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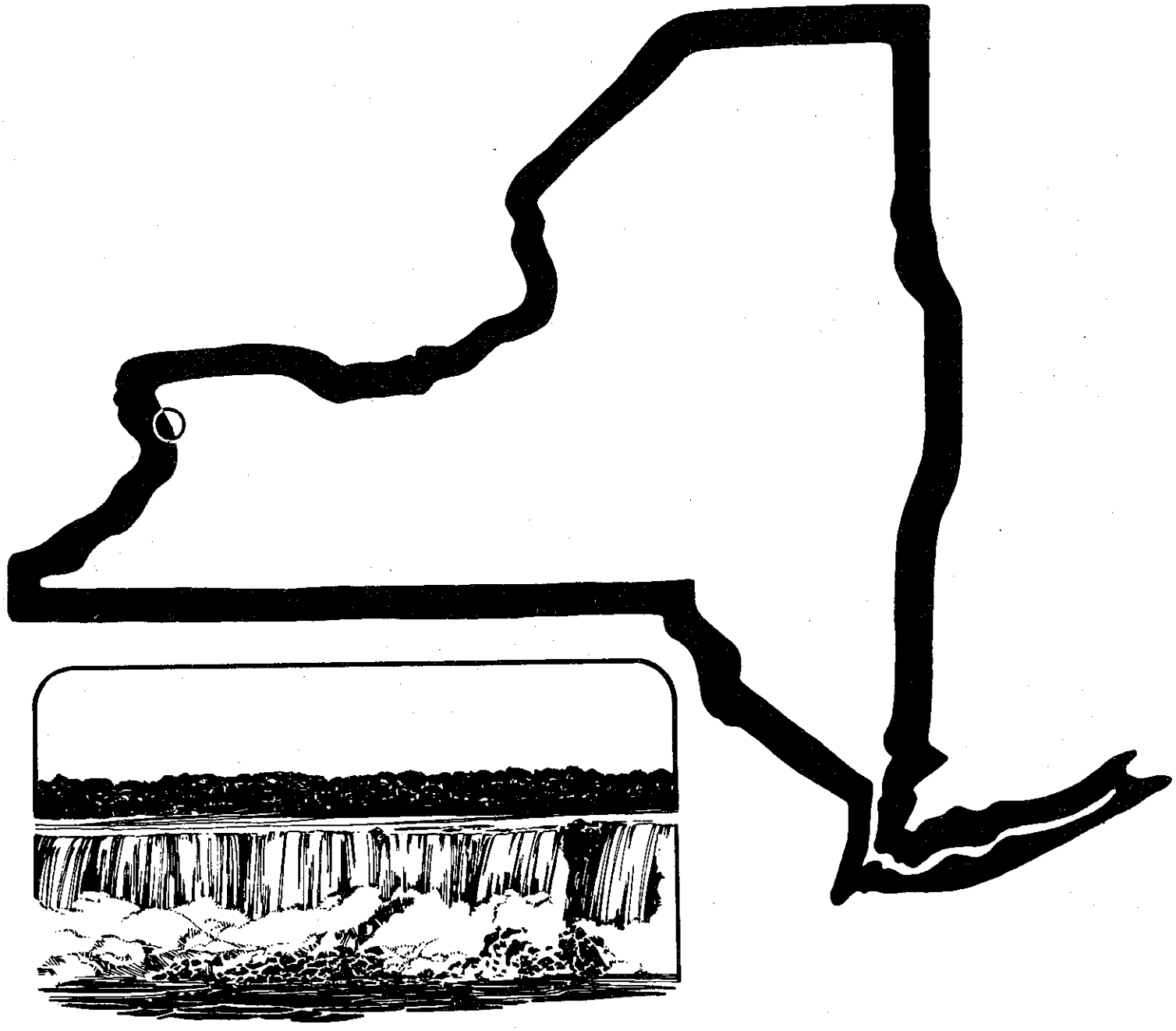
NEW YORK GLACIOGRAM



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

Parker E. Calkin

Ray B. Bryant - Agronomy, SUC Agriculture and Life Sciences, Cornell U.

The results of our study of soils developed in marine and lacustrine sediments in the St. Lawrence and Champlain Valleys are scheduled for publication in the May-June issue of the Soil Science Society of America Journal. The reference is as follows:

> Kern, J. S. and R. B. Bryant. 1987. Soils developed in sediments from late-Quaternary water bodies in northern New York. SSSAJ 51(3): - .

As previously reported, soil chemical characteristics were useful for distinguishing among marine, lacustrine and brackish-water deposited parent materials. A water plane for a late stage brackish water phase in the St. Lawrence Valley is proposed. The westward extent of marine waters in New York is discussed.

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Peter U. Clark - Geological Sciences, University of Illinois, Chicago

Cliff Brady is working on his M.S. thesis (Glacial geology of the Star Lake-Edwards, N.Y., area). Cliff and Tom Davis (Mount Holyoke College) cored a small kettle lake immediately south of Star Lake, and we are waiting on the basal C-14 date from the 8 m core. We are trying to get additional funding for more C-14 dates and pollen work on the core.

Allen Melcer presented his Masters thesis on the sedimentology of late Pleistocene glacilacustrine deltas in the St. Lawrence lowland at the 1987 NE GSA meeting in Pittsburgh, PA.

Due to time constraints and no new students in the wings, no field work is planned for the New York area this summer.

