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THE GEOLOGICAL SOCIETY OF AMERICA

GEOMORPHOLOGY NEWSLETTER # 2

William D. Thornbury, Editor

January, 1958

Officers and Panel Members of Geomorphology Group for 1958

Chairman	George W. White, University of Illinois
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Panel Member	A. D. Howard, Stanford University
Panel Member	S. S. Judson, Princeton University
Panel Member	A. N. Strahler, Columbia University
Panel Member	W. D. Thornbury, Indiana University

5th INQUA CONGRESS

The 5th Congress of the International Quaternary Association (INQUA) was held in Madrid and Barcelona, September 2-16, 1957. The scientific meetings were preceded by two 10-day excursions in the Pyrenees for a study of the glacial, geomorphic, and archeologic features, and were interrupted by several short excursions in the Madrid area and by a week-long excursion to observe the marine terraces and other features along the east coast of Spain and on the island of Mallorca.

The scientific meetings in Madrid included sessions on glacial geology, paleontology, limnology, climatic pedology, geomorphology, submarine geology, paleoclimatology, paleoanthropology, regional Quaternary geology, and radiocarbon dating. Concurrently there were meetings of the four commissions of the Association, (1) Study of shorelines, (2) Lexicon of Quaternary geology, (3) Nomenclature and correlation of the Pleistocene, (4) Recent tectonics, and (5) Pleistocene map of western Europe.

The congress was attended by about 300 geologists, geographers, archeologists, biologists, and other scientists from almost every country in Europe and North America and from other countries as well. Almost 200 papers were scheduled for presentation in French, Spanish, English, German, Italian, and Russian. The following Americans attended the congress: K. H. Clisby, E. S. Deevey, J. A. Elson, C. Emiliani, R. F. Flint, J. B. Griffin, B. Howe, S. S. Judson, R. N. Keller, A. D. Krieger, D. B. Krinsley, L. B. Leopold, J. P. Morgan, E. L. Pruitt, H. G. Richards, G. M. Richmond, H. T. U. Smith, C. E. Stearns, J. Stewart, H. Suess, and H. E. Wright.

Publications of the congress thus far include the guidebooks for the several excursions (in French) and a book of abstracts of the papers offered for presentation. The Actes of the congress will be printed in time. Professor Luis Sole Sabaris of the University of Barcelona is secretary. In its closing session the congress voted to accept the invitation of Poland for the 1961 meeting.

IGY Project No. 4.1, NSF Grant No. Y/4.1/193, Robert P. Sharp, Principal Investigator, is a project designed to study the dynamics of the Blue Glacier in the Olympic Mountains of Washington. Its personnel during the summer of 1957 consisted of:

Dr. C. R. Allen	Asst. Prof. of Geology, California Institute of Technology
Carl S. Benson	Graduate student, California Institute of Technology
Dr. M. F. Meier	Project Hydrologist, U. S. Geological Survey
Dr. W. B. Ray	Asst. Prof. of Geology, California Institute of Technology
Dr. J. C. Savage	Lecturer in Geophysics, Massachusetts Institute of Technology
R. L. Shreve	Instructor in Geology, California Institute of Technology
Dr. R. P. Sharp	Prof. of Geology, California Institute of Technology

Some of the major objectives of the project are: (1) Determination of the depth, slope and configuration of the subglacial rock floor, (2) Detailed measurements of thickness of ice in various parts of glacier, (3) Measurements of ice velocities, (4) Study of ice fabrics and the relationship of the fabric to foliation patterns of the glacier, (5) Search for relationships between ice type and fabric type, (6) Study of megascopic structures on the surface of the glacier, such as foliation, crevasses, faults, and drag folds, and (7) Stratigraphic studies of firn.

