secretary "on leave" and without pay. Lord Horder has been nominated as president of the society in the place of Lord Onslow.

DR. MICHAEL HEIDELBERGER, of the College of Physicians and Surgeons, Columbia University, gave on May 8 and 9 at the University of Wisconsin, under the auspices of the Wisconsin Alumni Research Foundation, lectures on "Modern Concepts of Immunity and the Part of Chemistry in Their Development."

THE U. S. Civil Service Commission announces that the closing date for the receipt of applications for the position of junior chemist will be June 1. The commission will continue to receive applications from women for these positions until the needs of the service have been met. All applications must be filed with the Washington office. Complete information is contained in the original announcement.

ACCORDING to the *Journal* of the American Medical Association the W. K. Kellogg Foundation has offered to each one of nearly a hundred and fifty schools of medicine, dentistry, public health and nursing in the United States and Canada funds to be used for loans to students and scholarships. The foundation leaves the matter of scholarships in the hands of the school. It is planned to set up loan funds so that payments on loans will be made to the schools and thus provide a continuing or revolving fund. The scholarships will be granted on the basis of the scholastic ability, character and need of the applicant in comparison with other applicants. The only restriction suggested is that it should not be more than $500 to any one student in any one year.

THE sixty-eighth annual meeting of the American Neurological Association will be held at the Drake Hotel, Chicago, on June 4, 5 and 6, under the presidency of Dr. Lewis J. Pollock, Chicago.

THE American Society of Clinical Pathologists will hold its twenty-first annual meeting and its ninth seminar at the Hotel Benjamin Franklin, Philadelphia, from June 4 to 7, under the presidency of Dr. John L. Lattimore, of Topeka, Kans. His address will be entitled "The Pathologist as a Physician."

SPECTROSCOPY, of which the practical applications have become important for the war effort, will be the subject of a four-day conference that will be held at the University of Chicago from June 22 to 25. Subjects ranging from the spectra of comets to the molecules in synthetic rubber will be discussed in twelve sections. Of special interest during the present curtailment of dyes is the symposium to be held on June 24 on the spectra of dye molecules, in which will be reported the latest developments in dyemaking. Those who will take part in the conference include James Frank, Nobel laureate, professor of physical chemistry at the University of Chicago; W. F. Meggers, the National Bureau of Standards; A. McKellar, Dominion Observatory, Victoria, British Columbia; W. E. Williams, the University of London; F. L. Whipple, Harvard Observatory, and P. Pringsheim, the University of Chicago.

A CHAPTER of the Society of the Sigma Xi was established at the Illinois Institute of Technology on March 25. The national president, Dr. R. A. Gortner, and the national secretary, Dr. G. A. Baitsell, took part in the ceremonies, attended by eighty local members and delegates from seven other colleges and universities. Dr. Rufus Oldenburger, associate professor of mathematics; Dr. David Boder, professor of psychology; Dr. George Ziegler, physicist, and Dr. Hugh McDonald were elected *President, Vice-president, Secretary* and *Treasurer,* respectively. Dr. H. A. Bethe, of Cornell University, delivered an address entitled "Energy Production in Stars." At a subsequent meeting eleven members and sixteen associates were elected to the local chapter, the following professors being among those elected to membership: Dr. Hans Reissner, Dr. Vasili Komarewsky, Dr. Michael Sadowsky and Dr. Myril Reed.

IT is reported that the War Department is planning to take over on August 1 the Battle Creek Sanitarium for use as a general base hospital. Its estimated value is $12,000,000. Dr. John Harvey Kellogg, who was medical director of the sanitarium for many years, is now a member of the board entrusted with control in the reorganization of 1938, after financial difficulties. The Army, it is said, will assume payment of a $1,271,500 mortgage, $18,300 in unpaid taxes and other liens, amounting in all to $2,250,000.

DISCUSSION

THE GEOLOGICAL HISTORY OF THE BERMUDAS

THE Bermudas being oceanic islands, any evidence as to their geological history is of considerable value. It is known from a single deep boring[1] and from two seismic soundings[2] that there is a volcanic core now lying at a depth of about 250 feet below sea level. Sayles[3] considers that this was cut down to its present

[1] L. V. Pirsson, *Am. Jour. Sci.,* 38: 189–206, 331–334, 1914.

[2] G. P. Woolard and M. Ewing, *Nature,* 143: 898, May 27, 1939.

[3] R. W. Sayles, *Proc. Am. Acad.,* 66: 11, 380–467, 1931.

level by wave action during tertiary times and not during the period of much lower sea level of pleistocene times. Finally from the evidence of submerged caves (Sayles, *loc. cit.*) and from peat bogs[4] it is clear that sea level in Bermuda must at one time have stood at least 60 to 100 feet lower than at present, and possibly considerably more, while from raised beaches (Sayles, *loc. cit.*) it appears to have stood at one time at least 25 feet higher than at present.

