and economic resources of Lower Paleozoic formations particularly in the Lower Devonian, Silurian, Ordovician, Lower Cambrian and Pre-Cambrian periods. A portion of the trip will be over the north half of the Skyline Drive. An optional trip to the Luray Caverns is included. The leaders will be Dr. Charles Butts, of the U. S. Geological Survey; Dr. Frank M. Swartz, of State College, Pennsylvania, and Dr. Arthur Bevan, state geologist of the Commonwealth of Virginia. The conference will assemble at the Algonquin Hotel, Cumberland, on Friday evening, May 27, for an evening conference and discussion. The second night will be spent in Winchester, Va., and the third in Luray, Va. Copies of the final notice and itinerary synopsis can be obtained by writing to Dr. Arthur B. Cleaves, *secretary,* Topographic and Geologic Survey, Harrisburg, Pa.

Nature writes that the Australian Government has decided not to proceed further at present with the proposal to invite the British Association to meet again in the Commonwealth. As it is desired, however, that leading men of science should from time to time be afforded opportunity to visit Australia, it has been decided to issue invitations to a party of six to attend the jubilee meeting of the Australian and New Zealand Association for the Advancement of Science at Canberra in January, 1939. It is hoped that the precedent so set will become regular practice at each succeeding biennial meeting of the association. A grant of £A1,500 towards the expenses of the guests in 1939 has been promised by the Government.

THE American Philosophical Society has been made the depository for a group of papers and memorabilia formerly belonging to the late Professor Elihu Thomson. In order to make the collection as complete as possible the society will be glad to receive additional contributions or information regarding such material. They should be sent to The American Philosophical Society, Philadelphia, Pa.

A CORRESPONDENT writes: "By the generous kindness of the widow and daughter of the late Sigmund Graenicher, a distinguished entomologist long resident in southern Florida, his collections of Diptera and Hymenoptera have been presented to the Museum of Comparative Zoology" at Harvard College.

THE John and Mary Markle Foundation of New York City has made a grant of $10,000 for a three-year period to carry on research work on neurophysiology under the supervision of Dr. Ernst Gellhorn, professor of physiology in the College of Medicine of the University of Illinois.

DISCUSSION

ATTENDANCE AT SCIENTIFIC MEETINGS AND MEMBERSHIP POPULATION CENTER

ABOUT a year ago the center of membership population was determined for the American Association of Economic Entomologists and for the Entomological Society of America.[1] Continuing interest in the problem of selecting the best locations for meetings has led to a similar study with the membership of the American Association for the Advancement of Science. In this study the methods described in the article cited were used. The association membership by counties in continental United States was obtained from its summarized Proceedings as of late 1934. These were the latest figures readily available, but it is believed that changes in distribution since 1934 have not been great. These and other data used were supplied by the general offices of the association in Washington.

The membership distribution for the association was in general similar to that for the entomological societies, with heavy concentrations in the Middle Atlantic, lower New England, East North Central and Pacific Coast States. A lower density was found westward and southward, especially in the sparsely populated Great Plains and Rockies. Membership of the association seemed to be more concentrated in large cities and educational centers than that of the entomological organizations, and was apparently less affected by horticultural development in the Gulf and Pacific States.

The "median," or place of crossing of the meridian and the parallel, dividing membership into halves, was located in the vicinity of Pittsburgh. The center of population, as determined by the gravity-center or first-moment method, was in eastern Madison County, Ind., about forty miles northeast of Indianapolis. These points are over 200 miles east and a little north of the same points for the combined entomological societies.

The winter meetings since the world war (1920–1936) of the American Association for the Advancement of Science were studied as to location and as to relation of registration to total membership. These factors are summarized below in comparison with those for the American Association of Economic Entomologists.

[1] F. M. Wadley, *Jour. Econ. Ent.*, 30 (4): 596–597, 1937.

TABLE 1
REGISTERED ATTENDANCE AT WINTER MEETINGS, 1920–36, EXPRESSED AS PERCENTAGE OF MEMBERSHIP

Section	Number of meetings	Percentage of membership attending meetings	
		American Association of Economic Entomologists	American Association for the Advancement of Science
Middle Atlantic ...	6	22.7	25.4
New England	2	20.4	18.5
East North Central	3	22.8	19.8
West North Central	3	17.7	13.0
South Central	2	17.8	9.9
Canada	1	18.0	18.0

TABLE 2
AVERAGE ATTENDANCE AT ANNUAL MEETINGS IN VARIOUS SECTIONS EXPRESSED AS PERCENTAGE OF AVERAGE FOR MIDDLE ATLANTIC STATES. (CALCULATED FROM TABLE ABOVE.)

