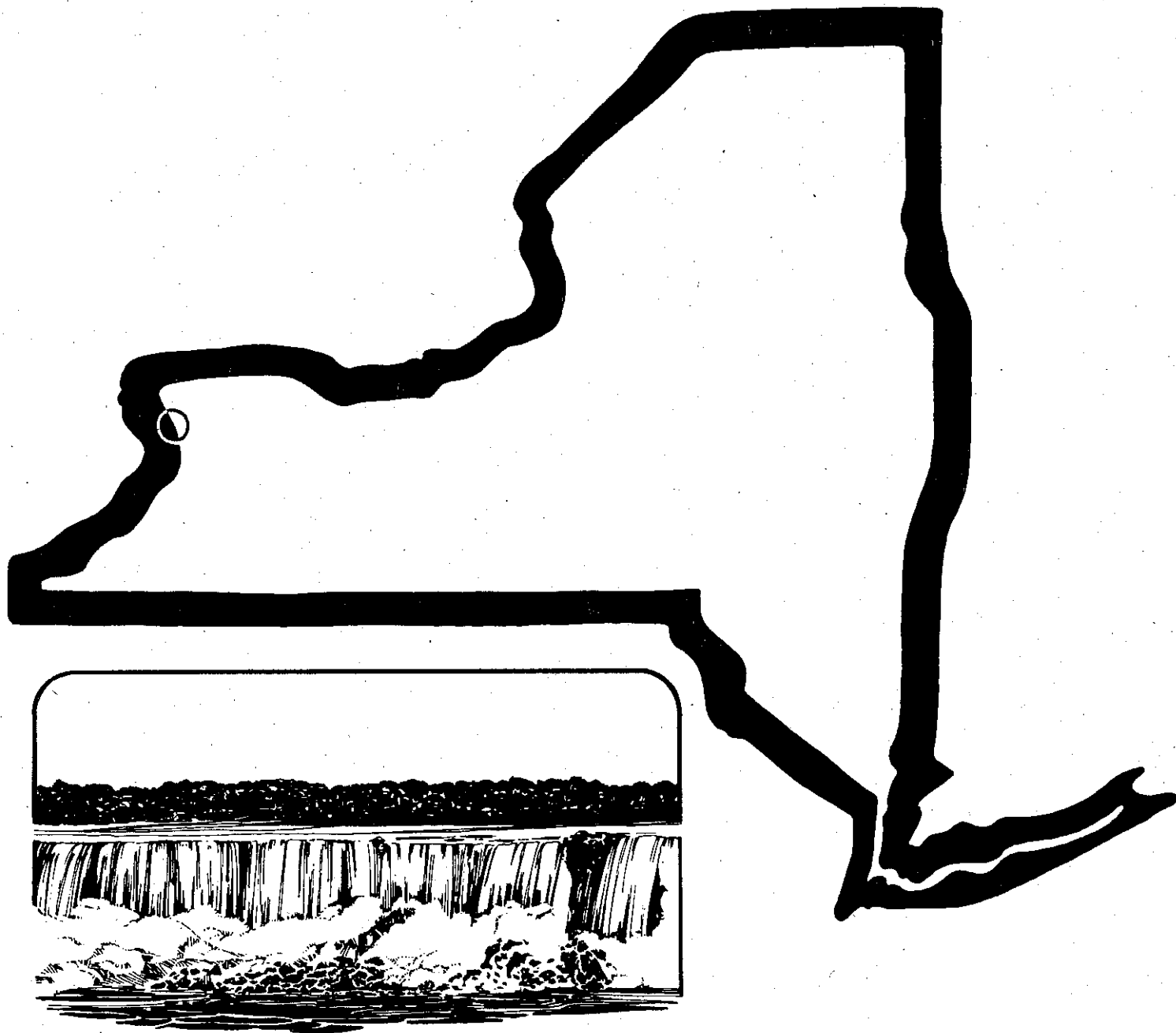


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E. E. KARROW

# NEW YORK GLACIOGRAM



DEPARTMENT OF GEOLOGY

University at Buffalo

Buffalo, New York 14260

## 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. It is suggested that reference to information in the GLACIOGRAM be identified merely as informal communication.