The Committee on the Pleistocene of the American Commission on Stratigraphic Nomenclature has been in existence for three years. The membership of the Committee is as follows: John E. Armstrong, Ronald K. DeFord, Harold N. Fish, Richard Foster Flint, Richard P. Goldthwait, John F. Lance, William C. Putnam, Gerald M. Richmond, and John C. Frye, Chairman. Products to date from this committee have been Note 19 of the Stratigraphic Commission, which deals with the general problem of stratigraphic status of buried soils. This is primarily a problem in Pleistocene stratigraphy, but with very strong geomorphologic overtones. At the present time, the Committee is at work on the draft of a report covering the general application of rules of

stratigraphic nomenclature and classification to the unique problems encountered in Pleistocene geology. There are certain problems of application of uniform rules in the Pleistocene that are not evident in the older rocks, largely because of the extensive use of landforms or geomorphology by the Pleistocene geologist in the identification and correlation of deposits. This is, of course, particularly important with late Pleistocene moraines and with alluvial terraces.

A Final Report, dated December 1, 1957, summarizes the research findings of a 7-year project supported by the Geography Branch of the Office of Naval Research and conducted in the Geology Department of Columbia University under the direction of Professor A. N. Strahler. Under this project a total of twenty technical reports have been written by the eleven investigators who, at one time or another, were engaged in the research. The final report presents a summary statement of the work as a whole, a list of the technical reports and authors, and an abstract of each report. A limited number of copies of the final report are on hand and will be sent by A. N. Strahler, Department of Geology, Columbia University, New York 27, New York, to geomorphologists particularly interested in the development of quantitative geomorphic methods and their applications to watershed hydrology. Reprint copies of certain of the technical reports are also available on request.

The GLOSSARY OF GEOLOGY AND RELATED SCIENCES, which was published in June 1957 by the American Geological Institute, is having a very good sale. Plans are already underway for revision of the book. A Glossary Review Committee, headed by Dr. J. Marvin Weller has been set up to consider all criticisms and suggestions for improvement of the glossary. Any geomorphologists noting errors or omissions in geomorphic terminology should report them to Dr. J. Hoover Mackin, who remains the geomorphology representative on the Review Committee.

The 9th Annual Field Conference of the "Midwestern Friends of the Pleistocene" will be conducted May 17-18 in east-central North Dakota under the sponsorship of the North Dakota Geological Survey. Members will assemble in Grand Forks on May 16 and the field trip convoy will leave from the University of North Dakota campus at 8:00 A. M. on May 17.

The two day trip will cover about 560 miles. The conference will emphasize the study of the beaches of Lake Agassiz, the distribution of till sheets, and associated land forms.

Transportation for the field trip will be provided by private cars and charter bus, if at least 29 persons indicate their preference for bus travel. Bus fare for the two day trip will not exceed \$10.

Preliminary announcements of the trip will be mailed in February to the regular mailing list. Others interested in the trip may be placed on the mailing list by notifying Dr. Wilson M. Laird, State Geologist, University Station, Grand Forks, North Dakota.

"The Eastern Friends of the Pleistocene" plan to meet May 24-25 at Harrisonburg, Virginia, in the Shenandoah Valley. They will visit an area in the Shenandoah Mountains to see the deposits and erosive effects of a cloudburst flood that occurred in June, 1949, including debris avalanches, alluvial fans, terraced bottomlands and other features. On the second day a visit is planned to the talus-covered slopes of the Blue Ridge Mountains. The trip will be led by John T. Hack of the U. S. Geological Survey, Washington 25, D. C., and John C. Goodlett, Harvard University, Petersham, Massachusetts.

CURRENT GEOMORPHIC WORK OF THE U. S. ARMY CORPS
OF ENGINEERS
WATERWAYS EXPERIMENT STATION, VICKSBURG, MISSISSIPPI

Charles R. Kolb & Jack R. Van Lopik

The Geology Branch and Area Evaluation Sections of the U. S. Army Engineer Waterways Experiment Station, Vicksburg, Mississippi, have been actively engaged in terrain mapping and terrain analog studies since 1954. Work has centered on a system for mapping and comparing the terrain of the Research and Development Test Station at Yuma, Arizona, with that of various world desert areas. Projects of a similar nature, but comparing Fort Churchill, Canada, and Fort Greely, Alaska, with world arctic regions and the Panama Canal Zone with world tropic areas, have been recently contracted to the Military Geology Branch, USGS, and Department of Geography, Syracuse University, respectively. A conference was held on 6 December at Vicksburg in order to bring consultants and interested agencies up-to-date on these and related projects and to obtain pertinent comments and suggestions.

