barry has gone on to his Ph.D. at Simon Frazer University in British Columbia.

Jeff Turner (PDF) is completing a paper with Peter Fritz and me on radiocarbon dating of marls.

Over the winter I have been completing several other manuscripts and have in various stages of completion ms. on the Guelph interstadial (with R. J. Hebda, E. W. Present, and J. Ross), ostracodes (with S. Poplawski), and a report on the Hamilton-Cambridge area for U.G.S. (revision of G.R.16, out of print for several years). A discussion of Nels Gadd's paper in C.J.E.S. on the upper St. Lawrence valley has been submitted.

Summer plans include several weeks surveying Huron basin raised shorelines, preparing a field trip for the 1982 Sedimentological Congress, more fossil collecting from Algonquin and Nipissing sites, and writing up research results.

Carl Koteff - Geology, U.S.G.S., Reston

After 3-1/2 years of administration, it is time to go back to the field. I will be looking into the broader aspects of postglacier uplift for the entire Northeast region starting with Vermont this summer and putting together the data I have previously gathered in southern New England.

Todd Miller - U.S.G.S., Ithaca

Todd has put together a report in the Water Resources Investigations Series which is due for publication sometime this summer. The title is GROUND-WATER RESOURCES and GEOLOGY OF OSWEGO COUNTY, NEW YORK. It is currently in review stage.

Ernest H. Muller - Geology, Syracuse University

Interim Chairmanship of the Syracuse University Department of Geology has absorbed much of my time for the past year. Assumption of the Chairmanship on July 1st by Dr. John S. Dickey, presently of the National Science Foundation in Washington, should enable me to get back to several projects which have been hanging fire for a long time.

Meanwhile, I have relied heavily on collaboration - coauthoring a couple of papers with Parker Calkin and cooperating with Todd Miller (USGS, Ithaca) on quadrangle mapping of Oswego County. I have worked as well with Bill Brennan (SUC Geneseo) in field sampling for his investigation of paleomagnetism of proglacial lake clays.

Completed last year were:

"Quaternary geology of the Jamesville 7½-minute Quadrangle", MS thesis by George Duchossois, who is now with the South Dakota Survey in Vermillion, SD

"Catastrophic discharge of Lake Warren in the Batavia-Genesee Region" PhD dissertation by Michael Wilson who is now at Texas A&M.

Adopting Don Cadwell's "pod" concept a group of graduate students including PhD candidates David Franzi who last summer mapped the Remsen Quadrangle, and Jack Ridge, and two or three master's candidates will be mapping the surficial geology of a number of quadrangles in the northwestern corner of the Mohawk-Hudson 1:250,000 map sheet.

On April 11, I welcomed the opportunity to participate in the Symposium arranged by Dick Young and Larry Lundgren honoring Herman Leroy Fairchild during the Centennial Celebration of the Rochester Academy of Science.

Unfortunately I shall miss the Friends of the Pleistocene as well as Mahaffey's symposium this year because in May I will be accompanying a departmental Rocky Mountain field seminar. However, I hope the summer will afford opportunity for contacts with a number of you working in neighboring areas.

Walter S. Newman - Geology, Queens College, CUNY

Shortly after returning from a field trip around the Sea of Cortez (Gulf of Baja California) last January, I phoned my friend and senior author Stephen P. Averill at his home in Hillsdale, New Jersey. Mrs. Averill devastated me with the news that Steve had died in an automotive mishap early in December. Steve, a Yale graduate, taught both at Pascack Valley Regional High School as well as at Fairleigh-Dickinson University. Having been exposed to the magic and aura of Dick Flint, he naturally gravitated toward the Quaternary Geology of his home turf, northeastern New Jersey and adjacent New York. Steve who had walked the terrane all his life, observed, studied and read on the area and discovered newly exposed geological localities as well as several new archaeological and mammalian sites. Cognizant of the importance of palynology in his studies, he undertook a course of study in pollen and spores under the direction of Harry Cousiminer at the American Museum of Natural History. His sincerity, intelligence and persuasiveness caused Dick Pardi, Director of the Queens College Radiocarbon Laboratory, to perform a series of assays on samples collected by Steve in his field area which led to the development of a reasonably firm chronostratigraphy going back to 13,000 YBP. Steve Averill was the principal organizer of the Quaternary field trip of the 1980 New York State Geological Association last Fall as well as the senior author of the field trip guide "Late Wisconsin-Holocene History of the Lower Hudson Region: New Evidence from the Hackensack and Hudson River Valleys." In this guide Steve documented two contrasting late Wisconsinian drift lithologies. Unfortunately, it was only several weeks after the meeting and shortly before his death that he finally found an exposure demonstrating the superposition of two contrasting tills superposed one upon another. In our last conversation he jubilantly described the find and we tentatively made arrangements to study it further. That was not to be. I know you all join with me and salute our dedicated colleague who too many of us just hardly knew. He did all he could to improve our fund of knowledge. He will be missed.