Parker E. Calkin

Peter J. Barnett, Ontario Geological Survey

The Engineering and Terrain Geology Section which includes the Quaternary Geology Subsection of the Ontario Geological Survey has relocated to Sudbury, Ontario. Our new address is:

Sudbury Advance Office  
Ontario Geological Survey  
Ministry of Northern Development and Mines  
6th Floor, 200 Brady Street  
Mail Bag 3000  
Sudbury, Ontario, Canada P3A 5W2  
Telephone: (705) 675-4441  
Fax: (705) 675-6473

Quaternary staff members at this office are Cam Baker (Section Chief), Andy Bajc, Tom Morris and myself.

This past summer and fall, I have been writing a summary chapter entitled "Quaternary Geology of Ontario" and putting finishing touches on a series of maps that display the Quaternary geology of Ontario at a scale of 1: 1 000 000 (4 sheets to cover the province). This series of compilation maps will be printed soon and hopefully released by the fall. Bedrock geology maps that cover the entire province at this scale have already been released. The Quaternary maps will be available separately, however, they will also accompany a special centennial volume entitled the "Geology of Ontario" scheduled to be released by the end of the year.

I will be completing field work in the Barrie area (immediately west of Lake Simcoe) this coming summer.

Tom Morris began field work in the Wawa area, north of Lake Superior. Primarily a drift prospecting project, however, additional data on Minong and Post-Minong lake levels is accumulating. Tom is continuing work in this area this coming summer. Tom's previous field work in the Windsor-Essex area of southern Ontario is wrapping up and has defined several minor end moraines.

Penny Henderson completed mapping in the Elliot Lake area, north of Georgian Bay. This study's primary aim was to provide a mineral exploration data base for the region. Penny agrees with the earlier work of Boissoneau (1968) that the ice margin stabilized just north of Elliot Lake (Whiskey Lake Moraine) during the initial draining of the glacial Lake Main Algonquin phase. Deposits support a water level of approximately 335 m or 1100 ft during this phase in the Elliot Lake area.

Andy Bajc has completed his work in the Fort Frances area in northwestern Ontario and began mapping in the Huntsville and Bracebridge areas last summer. This coming summer he will be mapping areas to the south that join the areas being mapped around Barrie (I hope the maps will match). Andy's work combined with recent mapping by Phil Kor, Bob Geddes, Paul Finamore, Chris Kaszycki (G.S.C.) and myself will have covered the entire area which includes the extent of glacial Lake Algonquin on the Canadian Shield south of the North Bay Outlet.

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Donald H. Cadwell - New York State Geological Survey

I want to take the opportunity to bring everyone up to date on the work being done to complete the Adirondack Sheet. All of the compilation is complete and the map is now at Williams and Heintz. Corrections to the scribe copy are almost done and we still anticipate being able to distribute the map in September or October 1991.

I also want everyone to know that we are organizing a conference on SURFICIAL GEOLOGIC MAPPING IN NEW YORK STATE, for April 1992 (a copy of the preliminary announcement is attached.) One of the more significant results of the conference will be recommendations on the needs for future surficial geologic mapping in New York.

**PRELIMINARY ANNOUNCEMENT**

**Conference on  
SURFICIAL GEOLOGIC MAPPING IN NEW YORK STATE**

**APRIL 23, 24, 25, 1992 (Thursday, Friday, Saturday)**

**Sponsored by:  
The New York State Geological Survey  
and  
The Department of Earth Sciences  
State University at Oneonta**

**Held at the Morris Conference Center  
on the campus of State University of New York at Oneonta**

**Conference will include:**

1. Invited presentations on the summary of surficial geologic mapping on each of the five published 1:250,000 scale sheets.
2. Invited presentations on the research potential developed during completion of the newly published New York State Surficial Map.
3. Invited presentations on the use of the new Surficial Geologic Map.
4. Discussion and recommendations on the needs for future surficial geologic mapping: alternative approaches.

