

hattan; *Treasurer*, H. A. Zinszer, Hays. *Additional members to the executive council*: W. J. Baumgartner, Lawrence; H. H. Hall, Pittsburg; W. B. Wilson, Ottawa. *Editorial board*: E. O. Deere, Lindsborg, and W. W. Floyd, Ottawa. The following section chairmen were elected: J. H. Doell, Newton, botany; L. E. Blackman, Emporia, chemistry; Louis R. Weber, Wichita, physics; F. C. Sauer, Wichita, zoology, who, however, died of scarlet fever about a week after the academy meeting, and John Breukelman of Emporia was appointed to the chairmanship of this section; Edwina A. Cowan, Wichita, psychology; Donald A. Wilbur, Manhattan, entomology; and Hazel Branch, Wichita, junior academy. Frank C. Gates continues as editor of the *Transactions*.

A new committee, consisting of O. W. Alm, Manhattan, A. C. Carpenter, Ottawa, and Miss Dale Zeller, Emporia, was appointed to study educational trends in the secondary schools of the state with respect to the basic sciences.

The next meeting of the academy will be held at Kansas State College, Manhattan, during the spring of 1937.

ROGER C. SMITH,
Secretary

THE PENNSYLVANIA ACADEMY OF SCIENCE

THE twelfth annual meeting of the Pennsylvania Academy of Science was held at the State Teachers

College, Indiana, Pennsylvania, on April 10 and 11. About 60 papers were presented and a number of demonstrations shown. The address by the retiring president, Professor Edgar T. Wherry, University of Pennsylvania, was entitled "Reflections on the Origin of Life." Following the annual dinner, Dr. Austin L. Patrick, regional conservator, Soil Conservation Service, U. S. Department of Agriculture, spoke on "Soil Erosion and its Control." A total of 90 registered for the meetings, besides about 40 who attended the junior academy.

The following officers were elected for 1936-1937: *President*, Dr. Thomas D. Cope (physics), University of Pennsylvania; *Vice-President*, Dr. George H. Ashley (geology), Pennsylvania Topographic and Geologic Survey; *Secretary*, Dr. V. Earl Light (biology), Lebanon Valley College; *Treasurer*, Professor H. W. Thurston (botany), Pennsylvania State College; *Assistant Secretary*, Charles E. Mohr (education), Reading Museum; *Editor*, Ralph W. Stone (geology), Pennsylvania Topographic and Geologic Survey; *Press Secretary*, Dr. Bradford Willard (geology), Pennsylvania Topographic and Geologic Survey.

The 1937 meeting is scheduled to be held at Franklin and Marshall College, Lancaster, Pennsylvania. The regular summer meeting, with botanic and geologic field trips, will take place at Somerset on August 14 and 15.

BRADFORD WILLARD,
Press-Secretary

SPECIAL ARTICLES

PLEISTOCENE ALLUVIAL STAGES IN NORTHWESTERN OREGON

SUFFICIENT progress has been made in the distinction of subdivisions of Pleistocene glacial alluvium in the Pacific Northwest that it seems appropriate to make an announcement for the benefit of workers in archeology, pedology, vertebrate paleontology, stratigraphy and physiography, and possibly other to whom the data may be useful. With present interest in the possibilities of Pleistocene man in North America at high pitch, the dating of Quaternary materials becomes particularly important. The following descriptions apply primarily to Willamette Valley but are known to be applicable to other areas in Oregon and Washington.

Alluvial deposits corresponding to Kansan, Illinoian and Wisconsin ages of glaciation in the Cascade Mountains of Oregon and Washington are recognizable over wide areas. A few scattered remnants sug-

gest another, yet older Pleistocene age, but as the deposits are rather local, limited to small areas on drainage divides, and are of uncertain importance, they may be dismissed briefly. An example is the gravel deposit on the hilltops in T. 6 S., R. 6 W., Polk County, Oregon. Their high topographic position, deep weathering and advanced degree of erosion suggest Early Pleistocene (Nebraskan ?) age. As a corollary of this interpretation the bulk of the andesitic lavas and pyroclastics of the Cascade Mountains must be pre-Pleistocene, probably Pliocene, and the fluvial quartzite conglomerate near Troutdale, included by Bretz¹ in his Satsop formation, must be still older—perhaps the equivalent of the Miocene Ellensburg formation and the Hood River formation of Buwalda and Moore.²

The oldest of the well-defined Pleistocene stages is

¹ J. Harlan Bretz, *Jour. Geol.*, 25: 446-458, 1917.

² J. P. Buwalda and B. N. Moore, *SCIENCE*, n.s., 66: 236, 1927.