Most landscape analysis to date, at small scales, has been qualitative and subjective; depending almost entirely on the skill of the analyst, not only as an analyst, but also as a master of descriptive prose. Quantitative analyses, on the other hand, have been confined to small, preferably homogeneous, regions. The WES Geology Branch has tried to develop a semi-quantitative scheme that provides for an upward or downward scaling of the envelope of mapping dependent on the scale, contour interval, and basic data available. Thus, when the implications of the system are understood, a small area mapped at a particular scale can be compared with an areally similar tract or with a vast region mapped at a much smaller scale. Consequently, the suitability of a particular area for testing world-wide desert terrain conditions can be readily established. At the present time the system has been applied to the Yuma area and the deserts of the Near East, Northeast Africa, and Northwest Africa by the WES Geology Branch. On a contract basis, the Geology Department of the University of Southern California and the Geography Department of the Ohio

State University are now engaged in applying this scheme to the deserts of Mexico and Russia, respectively. Although presently tentative and far from a geomorphic panacea, it is felt that the method can be developed into an objectively-oriented analytic tool for mapping and adequately comparing terrain of areas exhibiting great differences in size, homogeneity, and available data.

COMMISSION OF APPLIED GEOMORPHOLOGY

Some of you may be interested in the following slightly edited translation of a circular regarding the creation of a Commission of Applied Geomorphology.

Circular No. 1

International Geographical Union Presidents:

Professeur J. P. Bakker,
Univeriteit van Amsterdam,
Physisch-geografisch Lab.
Mauritskade 63, Amsterdam,
Pays-Bas

Commission of Applied Geomorphology

Professeur J. Tricart
(Chargé du Secrétariat)
Institut de Géographie
Université de Strasbourg
France

The International Geographic Congress at Rio De Janeiro adopted the proposal of M. Verstappen to create a Commission of Applied Geomorphology. This commission is composed of the following:

Presidents

J. P. Bakker and J. Tricart

Members

Messers Klimaszewski, Nielsen and
Verstappen

Although the commission has not yet been definitely set up, because of certain administrative difficulties following the Rio de Janeiro Congress, it is hoped that we can begin our work at once.

At the moment when programs of economic development are multiplying, both under the influence of governments and of international agencies, it is deemed indispensable that geomorphology participate more and more

actively in research that should permit a better utilization of the world's natural resources. It is for this reason that a commission on applied geomorphology was created.

Geomorphology is already playing an important role in various areas such as:

Mining research, relating to detritus formations, (alluvial, littoral, etc.) and alteration deposits; paleogeographical reconstructions which permit the replacing of empirical prospecting by systematic methods giving a much greater yield; determination of the natural dynamics of sites to be exploited and utilized; establishment of residential areas or factories; programs of agricultural development; hydroelectric installations; channeling of waterways; the protection of coastal installations and port facilities; collaboration with a certain number of related disciplines, notably pedological and geological cartography.

It seems that the moment has come to compare the different experiments already accomplished in very diverse fields and in countries which are often very dissimilar. Indeed, in many countries this research is carried out by technicians who have developed their own methods and whose work often remains unpublished, or is published only in journals of narrow circulation.

Besides, geomorphologists are often too modest, and do not sufficiently realize the possibilities of the practical scope of their science. A very great obstacle which today blocks the progress of applied geomorphology is the absence of liaison between specialists, and the scarcity of the information which is widely dispersed in this special field. Another difficulty resides also in the very unequal development of applied geomorphology in the different parts of the world. Research being undertaken at the present time is rarely systematic, and often assumes an empirical character which is not integrated with any uniform plan. This impedes progress in methodology.

Our program includes the following objectives:

1) To make a permanent census of the different research projects in applied geomorphology already completed or in progress throughout the world. We hope to be able to present the next International Congress with a list of researchers in applied geomorphology, with their addresses, their fields, and the principal research they are engaged in.

2) To compare the results obtained and the methods utilized, so as to facilitate methodological discussions and to effect an exchange of information which will permit us to improve our work and to render it more and more capable of satisfying the needs of particular fields which call upon us.