P. Tom Davis - Geology, Mt. Holyoke College

I recently obtained a minimum-limiting radiocarbon age of 12,640 ± 430 yrs B.P. for deglaciation of the northwestern side of the Adirondack Mountains. The dated detrital organic matter was concentrated from the 7.62-7.72 m depth of a sediment core recovered from the east basin of Readway Pond, a compound kettle, about 0.5 km SW of Star Lake. The site is at an altitude of about 425 m (1390 ft) a.s.l. The radiocarbon date provides a minimum age for ice retreat from a major moraine system mapped by Dr. Peter U. Clark and his students at the University of Illinois at Chicago. Peter's regional mapping prgram suggests that the moraine system is related to deglaciation of the Adirondack Mountains and concommitant incursion of proglacial Lake Iroquois. Efforts are in progress to obtain funding to support palynological analyses and further radiocarbon dating of the 8-m long sediment core to provide a paleovegetation and paleoclimatic record for this important unstudied area. I was assisted in the field by Cliff Brady, one of Peter Clark's master's degree students who is doing surficial mapping in the area near Star Lake.

Robert J. Dineen - New York Geological Survey

I'm starting to plan this year's field season, so the time has come to find talented individuals that will help me progress on the Adirondack Sheet. I will need energetic, resourceful people who are capable of reconnaissance glacial mapping in the relatively inaccessable sections of the Adirondacks.

As usual, our budget is somewhat limited. I can offer $500 to $700 per 15-minute quad. We might be able to provide a field vehicle, however. This is an opportunity to participate in a major mapping project, the surficial deposits of many areas of the Adirondacks have never been mapped before!

We've made quite a bit of progress in the State Glacial Map project. We published the Finger Lakes Sheet last Summer. We also completed the compilation of the Hudson-Mohawk Sheet and sent it to the printer for final drafting and printing. It should be published by the end of the Summer.

We've also been active on the Adirondack Sheet. Don Pair (Syracuse University) mapped a large section of the southwestern St. Lawrence Lowlands. Cliff Brady (U. of Ill. at Chicago) mapped in the Cranberry Lake area. Joe Gurrierri and Laurie Musiker (Geraghty and Miller, Inc.) finished the Saranac Lake, St. Regis, and Long Lake quadrangles. I've completed reconnaissance mapping in the Schroon and eastern Hudson river basins. Dave Froehlich (SUNY at Buffalo) continued working in the Black River basin near Lowville.

This Summer, I plan to work with Pair in the Black River-Tug Hill-eastern Ontario Basin area. Dave Franzi (SUNY at Plattsburgh) has expressed interest in the Bouquet and Ausable river basins. The Champlain Lowlands will be mapped by Dave DeSimone (Williams College). Dave Froehlich will map in the southeastern Black River basin and the western-most Adirondacks.

Areas that need work include the border between the St. Lawrence Lowlands and the Adirondacks, the central and western High Peaks, and the western Adirondacks. If you have any energetic students that would be interested in these areas, please have them submit their Honoraria proposals soon. We will also have money available from other accounts.

I have two additional projects underway. I will be co-leading a field trip in the Kingston area with Priscella Duskin (NYSDOT) for the Spring meeting of the NAGT. We will re-examine some of the evidence for the Rosendale readvance on this trip. I will lead another trip in the Fall for the NYSGA meeting in New Paltz. My tentative title for the Fall trip is "Pre- and Post Glacial drainage history of the Mid-Hudson Valley". It will include data from my bedrock topo project of the early sixties.

THE FAIRBRIDGE LIBRARY

Emeritus Professor Rhodes Fairbridge (Dept. of Geological Sciences, Columbia University, New York 10027; telephone (212) 663-8793) reports that he is disposing of his extensive library of general geology, geomorphology and Quaternary sciences. Reprints and old textbooks will be handled on a giveaway basis. All you need to do is make an appointment and bring a station wagon full of empty cartons; or pay for mailing (and a student's time).

There are also complete, long runs (30 to 50 years) of journals that Prof. Fairbridge would like to sell to college libraries, the proceeds to go to a Foundation that specializes in Quaternary science. These runs include Geology, Science, Nature, American Scientist, Societe Geologique de France, Eclogae Geologiae Helvetiae, Geologische Rundschau, Geologists Association of London, AGI, GSA & USGS Bibliographies, and the Proceedings and Guide Books of International Geological Congresses.

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Robert Fakundiny - New York Geological Survey

I have become interested in the paths that radon and its precursors take from source bedrock, through glacial, glacio-fluvial, and Holocene fluvial systems to foundations of houses.

We are seeking funds to initiate a series of experiments to test whether it is possible to construct useful maps of areas with higher than common radon hazard potential by identifying bedrock sources and the glacio-fluvial systems that spread radon precursors. We also wish to determine what role groundwater may have in moving radon and its precursors and also shielding houses from radon incursion.

Dick Goldthwait - Geology, Ohio State and Anne Maria, Fl.

Have just completed my final "slaving" over the Morphologic Classification of Glaciogenic Features with some international classification-translation. Hope it serves both New York and flatlands and alpine mountains - for INQUA. Copies by INQUA XII time. Just finished a brief history of (Eastern) Friends of the Pleistocene, also. Of the fifty field meetings by 1987, at least thirteen have been all or mostly in New York State!