Section	American Association of Economic Entomologists	American Associaton for the Advancement of Science
	Per cent.	Per cent.
Middle Atlantic	100.0	100.0
New England	89.9	72.8
East North Central...	100.4	78.0
West North Central...	78.0	51.2
South Central	78.4	39.0
Canada	79.3	70.9

Meeting places of the future will probably be selected on the basis of: (1) convenience of location; (2) facilities for large numbers of members; (3) rotation among important sections; and (4) cultural, scenic or general interest. The last two needs may be partly met by sectional or off-season meetings. Although there is a large membership on the Pacific Coast, it is worthy of note that a midwinter meeting has never been held there. It seems possible that, with present trends in automobile travel, winter meetings in the South might be well attended.

The facts studied show that, although entomological membership does not center very far west and south of association membership, a larger proportion of entomological society members than association members attend meetings in the western and southern sections.

F. M. WADLEY

BUREAU OF ENTOMOLOGY AND
PLANT QUARANTINE,
U. S. DEPARTMENT OF AGRICULTURE

STUDIES IN THE POTASSIUM METABOLISM OF THE ANIMAL BODY BY MEANS OF ITS ARTIFICIAL RADIOACTIVE ISOTOPE

A STUDY of the metabolism of potassium is being conducted on the white rat with the aid of radio-potassium used as a "tracer." Some of the salient facts which have been observed are given below.

The absorption of potassium from the gastro-intestinal tract is very rapid when potassium chloride is administered to a normal adult fasted rat, about 90 per cent. being absorbed within half an hour. Some of the absorbed potassium is very quickly rejected, mainly through the kidneys. The major portion is retained and taken up by the muscles and other soft tissues of the body. The radio-potassium incorporated into the tissues displaces a certain proportion of the potassium previously there, and appears subsequently to have the same fate as the ordinary potassium present in the body.

After the first few hours, the potassium retention per gram of fresh tissue—called the "specific affinity"—is about the same for such varied tissues as muscle, liver, kidney, stomach, small intestines and heart.

Another point of interest is that the liver takes up a greater fraction of the radio-potassium when it is administered orally than when it is injected intraperitoneally. This may be explained if the predominant path of potassium absorption is via the portal system.

DAVID M. GREENBERG
MICHAEL JOSEPH
WALDO E. COHN
ELMA V. TUFTS

DIVISION OF BIOCHEMISTRY
UNIVERSITY OF CALIFORNIA
MEDICAL SCHOOL
BERKELEY

FOSSIL ALGAE FROM THE SALEM LIMESTONE OF INDIANA

SEVERAL years ago the writer briefly described and illustrated some peculiar "rod-and-bead" structures from the Salem limestone (Indiana building stone) of Indiana and suggested that they represented the castings of large worms.[1] This interpretation and one of the illustrations were included in "Invertebrate Paleontology," which appeared in the fall of 1935.[2] Since the Salem limestone has been used so widely for large state, federal and office buildings, extensive surfaces of the stone have been made available for examination; and it was hoped, therefore, that others who noted these peculiar structures, which show up clearly after the stone has weathered a few years, would scrutinize them carefully and test the validity of the suggested origin.

Late in 1935 Dr. Titus Ulke, of Washington, D. C., wrote to Dr. W. H. Twenhofel, calling attention to Fig. 43A in "Invertebrate Paleontology" and suggesting that the "rod-and-bead" markings were ". . . not worm castings and tracks, but *algae,* probably allied to . . ." certain present-day lime-secreting forms.[3] Several

[1] R. R. Shrock, *Proc. Ind. Acad. Sci. for 1934,* 44: 174–175, Figs. 1A–C, 1935.

[2] W. H. Twenhofel and R. R. Shrock, "Invertebrate Paleontology," McGraw-Hill Book Company, Inc., p. 137, Fig. 43A, 1935.

[3] Letter to Dr. W. H. Twenhofel dated November 17, 1935.