If you would like to attend this conference AND would like to receive the second notice in September, please provide the following information to Donald H. Cadwell, NYS Geological Survey, Rm 3136 CEC, Albany, NY 12230 (Phone: 518-486-2012).

*Name* \_\_\_\_\_

*Affiliation* \_\_\_\_\_

*Address* \_\_\_\_\_

*Phone* \_\_\_\_\_

Parker E. Calkin ----- Department of Geology, University at Buffalo

Two papers are in press (or review) that may be of interest to Quaternary specialists. "Paleoecological Interpretation and Age of an Interstadial Lake Bed in Western New York" by Norton Miller and I will appear in Quaternary Research in the Fall. "Pleistocene Stratigraphy of the Erie and Ontario Lake Bluffs" done with Ernie Muller will be part of a symposium volume (SEPM-IGCD) on Quaternary Coastal Systems organized by J. Wehmiller and C. Fletcher.

Graduate student, Steve is putting together a survey of esker morphometries and their connection with New York State glaciation. Steve has attempted to visit most of the eskers that show up on the available toposographic maps; however, many small ones (and some larger) escape easy detection. He and I would appreciate hearing of any unpublished work on New York Eskers and related material (a collect phone call to (716)-831-2460 or 3051 for Calkin would be accepted gladly).

Gregory Wiles and I continue our studies of Holocene glaciation in Alaska and particularly on the use of tree rings in developing both glacial and climatic chronologies for the late Holocene in the Kenai Peninsula.

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Donald R. Coates ----- Geoscience Consultant, Endicott, N.Y.

Although I am now officially retired from SUNY-Binghamton, and part of the Emeriti brigade, I continue with my consulting firm. This keeps me busy nearly full-time. My projects are mostly in New York State, and invariably are associated in large measure to issues closely related to glaciation. Even the hydrogeology projects generally require thorough knowledge of the effects of the style of glacial deposition.

We just completed another report at the Chemung County Landfill. At this site we have the most complete record of the stratigraphy of glacial materials on a large till shadow hill. Nearly 100 wells provide a unique data set that sheds new light on glacial events that are more complex than often perceived. For example there are multiple episodes of till deposits of differing lithology. Ice contact deposits are also present in different thicknesses. Even glaciolacustrine sequences can occur with thicknesses in excess of 40 ft!

One of the large on-going projects continues to be the work on a hydrogeology report of the northern Shawangunk Mountains. Hopefully by the end of the year we will have completed all work. This investigation has involved bedrock mapping, glacial mapping, soils mapping, installation of rain gages, stream gaging, and pumping tests. One objective is to provide a water budget for the area, and make such determinations as safe water yields, and the dynamics of the entire groundwater flow system (s). Bedrock is mostly the Shawangunk Formation, a highly cemented quartzose series of rock units. Groundwater flow in such a lithology is generally dependent on secondary porosity. This in turn is related to secondary structural features, in addition to more recent disturbances. These include a range of weathering features. Due to the massiveness of some rock units unloading fractures can locally be important, as well as joint widening by plants, a ice wedging. Such openings provide avenues for surface water infiltration below zones of capture by evaporation processes. The thickness of till, and its type, are also part of the total equation for determination of surface vs groundwater flow systems.

A just-completed project near Ilion provided some new insights into glacial regimes that I found somewhat unusual. For example I had not been prepared for glaciofluvial beds that were in excess of 135 ft thick, and which did not exist in a major valley.

Another project south of Watertown has showed that the Tug Hill Aquifer, a glaciofluvial sequence of permeable sediments, continues farther in a northeast direction than previously mapped by the U. S. Geological Survey. Wells were emplaced in such units that produced sustained yields in excess of 100 gallons per minute.