3) To make known applied geomorphology and the services it can render to the different national and international agencies engaged in working out rational utilization of space. That will permit an increase in the outlets for applied geomorphology and in the resources of the researchers engaged in it, and at the same time it will render great service to humanity in general. The first difficulty that we encounter is to reach all those persons who are interested in applied geomorphology, whether they be geographers or researchers sprung from some other discipline, but who, by virtue of their activity, have come to be interested in specific geomorphological problems.

The present circular, though widely distributed, will certainly not reach all those it should. For this reason we urge those who receive it to send us the names and addresses of colleagues they know, and whom our commission might interest. If we already have their address, the secretary of the commission will take steps to eliminate duplication. On the other hand, our mailing list will be increased, and will permit us better to prepare the work we have undertaken. Permanent collaboration with the totality of geographers interested in applied geomorphology will alone permit us to carry our job to a successful conclusion.

NEWS ITEMS

J. Harlen Bretz reports completion for the Department of Conservation, State of Washington, of his project on the Channeled Scablands. He has three other projects in progress; (1) Pleistocene history of Bermuda (in cooperation with Heinz Lowenstam and R. V. Ruhe), (2) Geomorphic history of the Ozark dome and, (3) Caves of Illinois (in cooperation with Stanley Harris, Jr.).

Jim Zumberge will be in charge of a five-man party devoting its time to the study of the Ross ice shelf structural features from October 1957 to March of 1958. Two graduate students from the University of Michigan, John Reid and Edwin Robinson, have accompanied Jim to Antarctica.

H. W. Menard of Scripps Institute of Oceanography is continuing his Pacific-wide study of sea floor topographic forms, as an aide to understanding the structural development of this part of the earth's surface.

K. O. Emery is continuing his study of the sea floor topography of the continental shelf. His most recent work deals with a study of the submerged terraces that make up the shelf.

The Coastal Studies Institute of Louisiana State University will have three field projects during the coming summer: (1) Quaternary terraces in South Carolina, Philip B. Larimore in charge, (2) Relation of Indian settlements to marsh topography, Roger T. Saucier in charge, and (3) Beach rock and relation of beach forms to mineral composition in Caribbean Islands,

R. J. Russell in charge. Professors Morgan and McIntire will complete a report on the delta of the Ganges-Brahmaputra.

Richard F. Hadley, U. S. Geological Survey, Denver, is presently studying the controlling factors that determine channel characteristics in the Tusayan Washes of northeastern Arizona. Channel width, depth and slope at several reaches will be compared with the differences in grain size and sorting characteristics of the bank and bed material.

William C. Putnam has completed a seven-year tour as chairman of the Department of Geology on the Los Angeles campus of the University of California, and having caught his breath is trying to bring to completion some long-deferred projects and start a few new ones. He has finished work on the origin of Rock Creek and Owens River Gorges in east-central California, a problem concerned with the glacial, volcanic, and tectonic history of the region as well as with the drainage evolution of this part of the eastern slope of the Sierra Nevada.

As part of a long-term investigation of the connected series of lakes and overflow channels in the desert east of the Sierra Nevada, he has completed field work on an area at Little Lake, California where at least three periods of overflow of Owens Lake alternated with outpourings of basaltic lava flows.

He plans to initiate as a new project a study of the excellent pediment exposed through erosion by the Mojave River in the vicinity of Victorville, California. This particular feature was described ten years ago by W. M. Davis, but a detailed investigation had to await the availability of time, serial photographs, and a large scale topographic map, all of which are only recently at hand.

A continuing study, supported by the Geography Branch of the Office of Naval Research, directed toward the development of an essentially genetic classification of coastal landforms of the world, together with their related climates and vegetational associations, is nearing completion. The landform map, now being reproduced by the American Geographic Society, is the work of Dr. John T. McGill, the climatic map was prepared by Dr. H. P. Bailey, and the vegetational classification is the work of Dr. D. I. Axelrod.

Richard W. Lemke is studying the deposits and geomorphic history of glacial Lake Great Falls in the vicinity of Great Falls, Montana. The maximum areal extent of the lake is being mapped, successively lower shorelines are being studied, and altitudes of spillways that drained the lake are being accurately determined. Studies are also being conducted on the distribution and age of the drift sheets.

George Crowl will continue next summer his work for the Geological Survey of Canada on the glacial geology of Prince Edward Island.