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Edward Hinchey - Geology, Syracuse University

This spring Hank Mullins and myself presented the preliminary results from our work on the Finger Lakes at the NE-GSA meeting in Pittsburgh. The poster presentation was well received and provided us with much creative insight. In summary, the most significant data collected are; (1) the identification and orientation of buried morainal features (possibly sub-lacustrine outwash fans), (2) preliminary correlation of ice margin positions in the lake valleys with the terrestrial record on the watershed, (3) identification of large scale slumping (possibly ongoing) at the southern ends of Skaneateles, Seneca, Owasco, and Cayuga Lakes, (4) the correlation and relationship of continuous seismic facies along the longitudinal axis of the lakes, (5) the identification of numerous melt-out and collapse structures (concentrated in the northeast branch of Keuka Lake), and, (6) a continuous record of the depth to bedrock throughout most of the basins.

This will be an extremely busy summer for us as we expect to continue seismic profiling (including wide-angle reflection and refraction) aboard R/V Winchell in July and late August, and collect piston cores aboard R/V Explorer in the late summer or early fall. We also hope to visit Glacier National Park in early August after attending the INQUA Congress in Ottawa.

Again, anyone with specific research interest in our work on the Finger Lakes and is inclined to spend a day profiling with us, contact Hank Mullins or myself.

Paul F. Karrow - Earth Sciences, Waterloo University, Ontario

During the winter the Ontario government announced its decision on the Don Valley Brickyard - it is to be expropriated. Nothing is known yet about details or arrangements but access to the face is expected to be available this summer.

Some publications expected out have been delayed, thus the revised Hamilton-Cambridge report (GR16 of 1963) is now expected out this summer. The separate colored maps were released by the Ontario Geological Survey during the winter. The revised maps are now at a scale of 1:50000 and contain additional and revised information. A preliminary (uncolored) map of the west half of Brampton was issued in March. Field work in April and May is planned to complete the mapping in the east half of the area outside Metropolitan Toronto. Mapping Toronto airport and extensive urbanized areas nearer Lake Ontario will be this year's challenges! This year we will continue the glacial lake story down to include Lake Iroquois features.

In February I was elected Director, and Peter Martini as Deputy Director, of our new Quaternary Sciences Institute. Watch for our display at INQUA in Ottawa (see separate notice).

The manuscript mill saw publication of a paper on northwest Lake Huron in G.S.A. Bulletin and one on carbonates in drift on the Shield in C.J.E.S. A paper on Algonquin shorelines in eastern Lake Huron and a discussion of the Sheguiandah archeological site have been submitted. Completion of a paper on the Clarksburg interstadial has been delayed pending some insect verifications.

The work of the INQUA Subcommission on North American stratigraphy is being reorganized with new membership to make some material progress on stratotype descriptions for INQUA this summer.

Funding has been approved to complete the Kitchener-Waterloo drilling and geophysics project, suspended for two years by earlier budget cuts. This project involves several holes to bedrock, some continuously cored and all geophysically logged. Another hole drilled on campus failed to encounter the interstadial beds which are now believed to be confined to a stream channel fill. We realize what a piece of good luck it was that the beds were originally encountered in 1980-81 (see Karrow and Warner, Boreas, 1985). More campus drilling from various funds is planned and we still hope to encounter them again.

A continuously-cored hole is also planned at the Woodbridge cut. A poster with John Westgate (U. of T.) is planned for INQUA.

B.Sc. theses were completed this year by Joanne Paul on tills in southeastern Quebec and by Chris Vasko on a Paleozoic outlier and associated carbonate drift train east of Georgian Bay. Jill Sacré continues an M.Sc. project on New Brunswick tills and John Easton is tracing bedrock valleys near Georgetown at the Acton reentrant in the Niagara Escarpment for his M.Sc. project.

Applications for graduate work continue at a high level in hydrogeology but are down for Quaternary work. We have projects and support for good students in Quaternary topics.

Paul F. Karrow (continued)

UNIVERSITY OF WATERLOO

Quaternary Sciences Institute

Faculty members in Anthropology, Biology, Earth Sciences, Geography, and Planning at the University of Waterloo, Geography at Wilfrid Laurier University, and Land Resource Science and Zoology at the University of Guelph, have jointly formed a Quaternary Sciences Institute. Although various joint research projects have involved combinations of some of the participants before, the new Institute is expected to increase this activity and stimulate new indisciplinary research and educational programs. The present participants, home department, and their areas of expertise are as follows:

L.D. Delorme (Earth Sciences, UW)	taxonomy and paleoecology of ostracodes
H.C. Duthie (Biology, UW)	diatoms and paleolimnology
D.K. Erb (Geography, UW)	air photo interpretation
S.K. Frape (Earth Sciences, UW)	geochemistry and paleoenvironments
P. Fritz (Earth Sciences, UW)	geochemistry and paleoenvironments
J.S. Gardner (Geography, UW)	alpine slope processes and neoglaciation
J.P. Greenhouse (Earth Sciences, UW)	geophysics for subsurface stratigraphy
M.H. Hill (Anthropology, UW)	evolution of complex societies
P.F. Karrow (Earth Sciences, UW)	stratigraphy, geomorphology
A. Kesik (Geography, UW)	micromorphic mapping and remote sensing
G.L. Mackie (Zoology, UG)	taxonomy and ecology of molluscs
I.P. Martini (Land Res. Sci., UG)	clastic sedimentology
D.I. McKenzie (Geography, UW)	geomorphic mapping, parks planning
A.V. Morgan (Earth Sciences, UW)	paleoentomology, permafrost

Paul F. Karrow (continued)

D.C. Nobes (Earth Sciences, UW)	marine geophysics, physical properties
H.C. Saunderson (Geography, WLU)	clastic sedimentology
R.G. Suffling (Planning, UW)	dendrochronology
B.G. Warner (Earth Sciences, UW)	palynology, paleoecology
O.L. White (Earth Sciences, UW)	engineering applications

Special facilities available include a radiocarbon lab, stable isotope lab, drill rig and driller, SEM, fossil reference collections, downhole geophysics equipment, tree ring lab, and remote sensing facility. The Institute plans to offer short courses and publish research results. A long-established Quaternary Discussion Group brings to campus researchers from nearby institutions and agencies and provides a medium of communication for researchers.