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Robert H. Fakundiny ----- New York State Geological Survey

Comparison of indoor radon measurements in houses of central New York and surficial deposit type, as shown on the Finger Lakes sheet of the State Surficial Geology Map, shows a remarkable correlation. By using bedrock uranium distribution, ice transport directions and distance, and material distribution, I believe we will be able to predict areas of high concentrations of radon gas in soils.

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P. Jay Fleisher ----- Dept. of Earth Sciences, SUNY-Oneonta

The 1990 field research group at the Bering Glacier included Ernie Muller, Austin Post, Chuck Rosenfeld (Oregon State), myself and two undergraduates from SUNY- Oneonta, Mike Gonsalves and Joe Nossal. Our main thrust involved four projects that followed up on earlier work in '88 and '89. Austin and Chuck developed a survey net of control points for a base map on which the retreating ice margin and associated lakes and drainage system were mapped. Ernie and Austin made initial investigations of newly discovered buried forests (at least two) within foreland outwash exposed by retreat from the surge position of 1960. Initial C-14 dates provide a general chronology for ice-marginal events reported by Ernie at GSA in Baltimore. Mike and Joe worked together on bathymetry, rates of sedimentation and turbidity for two ice-contact lakes (Tsiat and Tsiu) at the Bering margin. Chuck and I mapped and measured several sections in foreland bluffs where remnant buried ice was exposed. A followed up surface traverse on the Grindle Hills Ice-tongue at its juncture with the Bering piedmont lobe, has provided additional data for our investigation of accelerated surface subsidence begun in '88.

We will return for our 4th season with an expanded group that includes Ernie, Austin and Chuck, plus Don Cadwell (back after missing the '90 season), Cal Heusser, Palmer Bailey (USMA at West Point), two cadets and another two SUNY-Oneonta undergraduates. Our objectives have been expanded to include consideration of organic zones associated with buried forests and bogs, greater definition of ice-contact lake sedimentation, englacial ice structures related to detachment of buried ice during retreat and improved map control of the ice margin and associated deformed debris bands.

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George M. Haselton ----- Department of Earth Sciences, Clemson University

After our summer school session here, I plan to spend a few days east of the Malone area re-examining some ice-contact forms in regard to genesis, morphology, physical features in the stratigraphy, and possible organics for <sup>14</sup>C dating.

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Aleksis Dreimanis and Steven Hicock ----- Dept. of Geology, U. of Western Ontario

Aleksis Dreimanis attended the NATO workshop on "Correlating records of the Past" in relation to world-wide Global Change problems, co-chaired the discussion session on "Global scenarios of interglacial-glacial transitions", and presented a paper on "Transition from the last interglacial to the last glaciation along the SE margin of the Laurentide Ice Sheet in Canada and the USA". The workshop, attended by 35 invited participants, took place in a secluded hotel on the island of Mallorca on April 4-9.

A more specific paper, "Reinterpretation of time-stratigraphic assignments to current Pleistocene rock-stratigraphy, north shore of Lake Erie, Canada" was presented at the Symposium on "Late Quaternary time classification in the Great Lakes Region" held at the meeting of the North-Central Section of the Geological Society of America at Toledo, Ohio, on April 18.

In July Aleksis will participate at the World Latvian Science Congress in Riga, Latvia, where he will present 3 papers and participate at the meetings of the Latvian Academy of Science. After the Congress, field work in the drumlin field of Burtnieki is planned together with Quaternary geologists of the Latvian University. Investigation of subglacial facies changes along the north shore of Lake Erie will continue with Steve Hicock. Aleksis' latest publication: Formation, deposition, and investigation of subglacial and supraglacial tills, as Chapter # 3 in "Glacial indicator tracing", edited by R. Kujansuu and M. Saarnisto, published by A.A. Balkema in Rotterdam, 1990.