Wakefield Dort, formerly Assistant Professor at Penn State University is now Associate Professor of Geology at the University of Kansas.

Lincoln Washburn, Troy Pewe, and Richard Goldthwait are spending several months in Antarctica on IGY problems.

A team of geologists and pedologists headed by Bob Ruhe has completed a project, the results of which are to be published as a Technical Bulletin of the U. S. Department of Agriculture entitled "Landscape Evolution and Soil Development in Southwestern Iowa". Ruhe is at present engaged in a similar project in an area in the vicinity of Las Cruces, New Mexico. One aspect of his present project will entail a study of the genesis of arroyos.

R. B. Daniels heads a field project in Iowa that is concerned with the evolution of gullies in areas of thick loess.

John P. Miller of Harvard has just completed a report that deals with hydraulic properties and bed sediment of high mountain streams in the Sangre de Cristo range in New Mexico. Next summer he hopes to gain information on weathering, sedimentation, and consolidation rates at Les Eyzies, Dordogne Valley, France. Graduate students of his are working on the following projects: (1) glaciation in the Mount Katahdin, Maine area, (2) cliff recession and shoreline processes at Highland Light, Cape Cod, Massachusetts, (3) flume study of the hydraulic requirements for the production of cross-bedding, and (4) Pleistocene geology of the Bishop, California area.

Stanley A. Schumm, U. S. Geological Survey, Denver, is currently investigating the mechanics of ephemeral stream degradation and aggradation at selected areas in South Dakota, Nebraska, Colorado and New Mexico.

D. R. Crandell, USGS, is continuing his mudflow studies in western Washington, especially in regard to the formation of lake basins by mudflow deposits (with D. R. Mullineaux). Last field season he completed mapping of an area southeast of Seattle which includes drifts of piedmont glaciers from the north, and valley glaciers from the Cascade Range to the southeast.

H. E. Malde, working in the Snake River Plain of Idaho, has found that preliminary measurements of the permanent magnetism of basalt flows show an apparent reversal of the earth's magnetic field during the early Pleistocene and late Pliocene. The reversal may correspond to that discovered in Japan, Iceland, France, and Russia in rocks of about the same age but not dated by fossils. In Idaho, fossiliferous sediments intercalated with

the lavas show that the reversal persisted through the Aftonian and possibly into the Kansan. Measurements now being made may give a further refinement in age and may possibly show when the reversal began:

C. B. Hunt, USGS, is completing studies of the characters, distribution, and stratigraphic relations of playa salts and alluvial fan deposits in Death Valley. He is also mapping the distribution of vegetation types with respect to these deposits.

George W. White of the University of Illinois has completed the field work in his study for the U. S. Geological Survey of the glacial deposits of northwestern Ohio (except for the new exposures expected to be provided in the summer of 1958 by the new northwest-southeast turnpike across northeastern Ohio). He hopes to complete the report on this work within the near future. His work continues on the constitution of tills in the Allegheny Plateau supported by a National Science Foundation grant. Among his associates have been Dr. V. C. Shepps, now of the Pennsylvania Geological Survey; Dr. John B. Droste, now of Indiana University; and Dr. R. F. Sitler, now of Kent State University. Preliminary reports of parts of the study have already appeared.

During 1957 five graduate students working with Mr. White at the University of Illinois have completed their work for the Ph. D:

Paul F. Karrow's thesis was on the Pleistocene geology of the Grondines, Quebec map area in the St. Lawrence Valley northwest of Trois Rivieres. The area includes the locality of the famous St. Thuribe landslides and includes several large tracts of "landslide basins". Doctor Karrow is now Pleistocene geologist on the staff of the Ontario Department of Mines.

Ward S. Mott's thesis was on the geology and ground-water resources of the Carlsbad, New Mexico region. The facies control of the surface morphology and of the ground-water resources was a major result of the study. Doctor Motts is now stationed at Roswell, New Mexico with the U. S. Geological Survey (Ground-Water).

John D. Winslow's thesis was on the geology and ground-water resources of Portage County, Ohio. Paleogeomorphology of the Mississippian surface, of the Pottsville sandstones, and of the pre-Pleistocene surface (buried valleys) exert important controls of the water resources. Dr. Winslow continues his work in northeastern Ohio with the U. S. Geological Survey (Ground-Water), but is to join the Indiana State Geological Survey in March.

