nesota, South Dakota, New Hampshire and Virginia. The largest groups worked in New Mexico, Montana and New Hampshire.

Five field parties, under the general supervision of Professor Kirk Bryan, carried on researches in New Mexico and Colorado, particular emphasis being given to the physiography. Professor Bryan spent the month of August visiting these field parties in New Mexico. In July he was at Fort Collins, Colo., investigating the geology of the archeological site now being excavated by F. H. H. Roberts, Jr., under the auspices of the Smithsonian Institution. In June he was in Minnesota studying the geological setting of the so-called "Minnesota Man" and also of a skeleton found at West Union, Minn., by Father Henry M. Retzek, A.M., '31.

Four field parties were in Montana. The study of the geology of the Highwood Mountains, which has been carried on as a Shaler Memorial Investigation under the supervision of Professor E. S. Larsen, Jr., was completed. William F. Jenks, working under the direction of Professor Russell Gibson, completed a two-year study of the geology of the Trout Creek area along the Montana-Idaho boundary.

Five field parties, under the supervision of Professor Marland Billings, '23, were at work in New Hampshire, giving special emphasis to the bed-rock geology.

Claude C. Albritton, Jr., A.M., '34, holder of the Woodworth fellowship, completed a detailed study of the Malone Mountains in Trans-Pecos Texas; Professor Billings visited him for two weeks. Lincoln R. Thiesmeyer, A.M., '33, Austin teaching fellow in geology, spent his second field season in northwestern Fauquier County, Va., and was visited by Professor Larsen for a week. Wallace de Laguna, 2 Grad., studied the ore deposits and general geology of an area at the southeastern end of the Wind River Range, Wyo.

The economic geologists were very busy. Professor L. C. Graton went first to Peru on consulting work, and then made a shorter visit to Braden, Chile. Professor D. H. McLaughlin returned from a half-year leave, in the course of which he visited many mining districts in Australia, Africa, Mexico and the United States.

Professor Charles Palache and Harry Berman, A.M., '35, made short trips to collect minerals at Amelia, Va., and the tale mines of Chester, Vt. The new x-ray laboratory for the study of the atomic structure of minerals was completed and in operation all summer.

Professor D. S. Whittlesey first went to Mexico, where he lectured, as a member of the faculty of the Seminar of the Committee on Cultural Relations with Latin America, on the "Geography of Mexico." He is now on a trip through Chile and Argentina, and will soon visit the west coast of Africa and the southwestern Hahara region. He is studying human geography. Harold S. Kemp, instructor in geography, spent the summer in the countries bordering on the Baltic and North Seas gathering material for a forthcoming book on the human geography of Europe.

Professors Daly, Raymond, Gibson and Larsen, although they did not do any extensive field work, were engaged in laboratory work and preparation of reports and books. Professor Mather served as director of the Summer School. Dr. L. Don Leet was at the seismograph station in Harvard, Mass., through the summer, writing a text-book on the principles of seismology and making a special study of dynamite blasts in the vicinity of Harvard.

## THE GEORGE F. BAKER FELLOWSHIPS AT CORNELL UNIVERSITY

As an outgrowth of the benefaction of the late George F. Baker to the department of chemistry at Cornell University, the creation of one or more Baker Research Fellowships, with tenure of a year or possibly longer, has been authorized by the Board of Trustees. According to Dr. Jacob Papish, head of the department, the holders of these new fellowships "shall be young men of the calibre of national research fellows, capable of carrying on independent investigations of high quality."

Dr. F. H. Spedding, formerly national research fellow and the winner of the Langmuir Prize in 1933, is the first appointee. His investigations are dealing with the correlation between the absorption spectra of solids and of solutions and their physical and chemical properties. Dr. Spedding received the degree of B.S. in chemistry from the University of Michigan in 1925, and the master's degree in 1926; his doctorate was obtained at the University of California, under Dr. G. N. Lewis, in 1929. During 1930–32 he held a national research fellowship, and in 1933 he was awarded the Langmuir prize. During the past year he studied in Europe under a Guggenheim fellowship.

The funds for the new fellowships will come from the Baker lectureship in chemistry, which was founded at Cornell University by Mr. Baker in 1925 with an endowment of \$250,000. The lectureship is filled in successively by men eminent in chemistry or in some related branch of science who are invited by the department of chemistry to lecture, each for one or two semesters, on some topic or topics within the lecturer's own special field of investigation. The present holder is Dr. R. A. Gortner, professor of agricultural biochemistry at the University of Minnesota.