Steve continues his studies of till along the north shore of Lake Erie to infer more details of Pleistocene subglacial processes. He and his new Ph.D. student, James Goff, will continue studies of subglacial processes along the southwest margin of the Cordilleran Ice Sheet in southwest British Columbia. Steve's other Ph.D. student, Ted Fuller, is finishing his thesis on the west-central margin of the Cordilleran Ice Sheet in the Queen Charlotte Islands. At the CANQUA meeting in Fredericton, New Brunswick, in early June Steve will present his latest thoughts on rheologic superposition in till along the north shore of Lake Erie. His latest paper on boulder pavements will appear in the Journal of Geology in July.

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Paul F. Karrow ----- Dept. Earth Sciences, University of Waterloo

On referring to last May's report I see I wrote from Manitoulin Island. As snowflakes fall today I am looking forward to continuing the Manitoulin raised shoreline surveys after the North-Central GSA meeting at Toledo. Last year after I wrote we went on to do two profiles up to the Main Algonquin beach for the first time. We hope to do a third this year as well as work on the west end of the Island and do at least one profile on Cockburn Island, between Manitoulin Island and Drummond Island, Michigan. Although only a few kilometres in diameter, Cockburn formed a small residual island in Lake Algonquin, rather like a smaller version of St. Joseph Island, surveyed in the early 80's.

The rotasonic drilling was extended last year to a fourth hole on the east side of Waterloo by the Grand River. It went to about 40 metres and cored several till layers below Catfish Creek Till. Further drilling across the Waterloo moraine awaits applied for funding.

Additional sampling at the Mill Creek interstadial site in Michigan yielded additional microvertebrates - now totalling 4 fish taxa and 8 small mammals. We will report on this at the Toledo GAS, where Tom Lowell and I will also chair a symposium on Late Quaternary time classification.

In August and September PDF Dr. Darrel Maddy, from England, studied terrace development in valleys southeast of Lake Huron. He found several molluscan fossil sites in the terrace deposits. Another PDF from England, Dr. Dan Charman, is working with our palynologist Barry Warner on peat development for this year. In July Barry will be moving to a new faculty position in our Geography Department. His M.Sc. student Stephen Marsters completed his thesis on two sites above and below the Algonquin beach east of Georgian Bay. M.Sc. student Lisa Belyea is continuing her work on bogs in northwestern Ontario, while Barbara Nagy is doing her M.E.S. on Wainfleet (Welland) Bog in the Niagara Peninsula.

Bill Buhay, jointly supervised by Tom Edwards and me, is doing his Ph.D. on C-O isotopes in wood cellulose, constructing detailed paleoclimate records for the last few centuries based on old trees. Andy Heath is finishing up his Ph.D. thesis on the Ft. Frances area in northwestern Ontario.

Owen L. White recently retired as Section Head of Engineering and Terrain Geology at the Ontario Geological Survey, is returning to Waterloo with part-time affiliation with the Department of Earth Sciences. It is anticipated he will become involved with the local urban geology through the Quaternary Sciences Institute.

About 250 people attended the CANQUA/AMQUA meeting here in June 1990. We are planning for the Great Lakes meeting in June 1992, which will feature sessions on Great Lakes neotectonics, geomorphology of past and present shorelines, general geology, and contaminant inputs to the Great Lakes.

My own field work has included reconnaissance and sampling of terrace deposits along the Thames Valley in Southwestern Ontario and a visit to valley terraces with Ed Frey near Wawa, northern Ontario. March 1991 I was back in Florida briefly winding up work there on former sea level dating. In prospect this summer is more attention to writing - a perpetual problem.