Dick Pardi, Les Marcus, Lenny Cinquemani and Jon Sperling are continuing our computer study of sea level. Because the IGCP 61 meeting in South Carolina conflicted with Orono GSA meeting, I was unable to attend the exciting meeting in Maine. The South Carolina meeting brought out two rather salient, exciting and controversial items. First, it is apparent that sea level at the height of the late Wisconsinan glaciation was well short of the frequently quoted "about 100 meters below its present level". The data appears to support Doug Grant's contention that the Late Wisconsinan mid-latitude glaciers never achieved equilibrium and that the mean thickness of these glaciers was rather less than previously believed. The second matter concerns the oxygen-isotope record and the problem of a relatively high mid-Wisconsin stand of sea level. There appears to be a growing suspicion of the veracity of the 0-18/0-16 record in the Stage 3 interval. There are now so many C-14 dates, including wood and peat dates, which suggest that sea level in the 25,000-40,000 YBP time interval was within 20 meters of its present level that one must question the slavish adherence to the oxygen-isotope record which after all even according to its adherents has a 50% smear factor. I include our two most recent abstracts. The first was presented at the South Carolina IGCP meeting while the second will be presented at the LaJolla "Migrations of Hominid Populations" meeting next October. Both papers will be published in the fall.

HOLECENE SEA LEVELS, NEOTECTONICS AND GEOIDAL DEFORMATION
ALONG THE EAST COAST OF THE UNITED STATES

Walter S. Newman₁, Richard R. Pardi₂, and Leslie F. Marcus₃

Queens College of the City University of New York

1. Department of Earth and Environmental Sciences.
2. Radiocarbon Laboratory
3. Department of Biology

In addition to the approximately 200 basal peat samples secured and dated by our group during the past three years, we have also assembled a body of data published by other east coast sea-level investigators. All these datae, totaling about 750 radiocarbon dates and ancillary information, have been stored in our computer memory bank as well as on magnetic tape. Computer-assisted analyses and graphic reconstruction of sea levels over the past 12,000 years yield rather ambiguous results inviting inquiry into the centrality of "Z"-axis eustasy as a measure of glacial volume. Furthermore, the bimodal distribution dips in mid-Holocene time and there is little data prior to 14,000 years ago.

The east coast, a passive continental margin, has demonstrably warped during the past 6,000 years, the New York Bight sinking at a rate of about one meter/millennium relative to South Carolina while the Bight's continental shelf edge also has evidently downwarped relative to the present coastline. Local geotectonic anomalies are evident within fault zones along the Hudson Estuary and, perhaps, along the Carolina coast. Since the dated sea level indicators define the geoid at specific points in time, mass distribution (and therefore the shape of the earth) has changed significantly through time. The east coast's curious behavior during Holocene time largely reflects the earth's rheological response to the transition from a glacial to an interglacial stage. From New York on to the southwest, sea level

was near 30 meters below its present level some 12,000 years ago. Any substantial departure from an assumed eustatic sea level standard for this point in time presumably measures subsequent deformation of the geoid. Concluding, additional radiocarbon-dated sea levels rather than confirming glacial control of sea level have confronted us with new problems inviting innovative solutions.

SEA LEVEL, NEOTECTONICS AND PALEOGEODESY

Leslie F. Marcus₁, Walter S. Newman₂, Richard R. Pardi₃,
Leonard J. Cinquemani₂, and Jon Sperling₁

Queens College of the City University of New York

- 1. Department of Biology
- 2. Department of Earth and Environmental Sciences
- 3. Radiocarbon Laboratory

Computer-assisted analyses and graphic reconstruction of sea levels over the past 12,000 years yield results so ambiguous as to invite further inquiry into the centrality of "Z"-axis glacial eustasy when modeling hominid migration routes. Our data base includes 3200 radiocarbon-dated sea-level indicators reported by numerous investigators throughout the world. The data distribution mode peaks in mid-Holocene time and there is little data prior to 12,000 years ago. Excluding those areas which have experienced postglacial isostatic rebound, the vertical range of reported sea level stands at 10,000 years ago exceeds 50 meters. Plate boundaries exhibit vertical deleveling velocities of up to about five meters per millennium. Even the east coast of the United States, a passive continental margin, has demonstrably warped during the past 6,000 years the New York Bight sinking at a rate of about one meter per millennium relative to South Carolina while the continental shelf edge has downwarped at a rather greater rate relative to the present coastline. The earth's special rheological behavior due to repeated glacial-interglacial cycles superimposed on the complexities of plate tectonics prevents a simple assessment of landmass outlines in the antedilluvian world. Furthermore, since our sea level indicators define the geoid at specific points in time, mass distribution (and therefore the shape of the earth) has changed significantly through time.