Among Mr. Baker's other benefactions to Cornell is

the Baker Laboratory of Chemistry, built in 1922 at a cost of \$2,000,000.

## THE SUMMER MEETING OF THE AMERICAN MATHEMATICAL SOCIETY

THE forty-first summer meeting of the American Mathematical Society was held at the University of Michigan at Ann Arbor, Michigan, from September 10 to 13. The Mathematical Association of America, which met in conjunction with the society, held its sessions on Monday afternoon and Tuesday.

The principal feature of the meetings was the eighteenth of the series of colloquium lectures delivered under the auspices of the society, by Professor H. S. Vandiver, of the University of Texas, on the subject "Fermat's Last Theorem and Related Topics in Number Theory." Professor Vandiver delivered three lectures of an hour and a quarter each on Tuesday, Thursday and Friday afternoons.

On Wednesday morning, by invitation of the program committee, Professor G. Y. Rainich, of the University of Michigan, gave an address entitled "Remarks on Product Integrals and Their Applications to Geometry." On Friday morning, by invitation of the program committee, Professor G. T. Whyburn, of the University of Virginia, gave an address entitled "On the Structure of Continua."

Of the shorter papers read before the society at its various sessions, thirty-five were presented in person and fifty-one by title.

The local committee arranged a delightful program for the visiting mathematicians and their friends. Wednesday afternoon was featured by an excursion to Dearborn, where mathematicians were free to visit Ford's Greenfield Village or to visit the Ford factory. On Thursday evening the banquet of the mathematical organizations was held at the Michigan League. Professor H. E. Buchanan acted as toastmaster. The speakers were: Dean E. H. Kraus; Professor H. L. Rietz, representing the Institute of Mathematical Statistics; Professor D. R. Curtiss, representing the Mathematical Association; and Professor J. D. Tamarkin, representing the society.

> MARK H. INGRAHAM Associate Secretary

## THE THIRTY-FIRST ANNUAL NEW ENGLAND INTERCOLLEGIATE GEOLOGICAL EXCURSION

THE annual geological excursion of the New England colleges for 1935 was held on October 11 and 12 under the auspices of the Department of Geology of the Massachusetts Institute of Technology. The leaders were Professor Frederick K. Morris, Dr. W. H. Whitehead and Mr. C. Pearsall.

The party assembled on Friday at 1:00 P.M. in the

yard of Technology and proceeded to the Blue Hills Reservation. Here the afternoon was spent in studying phases of the Blue Hill porphyry and the conglomerates of the Norfolk basin to the south. The gray Pondville conglomerate at the base of the sedimentary series was seen in several localities and its passage southward into the red Wamsutta conglomerates noted. As the contact with the porphyry was approached the conglomerate contained a higher percentage of porphyry boulders until at the contact little or no foreign material was seen. The porphyry near the contact showed a tendency to spheroidal weathering. These facts seemed to indicate that the conglomerate near the contact was residual or only slightly transported. The Blue Hill porphyry was seen in several phases which seemed to intrude each other, each stage sending stringers into earlier intrusions which had cooled to the stage of a jelly.

A conference was held on Friday evening at Technology at which the theories of intrusion of the igneous bodies of the region were presented by Professor Morris and discussed by other members of the excursion.

Friday was spent in the study of the igneous rocks of the Middlesex Fells. The first stop was at an exposure of the Medford diabase where a discussion as to pre- or post-glacial occurred. The proponents of post-glacial action believed that the composition of the rock and burial were responsible for the unusual amount of weathering.

The rest of the day was spent in the study of the relations of the Dedham granodiorite and the overlying Lynn volcanics. The evidence is believed by some to indicate that the granodiorite was the younger of the two formations and was intruded into the volcanics. Others believed that the volcanics intruded the granodiorite or were deposited on an eroded surface of granodiorite. These views might be harmonized by postulating two periods of volcanism, one pre- and one post-granite, or two periods of granite intrusion or both.

The excursion was attended by 110 individuals representing 21 institutions as follows: Bates, 3; Boston Teachers' School of Science, 17; Brooklyn College, 1; Brown, 3; Clark, 4; Colby, 3; College of the City of New York, 2; Columbia, 2; Dartmouth, 3; Framingham Teachers College, 1; Geological Society of America, 1; Harvard, 18; Massachusetts Institute of Technology, 19; Mount Holyoke, 3; Smith, 3; Tufts, 18; University of Maine, 1; University of Pennsylvania, 1; Wellesley, 2; Wesleyan, 2; Worcester Polytechnic Institute, 1; miscellaneous, 2.

> Edward H. Perkins, Secretary

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