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Norton G. Miller - Biological Survey, New York State Museum

**Craig Chumbley, Dan Royall** and I are continuing work on a survey of late-glacial and Holocene vegetation change in western New York. Pollen diagrams and bathymetric maps are now available for Hundred Acre Pond, Round Pond, and Devil's Bathtub, which are all located in the Mendon Ponds County Park near Rochester, New York. The sediments from Devil's Bathtub, a small meromictic kettle-hole, are of special interest because they are laminated and have negligible carbonate content. Eight radiocarbon dates have been obtained, and they suggest that the laminations are annual. Therefore, it should be possible to assign accurate ages to the palynostratigraphic changes at Hundred Acre Pond and Round Pond. During the past winter, we obtained long cores from South Junius Pond (Seneca County), North Pond (Oswego County), and Van Keuren Lake (Steuben County); the work at North Pond and Van Keuren Lake included bathymetry. We also obtained short cores from Allenberg Bog (Cattaraugus County), Mutton Hill Pond (Tioga County), Moss Lake (Allegany County), and two sites in Onondaga County (Beaver Lake and Labrador Pond). By comparing the vegetation changes at these sites, we hope to understand better the history of the ecotone between the forests of the Erie-Ontario Lowland and those of the Allegheny Plateau. A secondary focus is on pre- to post-settlement changes of this region, including the palynological details of forest clearance and reforestation upon farmland abandonment.

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Ernest H. Muller ----- Department of Geology, Syracuse University

After devoting the fall term to travel, Wanda and I returned to Syracuse in January, prevented from any extended excursions by a one-night-a-week course in Environmental Geology that I have taught this spring for SU's University College.

A major milestone since my retirement a couple of years ago came with Don Pair's defense of his excellent dissertation study of "Late Pleistocene glacial history and magnetic chronostratigraphy, western Adirondack borderland, New York". This made him the last doctoral degree recipient to complete his work under my supervision.

Last summer, I returned to Bering Glacier with Jay Fleisher, Austin Post, Charles Rosenfeld and two of Jay's students. Since Bering Glacier's massive surges of 1959-60 and 1965-66, the subsequent 25 years of downmelting and recession of its piedmont lobe into a developing peripheral lake system serves well to sharpen our views of the nature of glacial recession as the Laurentide Ice Sheet in New York receded in the Ontario lake plain.

At the NE-SE GSA meetings in Baltimore we reported on disinterred forest beds that were exposed by the rapid 18-m lowering of Tsiu Lake when a new ice-marginal outlet opened in August, 1989. I am looking forward to a return visit this summer, when, hopefully, Cal Heusser will be joining us in this research.

Several years ago, at the annual meeting of GSA in St. Louis, Paul Karrow assembled several individuals concerned with Pleistocene stratigraphic correlations in the Great Lakes area. An outgrowth of that first meeting in 1989 was the Symposium on "Pleistocene Time Classification in the Great Lakes area" chaired by Paul Karrow and Tom Lowell at the NC GSA meetings in Toledo in April. It is to be hoped that some, at least, of the summaries presented at that session will be published in due course.

I am looking forward to the Friends of the Pleistocene meeting to be hosted by Jack Ridge in Herkimer. New York examining some of the exposures in the West Canada Creek basin which have been the focus of his stratigraphic and paleomagnetic research for the past several years.

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DON PAIR --- GEOLOGY DEPARTMENT, SYRACUSE UNIVERISTY

The past year at Syracuse has found me filling the open faculty position at Syracuse and teaching Geomorphology, Environmental Geology, and Introductory Geology. In addition, I continued to work with the NYS Survey and the fruits of our labors, in the form of the page proofs of the Adirondack Sheet Surficial Map, have just arrived from Albany. Publication is anticipated in the Fall.

The month of April brought the defense of my dissertation and acceptance of a faculty position in the Geology Department at the University of Dayton. I plan to continue working in the Adirondacks with the hope to study several of the perplexing problems highlighted by the surficial mapping and paleomag. studies. In addition, I am looking forward to further expanding the paleomagnetic work into Ontario and Quebec, and am beginning to examine a number of possible problems closer to my new home in Ohio. At Ernie Mullers's request, a copy of my dissertation abstract is featured below.