Students interested in applying for graduate work should contact the particular faculty member or graduate officer for the relevant department.

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Barry B. Miller-Geology, Kent State University, Kent, Ohio

Bill McCoy (University of Massachusetts) and I will be starting work on a study of 39 pre-Wisconsinan sites containing molluscan faunas that will be used to devlop an aminostratigraphic framework in the interlobate area of Illinois and western Indiana. It is hoped that the research will help identify a series of regionally recognizable aminostratigraphic units based on molluscan shell protein that can serve as a basis for correlation between sites. We expect to use the amino acid racemization ratios to calculate numerical age estimates by calibrating some of the ratios from younger Wisconsinan-age deposits with radiocarbon-dates. We hope that thermoluminescence-dating will be able to provide a means for calibrating some of the Illinoian-age deposits. This work is being supported by NSF Grant EAR-8618228. Any of you out there that know of

Barry B. Miller (continued)

any pre-Wisconsinan age sites with molluscs, please let one of us hear from you!!

A study of 20 dated molluscan faunal sites from the Lake Michigan basin show that most of the deposits are Nipissing or younger in age. The first appearance of many species of unionid clams, and the gastropods Campeloma decisum and Goniobasis livescens in Nipissing-age sediments strongly parallel their stratigraphic record in the Huron basin. Although the sampling is strongly biased toward Nipissing age assemblages (11 of 20), there is the suggestion of faunal zonation similar to what was found in the Huron basin (Miller et al, 1985, G.A.C Special Paper 30, pp.95-107).

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

Fossil pollen in cores from the Bergen-Byron Swamp in Genesee Co., New York, are under study by Richard Futyma. The swamp is 6 km E-NE of the Hiscock mastodon site. The study was undertaken to understand the formation of the swamp and to provide new data on the postglacial history of vegetation in the region. Cores were collected at two locations ca. 200 m apart. Sediments of the first core (5.8 m) were marl, several layers of marly peat, dark brown woody peat, and dark gray silt. The second core (6.4 m) consisted of dark brown peat with some wood and marly particles in places, marl, and dark gray silt. Preliminary pollen diagrams show that each sites has an assemblage dominated by spruce, pine, and sedges in the basal silts, which is succeeded by a zone dominated by pine, and then one in which pine, hemlock, sugar maple, oak, and beech are the most abundant pollen types. The pollen stratigrapies of the two cores differ in a number of ways, probably as a result of differences in vegetation at the two sites and associated variations in rates of sediment accumulation. Radiocarbon dating and detailed correlations are in progress.

Sediment cores from Diver's Lake near Basom in western Genesee County were raised by Norton Miller and colleagues in May 1986 and February 1987. Pollen spectra from 8.5 m of sediment (marly gyttja, gyttja, clays, silts, and fine sands) have been counted for intervals of 10 cm or less. Nine radiocarbon dates were obtained for lake sediments along the column, the oldest (11,900 ±100 yr B.P.; C-13 adjusted) on the basal clayey gyttja; other dates mark important changes in

Norton G. Miller (continued)

pollen assemblages. Plant macrofossils have also been recovered from the sediments, and these await further study. The Diver's Lake pollen diagram will be used in the correlation of pollen assemblages from the Hiscock Site and the Bergen-Byron Swamp. The diagram is the first in a new network of high-resolution pollen profiles that will be produced during the next few years to evaluate the development of the contrasting vegetation of the Erie-Ontario lowland and the Allegheny Plateau in western and central New York.

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Alan Morgan - Earth Sciences, University of Waterloo, Ontario

A few items to bring you up to date on two fronts; research and INQUA. As many of your readers are aware, I split my sabbatical year into two parts. The first involved fossil insect research in New Zealand. Since this is rather far from New York let me just state that fossil insects are alive and well in a number of sites examined in South Island. The second portion of the sabbatical was reserved to look after INQUA affairs and to complete a backlog of research.

The following paper has been published in the last few months:

Nielsen, E., A.V. Morgan, A. Morgan, R.J. Mott, N.W. Rutter, and C. Causse. 1986. Stratigraphy and Paleoecology of glacial and non-glacial deposits of the Gillam area, Manitoba. Can. J. Earth Sci. 23, 1641-1661. (A summary of ?Sangamon and Wisconsin events in northern Manitoba).

The following papers are in press, and should be out before this summer.

Fritz, P., A.V. Morgan, U. Eicher, and J.H. McAndrews. 1987. Stable isotope, fossil Coleoptera and pollen stratigraphy in late Quaternary sediments from southern Ontario and New York State. (In Press; Paleo ^{3}).

Pilny, J., A.V. Morgan and A. Morgan. 1987. Paleoclimatic implications of a Late Wisconsinan insect assemblage from Rostock, Ontario. (In Press; C.J.E.S.). (Fossil insects in the Waterloo interlobate moraine area from ca. 13 to 11 ka).

Pilny, J., A.V. Morgan and A. Morgan. 1987. Paleoentomology and Paleo-ecology of a possible Sangamon age site near Innerkip, Ontario. (In Press; Quat. Res.). (Fossil insects in a site near Woodstock, Ontario, dated >50 ka).