We conclude that glacial eustasy alone provides a poor and probably fallacious basis upon which to model the migrations of hominid populations.

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Gerald W. Olson - Agronomy (Soils), Cornell University

Recently excellent progress has been made toward preparation and publication of Soils Tour Fact Sheets for counties in New York State; an example is enclosed for Ulster County. Soils Tour Fact Sheets are now published and available for Broome, Cayuga, Chemung, Cortland, Monroe, Montgomery, Niagara, Onondaga, Ontario, Schenectady, Schoharie, Seneca, Tioga, Tompkins, Ulster, Washington, Wayne, Wyoming, and Yates Counties. Preparations are under way to publish soils tours for Genesee, Lewis, Orleans, and Schuyler Counties. My book "A Handbook for Use of Soils" edited by Dr. Don Coates of SUNY - Binghamton for the Environmental Series to be published by Dowden and Methuen will be off the presses early this summer (1981). This fall (1981) I will be teaching Agronomy 506 "Use of Soil Deformation and Maps as Resource Inventories" at Cornell University.

Jaen Terasmae - Geology, Brock University, St. Catharines, Ontario

My current research in southern Ontario is mainly concerned with palynology and chronology of the deglaciation phase of Late Wisconsin time.

One report was published in 1980:

Terasmae, J. and Matthews, H.L. 1980. Late Wisconsin white spruce (*Picea glauca* (Moench) Voss) at Brampton, Ontario. Canadian Journal of Earth Sciences, vol. 17, no. 8, pp. 1087 - 1095.

Another report is in press and should appear in 1981:

Terasmae, J. (in press). Late Wisconsin deglaciation and migration of spruce into southern Ontario, Canada. Proc. of Geobotany Conference (March 1, 1980), Bowling Green State University, Ohio.

The study of Late Wisconsin age peat and lake sediments at Brampton, Ontario, is continuing in cooperation with Alan Morgan (Univ. of Waterloo) who is studying the beetle fauna in these deposits.

Several new pollen diagrams have been completed on lake sediments from southern Ontario. These pollen sequences cover postglacial and Late Wisconsin time, and the supporting radiocarbon dates indicate ages for oldest sediments more than 13 000 yrs BP. Pollen influx data have been used (in addition to modern surface sample 'analogues' from northern Canada) to infer types of Late Wisconsin vegetation in southern Ontario. A report on these studies is in preparation.

Jim Leyland and Maryann Leyland (graduate students) are working on problems related to deglaciation and glacial Lake Iroquois and subsequent lake phases north of Lake Ontario near Trenton. Their studies (supported by the Ontario Geological Survey) involve mapping of surficial deposits in an area covered by six 1:50 000 map sheets. Two maps have been completed. George Pastirik (graduate student) is studying sand dunes and glaciolacustrine deposits in the Dunville area west of St. Catharines.

George W. White - Geology, University of Illinois, Urbana

Report of Investigations No. 117, Ohio Division of Geological Survey, Glacial Geology of Lake County, Ohio appeared in February 1981, although it carries a date of 1980. It comprises a text and a large colored map. Lake County adjoins Ashtabula County on the west and is a continuation of the recent R.I. on Ashtabula County. If you have not yet seen the Ashtabula County by White and S. M. Totten, R.I. 112, be sure to read Totten's chapter on the standlines in which he shows that cliffs are older than the beaches. The reports on several Ohio counties are now in editing and the monographic report on all of Northeastern Ohio is in advanced editing.

* * * * *

Dick Young - Geology, SUNY Geneseo

At the Rochester Academy of Sciences Centennial Colloquium, the following topics on Quaternary geology will be presented: (1) Geologic Evolution of the Genesee Valley and Early Lake Ontario (a review of recent progress by R.A. Young, Cochairman), (2) Glacial Geology in West Central N.Y.: Progress since the Pioneering Studies of H.L. Fairchild (E.H. Muller), and (3) Fairchild's New York: Landscapes from the Past Revisited (L. Lundgren, Cochairman). The presentations will be published in a special volume with other geologic papers by the Rochester Academy of Science.

Ongoing work related to borings for sewer tunnels and landfill studies is continuing to provide an abundance of new data on the quaternary geology of the Rochester area. One of the most recent findings is the apparent effect of preglacial faulting on portions of the postglacial gorge of the Genesee River in Rochester.

The N.A.G.T. Eastern Section regional meeting (June 5-7) at Brockport will have 3 field trips, one of which will concentrate on the glacial features of the Genesee Valley, Dansville, Naples area. A field trip guidebook has been prepared with 32 sections of USGS topographic maps illustrating a wide variety of glacial landforms suitable for earth science or undergraduate college courses. The maps should provide a useful framework for field trips or location of selected photographic subjects. A variety of unusual, well-preserved landforms (some not described in available literature) are included (Trip Leaders: R.A. Young, R.B. Hatheway, SUNY College at Geneseo).

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