LATE PLEISTOCENE GLACIAL HISTORY AND MAGNETIC  
CHRONOSTRATIGRAPHY,  
WESTERN ADIRONDACK BORDERLAND, NY

ABSTRACT

New lines of evidence from the western Adirondack borderland have been employed to assess the style of deglaciation and reconstruct the nature and timing of associated proglacial lacustrine and marine (Champlain Sea) events. Contrasting styles of deglaciation, controlled primarily by water depth, resulted in landfast ice withdrawing gradually on the northern slope of the Adirondacks while actively calving ice, retreating rapidly in the deep water of Lake Iroquois, quickly evacuated the western St. Lawrence Lowland of ice. The extent of ice retreat from the western St. Lawrence Lowland during the life of Lake Iroquois has been estimated on the basis of the distribution of the ostracode *Candona subtriangulata* in Lake Iroquois and by northward projections of Iroquois shoreline elevations to the region bounded by the Madawaska Highlands (Ontario). Results indicate that models envisioning calving-bay recession in the Ottawa Valley contemporaneous with proglacial lakes in the St. Lawrence Lowland are improbable.

Study of the forms and possible origins of glacial erosional and depositional features in the Adirondack borderland highlights the importance of the presence of an impermeable substrate and the role of meltwater in the lowlands as channelized subglacial flows. Deep sheetfloods are not required to account for the erosional features described from the western St. Lawrence Lowland. Instead, plastic deformation of the glacier sole in near conformity with pre-existing subglacial topography accounts for characteristics of erosional forms produced both by meltwater and by glacial erosion.

Secular changes in the depositional remanent magnetism (DRM) are used as a means of testing time equivalence between glaciolacustrine/marine facies associated with ice marginal positions. Construction of a glacial-magnetic record suggests possible correlations of events in the western Adirondack borderland of New York with evolving glacial-magnetic records from the Champlain Valley and New England independent of morphostratigraphic inferences.

The shape and amplitude of the secular variation curve preserved by the glaciolacustrine and marine sediments from the western Adirondack borderland show strong agreement between secular variation records from both other varve-based records and high resolution wet sediment cores. These results clearly demonstrate the potential of these records for correlation and show that comparison of geographically distinct sites is possible with a resolution unparalleled by radiocarbon dating.

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B. E. Raemsch ----- Department of Anthropology, Hartwich College, Oneonta, N.Y.

Two radiocarbon dates associated with paleolithic cultures have been obtained from archaeological sites in Schoharie County, one near Hyndsville, the other from Seward, N.Y.

These dates came from the surface of Wisconsin tills and they reflect the maximum advance of ice from the areas studied, and were obtained from two laboratories. The charcoal at Hyndsville has a date of  $16,040 \pm 170$  years B.P. (S.I.-4128). The one from Seward was collected from a fire pit dug in Wisconsin till and was associated with a transitional uniface-biface chert tool stone culture; the former date, taken from charcoal found in a rill bed, excavated by running water, a stream that had dissected the till down to a paleosol described as AS #2 ("ancient soil" in Flint's vocabulary) by Stagg, Timlin, and Raemsch in the publication Early Native Americans, David Browman, ed., Mouton, 1980, pp. 41-67.

The date received for the fire pit and stone tool complex yielded a figure of  $17,320 \pm 160$  years B.P. (Beta Analytic #28749).

This last date is also associated with fossil mountain sheep, from teeth identified by Dr. Malcolm McKenna of the American Museum of Natural History as well as Dr. Richard Harington of the National Museum of Canada, together with a chert biface in a leg bone, the entire assemblage appearing to reflect a habitation site.

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Jack Ridge ----- Department of Geology, Tufts University

Below is an announcement for the 1991 (54th Annual) Meeting of the Friends of the Pleistocene in central New York. I would appreciate it if you would place the announcement in any issues of the Glaciogram which are sent out before May, 1991.

FRIENDS OF THE PLEISTOCENE  
54TH ANNUAL MEETING

HERKIMER, NEW YORK, U.S.A.