Warner, B.G., Karrow, P.F., Morgan, A.V., and Morgan A. 1987. Plant and insect fossils from Nipissing sediments along the Goulais River, south-eastern Lake Superior. (In Press; C.J.E.S.). (Summary of data from a mid-Holocene site).

Alan Morgan (continued)

Morgan, A.V. 1987. Late Pleistocene and Early Holocene Coleoptera in the Lower Great Lakes Region. Proceedings of the Smith Symposium, Buffalo, N.Y. (Fossil insect techniques, and some results).

Morgan, A.V. 1987. Late Wisconsin and Early-Holocene paleoenvironments of east-central North America: assemblages of fosssil Coleoptera. in North America and adjacent oceans during the last deglaciation. DNAG Volume (eds. W.F. Ruddiman and H.E. Wright). Geological Society of America, Boulder, CO. (Summary of fossil insect research, refugia, zoogeography, and changing postglacial climates in the eastern section of the continent).

Morgan, A.V., and Morgan, A., 1987. Paleoentomology - toward the next decade. (In Press; Episodes). (Summary article for Special Session 17 at the INQUA Congress).

Most of my research time has been spent with Jerry Pilny in trying to re-organise the modern insects at Waterloo, especially with the growing recognition that there are many rare specimens in the collection. Our modern arctic collections might seem to be far removed from the Pleistocene, (but, as I point out to fellow geologists at Waterloo, we are living in the Quaternary)! These collections are essential to an understanding of species assemblages and for reference purposes since they contain many beetles which were living in the lower Great Lakes region in latest Wisconsin time.

Now on to a brief summary of INQUA affairs. We have received well over 1,000 abstracts for the Congress, of which about 35% will be presented as posters. Sessions are for the most part, well on track. Special Session 4 (Early prehistory of Africa) has been removed and substituted by an additional session from IGCP 158 (Paleohydrological changes in the temperate zone during the last 15,000 years). There will also be a session on Lake Biwa (supplementary to Symposium D, on Long Continental Records). The Programme Committee has sorted the bulk of submissions and is thrashing out the final details of what goes where. By the time your readers get this Glaciogram they should also have received their timeslot designations for abstracts submitted for INQUA '87.

SOME IMPORTANT REMINDERS!

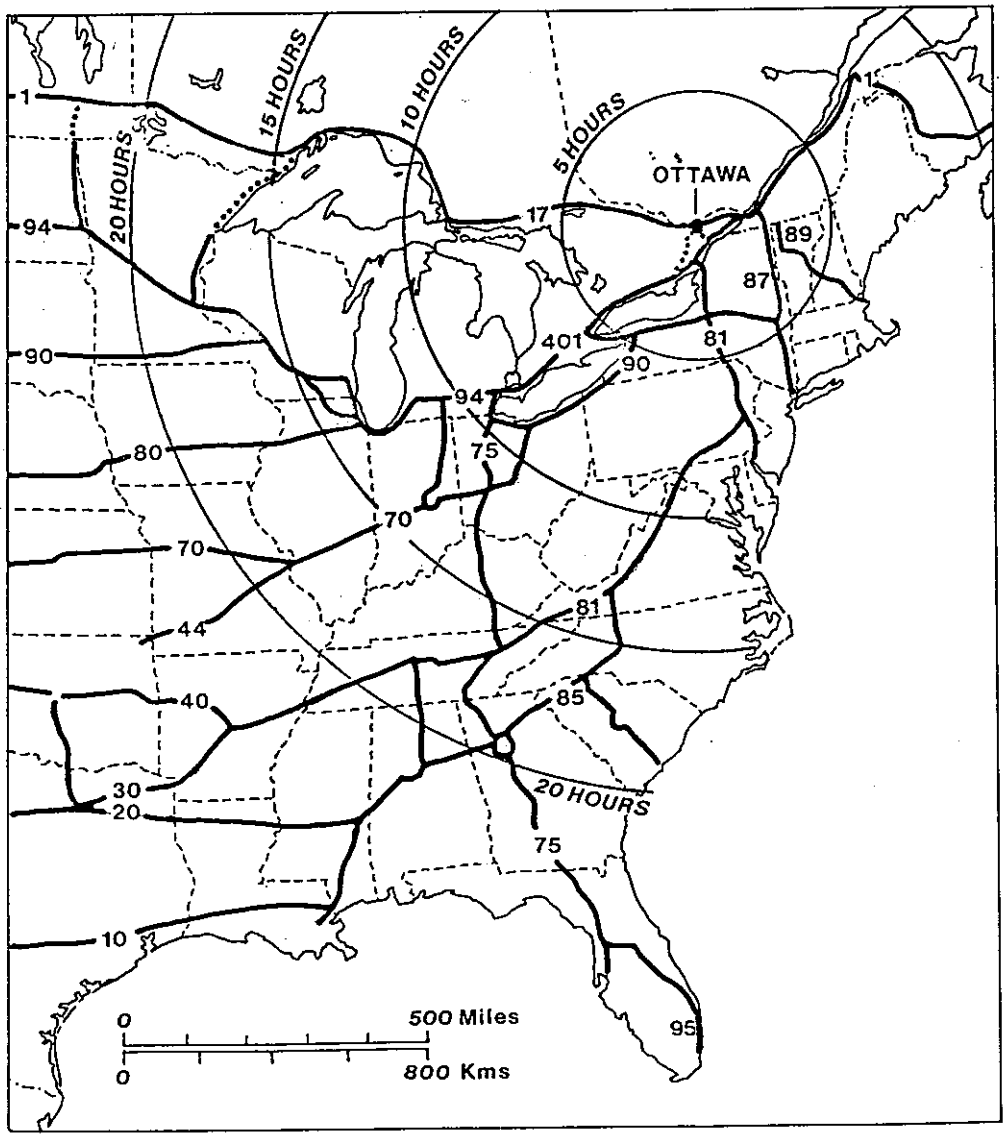
Please make sure that you send in requests for registration as soon as possible. Unfortunately this Glaciogram will arrive too late for you to catch the 30 April advance registration deadline unless you have already submitted it. However, the Committee for the XII Congress would appreciate all early submissions to help alleviate an onsite crush at the Congress Centre on July 31, and the first few days of August.