Jack Baker's thesis was on the geology and ground-water resources of Geauga County, Ohio. His studies showed the buried pre-Pleistocene valley systems and the sequence of Wisconsin ice advances which

crossed or came into the area. Doctor Baker is now assistant professor of geology at Oklahoma State University.

Robert F. Sitler's thesis was on the glacial deposits of the New Castle Pennsylvania region, including the marginal area of Wisconsin drift and the Illinoian outer drift. His studies show the areal distribution of the Cary till, and lead to the conclusion that the Illinoian till was deposited by two different advances. His petrographic studies were an important part of the investigation. Doctor Sitler is now assistant professor of geology at Kent State University, Kent, Ohio.

Other students now working with Mr. White are: John A. Brophy, working on weathering studies of Illinoian drift with the support of the Illinois Geological Survey; Earl Christiansen, working on a study of the Swift Current area in southwestern Saskatchewan with the support of the Saskatchewan Mineral Resources Survey; John S. Scott of Toronto, Canada, beginning work in Pleistocene geology; and Cotter Tharin, associated with the National Science Foundation project on till constitution, who is working on textural variations within single drift sheets and within single morainic systems.

The State of Connecticut has doubled the size of the State Geological Survey - U. S. G. S. cooperative mapping program. Work will yield both bedrock and surficial maps of the State in about 12 years, compiled from separate quadrangle maps published as completed at 1:24,000. Field personnel assigned include Howard E. Simpson, Mrs. Penelope Hanchaw, George Snyder, Richard Goldsmith, Robert Schnabel, C. E. Fritts, Miss Roberta Dixon; they will be joined this season by Roger B. Colton.

John H. Moss has been working with Paul Martin of the University of Arizona Geochronologic Laboratory on the origin of "The Marsh", reportedly the largest upland swamp in Pennsylvania. He is also doing laboratory work on the tills from New York state in the area between the Finger Lakes and the Catskills, trying to determine whether Binghamton drift has an identity distinct from that of the Valley Heads and Olean drifts.

V. C. Shepps, now with the Pennsylvania Geological Survey, is working on the revision of the State geologic map of Pennsylvania soon to go to the printer. He has been working on checking the glacial border at different places in the state.

John Carey, in mapping the soils of Berks County north of Reading for the Soil Conservation Service, has uncovered some hitherto unreported drift deposits beyond the Illinoian glacial border.

David G. Moore as marine geologist in the Sea Floor Studies Section of the Navy Electronics Laboratory is studying the stability and evolution

of submarine sedimentary slopes. Work is being carried on with an echo sounder and coring tubes. Soil mechanic techniques are being applied to the study of the sediments.

Miss Marie Tharp and Bruce C. Heezen have recently completed a physiographic diagram of the North Atlantic from 17°N to 50°N Latitude. This diagram will be published soon by the Geological Society of America in the Special Paper series. The physiographic diagram of the South Atlantic at a scale of about 1:12 mil. is nearly completed. Both these diagrams as well as preliminary studies made in other oceans by Miss Tharp, Maurice Ewing and Heezen, reveal the existence of a persistent linear topographic depression which cleaves the axis of the mid-ocean ridges of the world. This feature is considered to be a matter of major importance to the geomorphology and structure of the oceans.

The Research Vessel VEMA is currently making a cruise to the South Atlantic, Indian Ocean and Red Sea in an effort to shed more light on the mid-ocean rift in the Indian Ocean, where little topographic data is available at present.

Roger Colton and Richard Lemke have compiled a map of the glacial geology of North Dakota (scale 1:500,000) from high altitude aerial photos, photo index sheets, Army Map Service 1:250,000 scale topo maps, and published and unpublished maps. This map was prepared for the forthcoming Glacial Map of the U. S. East of the Rockies. Colton has also compiled a map (scale 1:1,000,000) of the drift borders in Montana, east of the Rocky Mountains, North Dakota, and South Dakota.

R. D. Miller, USGS, is studying the geology of Pleistocene glacial and non-glacial deposits in the Omaha-Council Bluffs area, Nebraska-Iowa. A number of C₁₄ dates determined by the Washington Laboratory support the geologic ages of phases of loess and alluvial deposition as determined by stratigraphic methods.