Practically all the rocks now above sea level in Bermuda are eolianites formed, together with alternating soil layers, during the glacial and interglacial periods. There is a small amount of marine limestone which, from its coarse particle size and the nature of its fossils, seems to have been consolidated from either beach sand or a very shallow water deposit.

During dredging operations for the new American air base at Bermuda, large amounts of rock have been brought up from 30 to 50 feet below sea level in Castle Harbor. These appear to fall into the following categories: deepest of all is a reddish-brown clay, quite unlike anything previously known from Bermuda, and Dr. E. S. Larsen, who has examined it, states that it probably was derived from the weathering of volcanic rocks. It contains no fossils except foraminifera, and from its very fine texture would seem to have been deposited in fairly deep water, probably after reworking. Above this is calcareous rock, also of extremely fine texture, and characterized by the very abundant coral *Cladocera arbuscula* Le Seur, many other fossils also being present. Above this again is a rock of similar fine texture but characterized by the coral *Occulina*, which, while abundant in shallow water, extends deeper than most of the typical reef corals. Reef corals such as *Meandra, Montastraea, Porites* and *Siderastrea* are rare or absent in these two rocks.

Above these fine texture rocks is a much coarser calcareous sandstone such as might be formed from the deposits in the shallow areas inside the present reefs, and containing most of the modern reef corals, but not *Cladocera*. Finally above these is unconsolidated sand, whose fauna resembles in most respects that of the present day. With the exception of small local patches of peat, which indicate temporary mangrove swamp conditions, the scarcity of purely littoral species is striking.

The above is a summary of the observations which we have made to date, and which it is hoped will be considerably expanded when Dr. Frederick Foreman, who is working on the minerals from these formations, completes his investigations. The sequence of rocks and their fauna suggests a progression from fairly deep to shallow water conditions. As this range of probably several hundred feet is represented by only 30 to 50 feet of deposits, the change was presumably due to either a rise of the land or a drop in sea level. Since these deposits, except for the recent loose sand, are all below the land eolianites, they are presumably preglacial. Also, in glacial times the sea level was lower, and not higher than at present. According to Daly[5] in late Tertiary times sea level was probably 85 to 170 feet higher than it is now, and this would be quite sufficient to account for the observed sequence of fauna in the rocks.

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[4] A. S. Knox, *Jour. Geol.*, 48: 7, 767–780, 1940.

[5] R. A. Daly, *Bull. Geol. Soc. Amer.*, 40: 721–734, 1929.

A GROUND SLOTH IN ALASKA[1]

CHILDS FRICK, honorary curator of the American Museum of Natural History, has kindly permitted me to examine and report upon a phalangeal element of an extinct megalonychid ground sloth from the Quaternary of Alaska. The specimen, No. F.A.M. 30844, a first or proximal phalanx, possibly of the fourth digit, manus, is larger than the corresponding bone in *Nothrotherium* and represents apparently a species of *Megalonyx*. Curiously enough, it is the only ground sloth material thus far recorded from the frozen muck of Alaska. This is all the more remarkable in view of the fact that during thirteen seasons of work since 1929 the Childs Frick Expeditions in cooperation with the University of Alaska have conducted intensive paleontological explorations in this northern region. The present specimen, found by Otto Wm. Geist during the field season of 1941, adds another large mammal to the extinct pre-tundra fauna known from Alaska.

The site of discovery of the *Megalonyx* phalanx occurs on Cripple Creek, approximately fifteen miles southwest of Fairbanks. Associated fossil mammals from this region[2] include the woolly mammoth (*Mammonteus primigenius*), mastodon (*Mammut americanum*), horse (*Equus alaskae*), bison (*Bison crassicornis*), ovibovids (*Symbos tyrrelli* and *Boötherium sargenti*), camel (*Camelops*), saiga antelope (*Saiga ricei*), as well as large carnivores like the great cat (*Panthera atrox*), short-face bear (*Arctotherium yukonensis*) and dire wolf (*Aenocyon dirus*).

The genus *Megalonyx* is associated with the Pleistocene forest faunas of the more southerly regions of North America. Remains of this mammal were first described by Thomas Jefferson from a limestone cave in western Virginia. Since then these ground sloths have been encountered at a number of Pleistocene localities in North America from southern Nuevo

[1] Contribution No. 335, California Institute of Technology.

[2] C. Frick, *Nat. Hist.*, 30: 69–80, 1930. Illustrated.