Please encourage all graduate students, (and senior undergraduates) to attend the Congress. I have just spent the best part of a week sending letters to chairmen of Earth Science / Geology departments across North America requesting that they draw the attention of Quaternary students to the Ottawa Congress. A map of approximate driving times and routes to Ottawa is appended.

Alan Morgan (continued)

Finally, if anyone has any concerns, please contact me at: The Quaternary Sciences Institute, Department of Earth Sciences, University of Waterloo, WATERLOO, Ontario N2L 3G1; or at (519) 884-6112 (my home 'phone number).

I look forward to meeting many of you at the XII INQUA Congress in the Conference Centre in Ottawa this July and August.



Ernie Muller - Geology, Syracuse University

Don Pair and I have spent every spare minute of the Spring Term on preparation of a geologic guidebook for the Eastern Section of the Seaway Trail. This has been more of an educational experience than expected for both of us. Prime lesson we have learned is not to prepare on IBM-PC a manuscript to be produced by a printer that listens only to the Mackintosh. The manuscript is finished and hopefully will be published this summer by Seaway Trails Inc.

Having compromised so long for popular (the French word "vulgar" doesn't convey quite the right meaning in English either) it will be a relief now to be able to get back onto projects that had to be placed on the back burner.

The summer ahead promises in June a family wedding (daughter, Katherine) and a 10-day prospecting jaunt with Parker Calkin in south central Alaska; in July a couple of days teaching a SUNY CES&F field course in Allegheny State Park and a week with Don Cadwell's Niagara Sheet field review chautauqua in western New York. The first half of August is reserved for INQUA.

Gerald W. Olson - Agronomy, SUC Agriculture and Life Sciences, Cornell U.

COMPUTER APPLICATIONS OF SOIL MAPS

G. W. Olson

The objective of this study is to investigate (1) the variability of soil properties between and within other soil related land units; and (2) the reliability of land use mapping units to predict soil properties and behavior. In addition, the study is illustrating the use of manual and computer-assisted techniques for overlaying and spatially-referencing land use and soil maps for understanding the relationships between the soil use and the soil forming factors.

The soil and land use data base is being developed using the Tompkins County Soil Survey report. A 10 x 100 grid (1000-0.5 ha sample units) is used to extract soil and land use map unit data. Two non-parametric statistical methods are being used to analyze differences in soil properties by land use (contingency tables and Mann-Whitney).

Results to date indicate large variation in the expected vs. observed spatial distribution of selected land use/land cover types by soil mapping unit. In addition, the Mann-Whitney tests show that limiting soil properties are significantly different among various land uses. Use of computer-based geographic information systems for automatic gridding, geo-referencing, and interaction accessing of soil data in digital space is being explored.

Gerald W. Olson (continued)

GERRY OLSON RETURNS FROM SABBATIC LEAVE

This note briefly describes six months of sabbatic work of G.W. Olson in the last half of 1986, consisting chiefly of five weeks of consulting in India and teaching a course in soil survey interpretations at the Ohio State University in the Autumn Quarter.

Consulting in India consisted of advising the All India Soil and Land Use Survey in remote sensing and soil survey interpretations for the Food and Agriculture Organization of the United Nations. In New Delhi, computer facilities had been acquired to process LANDSAT images; unfortunately the equipment was largely non-functional due to many factors, including equipment purchase on world-wide low bidding, electrical power surges and cut-offs, inadequate maintenance and servicing, etc, etc. Military restrictions on use of air photos in India instigated attempts to do soil mapping on LANDSAT images, largely unsuccessful. Considerable discussions were held about soil survey interpretations and geographic information systems to improve use of soils maps in India. Currently only "catchments" (watersheds) are surveyed to help reduce sedimentation in reservoirs. Only about 50 mimeographed copies of reports are reproduced, so that the soil information is essentially unavailable to potential users.

A four day trip of 1,000 kilometers in the Rajasthan Desert west of Delhi enabled field-checking of LANDSAT images. Desertification is rapidly increasing with vegetation destroyed by sheep, goats, camels, cattle, and humans. Sand dunes drift across the roads. After a year in India in 1958, this trip confirmed few changes in India in the period 1958-1986 except for: huge expansion in populations and urban centers, accelerated environmental degradations, disappearance of coins, more tractors and irrigation, fewer Americans, and more political and social unrest. Locally manufactured car models are the same in 1986 as in 1958.

A new special course (Agronomy 694) was taught at the Ohio State University about the opportunities afforded to soil science through innovative soil survey interpretations. In addition to traditional approaches of uses of soils data and groupings of soil properties for various comprehensive and specific plans, this course concentrated also on development of perspectives and priorities of soils for long-range planning in the future. Questions of ethics and morality in soil science, for example, are vital to consider to reduce excessive fertilizer costs and groundwater pollution. Each student completed an extensive report on a topic of special interest. Those special reports are truly beautiful and illustrate the scope and content of the course. They are on file in the Kottman Hall Learning Resources Center. Some of these examples of the scope of the course and their respective authors include:

C.L. Burras, Calculating Erosion Rates Using Soil Map Unit Information. 25 pages.