R. D. Miller and Ernest Dobrovoly, USGS, have completed a report on the surficial geology in the vicinity of Anchorage, Alaska. Deposits related to the three glaciations were distinguished and mapped.

Arthur D. Howard of Stanford University is devoting his attention these days to problems of photogeology. He is particularly interested in criteria for the recognition of rock types. His report on the "Cenozoic History of Northeastern Montana and Northwestern North Dakota, with Emphasis on the Pleistocene" is in press with the U. S. Geological Survey. A short article on "Drainage evolution in northeastern Montana and northwestern North Dakota" should appear shortly in the Bulletin of the Geological Society of America.

Two recent Ph. D. theses done by W. C. Bradley and David Smith under the direction of Professor Howard have added to the knowledge of the San Francisco Peninsula. These studies, plus two studies by Charles Higgins of Davis College, University of California, and quadrangle mapping by the U. S. Geological Survey have increased greatly the understanding of the geomorphic evolution of the San Francisco Bay region. A comprehensive report on this area is planned.

Ernest H. Muller of Cornell University has been engaged in quadrangle mapping of glacial geology in western New York. Last summer was spent in Cattaraugus County on the edge of the Salamanca re-entrant. Next summer he will be in northern Cattaraugus County and southern Erie County working toward the contact area between drifts derived from the Lake Erie and Lake Ontario basins. Ernie calls to the attention of those interested in New York geology the existence of the New York State Science Newsletter, an annual summary of the geologic work in the state. Although geomorphology is not listed as such in the Newsletter, glacial geology is a major category.

G. M. Richmond, USGS, attended the 5th International Congress of INQUA in Spain, where he was elected chief of the United States delegation for purposes of the business meeting of the Congress at Barcelona. He was also named president of a new Commission of INQUA whose function is to compile Quaternary maps of major regions of the world. Conditions permitting, work will be started on parts of northern Africa as soon as Secretaries from each of the nations involved can be appointed.

David D. Smith reports that the Graduate Seminar in Glacial Geology at Dartmouth College has begun a long range, detailed mapping project on the surficial geology of the upper Connecticut River valley. Present members of the Seminar include: Richard H. Ragle, Lawrence D. Taylor, and Donald H. Zenger.

The second number of Vol. 1 (New Series) of the ZEITSCHRIFT FUR GEOMORPHOLOGIE appeared in October under the editorship of Hans Mortensen (Gottingen). The price is 42 DM per year, Gebruder Borntraeger, an der Rehwiese 14, Berlin-Nikolassee. The first two numbers contain 232 pages on excellent paper and with good illustrations. The policy is to publish journal-length articles in English, French, or German. The author obtains 100 free reprints and larger numbers may be obtained at moderate cost. Abstracts are in a language other than that of the article. The journal is anxious to obtain papers in English and will supply a translation of the abstract if the author desires. Address inquiries or submit contributions to Professor Hans Mortensen, F. E. Zeuner, Institute of Archology, London NW 1, or R. J. Russell, Graduate School, Louisiana State University, Baton Rouge, 3, Louisiana.

FROM THE EDITOR

I am sure that the editor speaks for the Geomorphology group when he expresses appreciation of the work that Herb Wright and his associates are doing on the German translations. We hope that they keep up the good work.

Apparently there was no strong feeling for including in the Newsletter a section in which a few good topographic maps and aerial photographs are described as a means of calling these to the attention of persons who might have use for them in the laboratory work in courses in geomorphology. At least no one sent in any list or description of maps or photos. For the time we shall hold this project in a state of suspended animation; if there seems to be no need for it, we shall let it die; if contributions are sent in we can include them in subsequent Newsletters.

With your cooperation, your editor will attempt to get out another Newsletter in late May or early June, despite the fact that he will not have available then the secretarial assistance that he now has. As of February 1, 1958, your editor's address will be, Department of Geology, Pomona College, Claremont, California. This address will hold good until about September 1, 1958. Special calls for material will not be sent out but if enough material is sent in by May 1, 1958, to justify issuing another Newsletter, one will come out. Please send in material at any time that you feel is worthy of being included in the Newsletter.