MAY 17-19, 1991

LEADERS: J.C.RIDGE AND D.A. FRANZI

The 1991 FOP meeting will convene in central New York State to investigate the late Wisconsinan glaciation of the western Mohawk Valley region north of Utica, New York. The region, and in particular the West Canada Creek valley, has a complex glacial stratigraphy that records glacial readvances and deep glacial lake impoundment which occurred during recession of the Ontario and Mohawk lobes. Special topics that will be discussed include: 1) the genesis of till and other diamicton units in a deep glaciolacustrine trough; 2) the use of paleomagnetic declination measurements from laminated lacustrine deposits as a glacial chronostratigraphic tool; and 3) the causes of glacial readvances which occurred in central New York during late Wisconsinan ice recession. For more information due out this Spring contact: Jack Ridge, Dept. of Geology, Tufts University, Medford, Massachusetts, USA 02155, Phone (617) 381-3494.

Publication of the Glaciogram is a little late for this announcement, but you will have some idea of what Jack did this spring.

Editor

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John P. Szabo ----- Department of Geology, University of Akron

John Hofer and I are working on the heavy mineral assemblages in the Late Wisconsinan Lavery, Hiram, and Ashtabula tills of the Erie lobe. We are also using samples from vibracores taken by the Ohio Geological Survey. The assemblage in the Ashtabula Till is radically different from the other tills. It contains up to 40% opaque minerals dominated by oolitic hematite possibly from the Silurian Furnace Creek Formation. Overall, purple garnets dominate and the amount of epidote is low. This suggests flow from New York down the Erie Basin. These results are different from those of the Illinoian tills which suggest a Huron-Georgian Bay influence in western Ohio.

I am continuing to work on correlation problems among deposits of the sublobes in Ohio and on stratigraphic problems. Christi Wilson is almost done with her thesis on the possible extension of Kent ice from the Grand River lobe into the lower Cuyahoga River basin. It has forced me to work with Late Wisconsinan stratigraphy which I have avoided in the past and to consider drainage changes near spillways at Akron.

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Richard A. Young ----- Dept. of Geological Sciences, SUNY Geneseo

1) As widely reported in the national press, a well preserved mastodon skeleton was located during golf course construction north of Geneseo. The site was a depression connected to glacial Lake Avon as a small embayment (later isolated by sand bar growth along the shoreline). The site also has a significant thickness of postglacial/late glacial eolian sand. Eolian sand redistribution has been demonstrated to have been a more pervasive process than may have been assumed in postglacial (or glacial) environments in the region, as shown in both geologic and archaeological studies elsewhere in the valley. The mastodon location is now a bog immediately adjacent to the south edge of the large moraine complex on the Geneseo Quadrangle that was related to damming of the Genesee Valley to form Lake Geneseo (Muller et al, 1988) near the latitude of Fowlerville, but on the east side of the valley. The site geology and skeleton are currently under study by numerous individuals at Geneseo. Radiocarbon dating and studies of the associated flora and mollusca are planned.

2) I have located a complex multiple till, outwash, lacustrine section in the Genesee Valley which contains peat bog deposits overridden by an ice readvance. Radiocarbon dates are under way. The results should shed light on the last, late glacial, ice-free episode in the valley (Port Huron equivalent?), but might be older. There is much organic material from the small wedge of peat (since destroyed) that is being saved for later faunal/floral analyses. Anyone interested in working on such

material is encouraged to contact me for samples once the radiocarbon results are back. Extensive photographic documentation of the site was accomplished prior to sample collection.

3) Engineering borings for the proposed new bridge at the mouth of Irondequoit Bay (Rochester) have provided extensive samples of organic sediments down to the lowest levels of the post-Iroquois low stand of Lake Ontario. The lowest lake level appears to have been at least 20 feet lower than implied in the most recently published lake level curves (GAC Special Paper 30). Samples for radiocarbon dating are being saved pending funding application.

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Richard A. Young - Dept. of Geological Sciences, SUNY Geneseo	13