D.T. Cooper, Using Soil Survey Information in the Interpretation and Management of Civil War Battlefields and Historic Sites. 61 pages.

J.C. Gerken. LESA-A System For Land Use Decisions. 29 pages.

Gerald W. Olson (continued)

W.R. Guertal. Relating Soil Wetness to Soil Color. 57 pages.

L.J. Olivieri. Evaluation for Town and Country Planning of the Soils From an Area at the South of Mayaguez, Puerto Rico. 36 pages.

M.A. Scarpitti, et al. Soil Potential Ratings For Home Sewage Treatment and Disposal. 26 pages.

J.A. Wagner. Utilizing the Soil Survey to Locate a Sanitary Landfill in Licking County. 25 pages.

D.D. Waters. Annual Soil Loss of a Small Watershed in Clark County, Ohio. 17 pages.

R.L. Winland. Use of Soil Survey Information and Technical Grouping of Soils in Planning Vegetation for Wildlife Habitat on Surface Mined Lands in Ohio. 25 pages.

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John P. Szabo - Geology, Univ. Akron

Work continues on pre-Woodfordian tills of the Allegheny Plateau. M.S. candidate, Rick Volpi, has determined that 60% of the variance of clay mineralogy in tills in Columbiana County, Ohio, comes from variance in the clay mineralogy of bedrock. Sandstone-shale ratios of the 1-2 mm fraction increases with decreasing age suggesting that shales in low areas were veneered by older drift whereas sandstones of bedrock highs continued to be a source of material during successive glaciations.

Farther west on the plateau, I am contiuing work on a model to account for lithologic variations and changes in till along the Allegheny escarpment. Work is being earned out on samples supplied by the Ohio Geologic Survey and Stan Totten. Data are relatively consistant east of the center line of the Scioto lobe as ice moved from carbonate rocks onto a clastic substrate. West of the center line the system breaks down, marker beds are lacking, and the stratigraphy is not as distinct. Fortunately, work by Pleistocene geologists at the Survey are filling some gaps in the counties around Sandusky, Ohio.

New projects consist of attempting to apply the lithofacies code to the Ashtabula Till in Lake and Ashtabula Counties, Ohio. M.S. candidate, Pierre Bruno, has found applying the code much easier than trying to interpret what it means in terms of environment of

The Ithaca JOURNAL

Saturday
December 6, 1986

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Today: **Sunny**
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Low: **20**

Gerald W. Olson

Worker killed as ditch collapses

By JOHN YAUKEY
AND HELENA TREDWAY
Journal Staff

It took almost nine hours to find and remove the body of a man buried by a 40-foot wall of sliding mud and heavy clay that collapsed around him as he worked in a deep pipe trench southeast of Ithaca Friday afternoon.

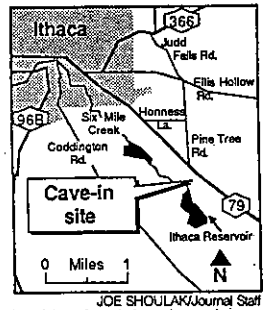
The body of the unidentified man was recovered about 11 p.m. by rescue workers who had worked since about 2:30 p.m. at the scene, behind the Commonland Community about two miles east of Ithaca on Route 79.

The body of the man, whose identity was being withheld pending notification of family, was taken to Tompkins Community Hospital.

The man was buried under several feet of thick mud and dirt boulders as construction workers from Central New York Hauling and Erecting Co., Inc., of Auburn, were digging along a gully about 45 feet deep and about 30 feet wide. The north embankment, which had been shaved by a bulldozer, fell in.

Four workers immediately began to dig for the buried man, but one of them felt small clods falling from the hollowed-out wall and noticed a crack forming in a 30-foot-high wedge of clay above them.

Ithaca Fire Chief Edward Olmstead ordered them out of the ditch when it became apparent that another cave-in might occur.



JOE SHOULAK/Journal Staff

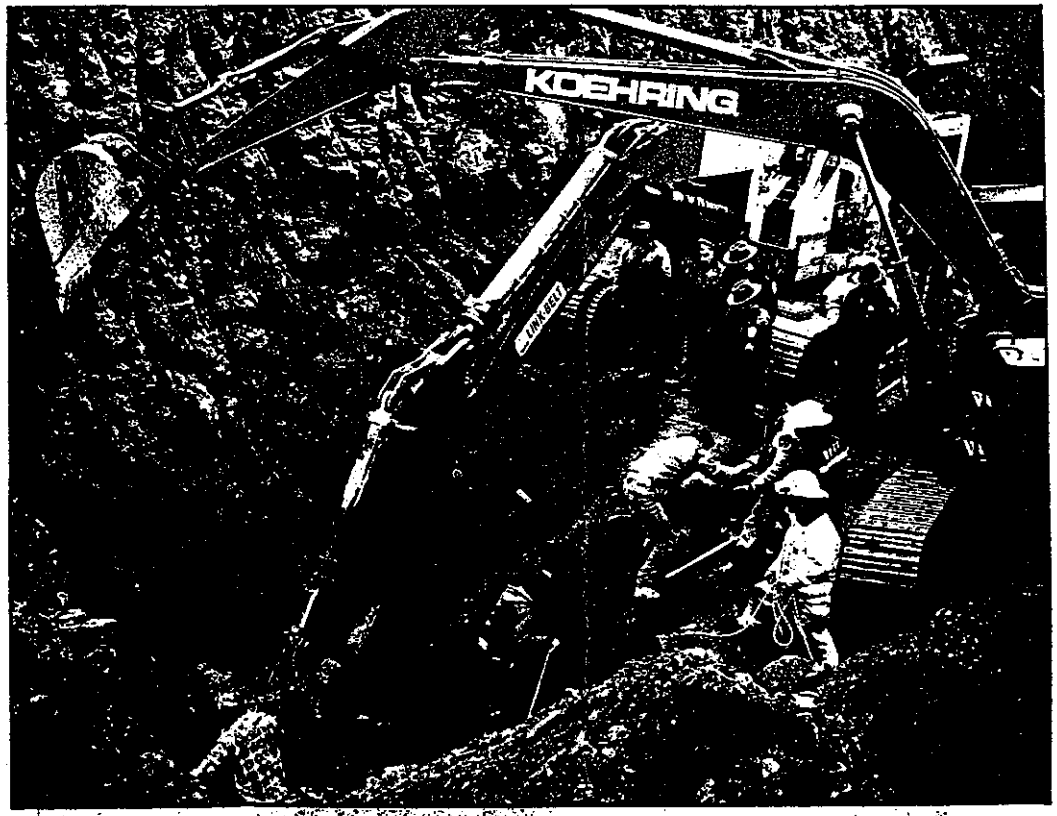
The brother of the buried man, who was also working in the trench, jumped in with a shovel, ignoring orders to evacuate the ditch.

Visibly shaken, the victim's brother was escorted out of the construction area by co-workers. Minutes later a section of the embankment filled the pit that workers had dug.

At that point all excavation was halted while workers called the Cargill Inc. salt mine, Triangle Steel, and McGuire and Bennett Construction to bring additional equipment to help shore up the unstable wall so the search could resume.

"It's just too dangerous to get down there and dig," Olmstead said after rescue workers had been digging for two hours. "It's presumed that the man is already dead so we don't want to risk any more men."

The soil in the area of the acci-



ANGIE GOTTSCHALK/Journal Staff

TRAPPED WORKER: *Rescuers use a backhoe in an attempt to locate collapsed Friday afternoon behind Commonland Community near the Ithaca Reservoir, south of Route 79.*

2A Weather/Continued Stories

Worker

(Continued from Page 1A)

dent is a clay mixture, making an unstable base that Ithaca Fire Lt. Raymond Wheaton called "funny stuff."

"You can't predict what's going to happen with it," he said.

At about 5 p.m. workers began stabilizing the wall of clay and soil using large pieces of timber and steel mesh. Rescuers started digging again by hand about four hours later.

Floodlights were provided by the Cayuga Heights Fire Department, and over 70 people eventually joined in the rescue effort. Cornell University Professor Harry Stewart, a civil environmental engineer, also assisted at the scene.

No heavy machinery could be used because of the possibility of disturbing the unstable clay wall.

"That's an inherent danger, let's face it," Wheaton said. The rescue attempt posed more dangers than many fires, he said, because of the unknown factors involved.

The construction company, a subsidiary of Schooley Enterprises Inc. from Auburn, had been hired by the City of Ithaca to relocate the main water supply from the city reservoir, about a half mile south of Route 79, City Public Works Superintendent John A. Dougherty said.

John P. Szabo (continued)

deposition. Ashtabula Till seems to have had the same source area as the Kent Till and/or Keefus Till. Some variation is lithology exists amoung different lithofacies.

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Michael Wilson - Geology, SUNY Fredonia

During the past year Tom Jordan completed his M.S. Thesis, a gravity, well and outcrop study of buried, escarpment-face ravines south of Fredonia. Tom presents evidence supportive of several episodes of interglacial ravine cutting and filling in the Alleghany Escarpment face. There is evidence that Cassadaga Trough extends under Cassadaga Lakes and the Fredonia Reservoir. However, questions regarding Cassadaga Trough's exact shape and depth, as well as the continuity of the northern extent of the Jamestown Aquifer remain unanswered.

Much of my time continues to be absorbed in thesis supervision:
Todd France is studying the juncture of the Alleghany and Conewango valleys.
Randy Woodbury's thesis concerns eastern Great Lakes rebound.
Mark Schumacher is investigating a small waste site in glacial deposits near Panama, NY.
Not so glacially oriented is Dave Kamakaris's thesis, dealing with regional climate factors and their impact on watershed modeling.

One of the past year's more interesting tasks has been my involvement with the West Valley Coalition. The Coalition's position is that the many fine geomorphic studies of the site serve to demonstrate the need for an Environmental Impact Statement before class B/C nuclear waste is buried. The site needs additional investigation and erosion control (if erosion is controllable).

This summer I will be examining glacial stratigraphy in the buried valley fills of the Alleghany Escarpment and Lake Erie Plain. I plan to integrate this work with my previous studies and make a presentation at INQUA-Ottawa.

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Donald Pair - Geology, Syracuse University

Don Pair reports that he (with Ernie Muller) have just finished a field guide for the eastern margin of Lake Ontario. This will be part of the Seaway Trail Guide. This summer he will be mapping surficial deposits south and east of Watertown as part of the State Geological Survey mapping program and his doctoral work. The research will be focused on delineation of patterns of regional deglaciation and proglacial lake/Champlain Sea changes. Paleomagnetism will be an important part of his correlation program.

CONTRIBUTORS