College of Brown University was selected for study; its members were tested in 1923 with the Brown University Psychological Examination. The scores of several could not be used because no information on their reproductive histories was available; they were not significantly different in intelligence from the remainder of the group.

The total group was divided at the median into a high-scoring and a low-scoring group of 54 subjects each; 36 live births had been reported for the former and 37 for the latter. Further subdivisions were made to correct for inequalities among the dates of latest reproductivity information, but no significant differences appeared beween the groups. A comparison of marriage dates also revealed no significant differences.

While these data are obviously inadequate, the tentative conclusion may be drawn from them that test intelligence is not a factor in the reproductive histories of college women, at least so far as the most fertile years are concerned. It is also incidentally evident that college women, like college men, fall considerably short of reproducing themselves. It is to be hoped that these conclusions and those of the inquiry previously referred to may be repeatedly examined as more data become available on the reproductive histories of the early test populations.

RAYMOND R. WILLOUGHBY

BROWN UNIVERSITY

## THE ROLE OF THIAMIN IN ORGANIC EVOLUTION

IN connection with the article of Dr. R. R. Williams (SCIENCE, June 24, 1938), it may be of interest to

point out that the assumption that thiamin is needed by all living cells, together with the statement that "only the higher plants can make it," would completely disrupt the concept of the evolution of higher from lower forms of life.

Hugo P. Kortschak

EXPERIMENT STATION OF THE HAWAIIAN PLANTERS' ASSOCIATION

Dr. Kortschak's inference that my conception of the role of thiamin in the living world is at variance with the idea of the evolution of higher from lower forms of life is not one which I intended the reader to draw. On the contrary, I believe that our knowledge of the rôle of thiamin in living things has contributed a most important bit of chemical evidence that all forms of life have a common heritage. The single sentence which Dr. Kortschak quotes is taken from a brief paragraph in which I attempted to condense for the sake of perspective the results of some scores of experimental studies by various workers. It accordingly is lacking in accuracy of detail. Some, at least scanty, powers of synthesis of thiamin are doubtless to be found among the lower plants.

It does appear, on the basis of present evidence, that the higher plants are responsible for synthesizing most of the thiamin in living nature. However, it is not at all clear to what extent lower plants have failed to develop ample synthetic powers in this respect and to what extent past powers may have been lost through symbiotic or saprophytic habits.

R. R. WILLIAMS

BELL TELEPHONE LABORATORIES

## SOCIETIES AND MEETINGS

## AMERICAN GEOPHYSICAL UNION

The Transactions of the nineteenth annual general assembly of the American Geophysical Union and the meetings of its seven sections, held from April 27 to 30, 1938, at Washington, D. C., and of regional meetings at Spokane, Wash., December 28 and 29, 1937, and at Davis, Calif., January 7 and 8, 1938, are now in press. Part I of 585 pages relates to the Washington meetings, and Part II of some 160 pages relates to the regional meetings.

Because of the importance of the minutes of the general assembly and of those of the sections, with their appendices, in the general view of the development of the union and of their interest to all its members, they have been included, for the first time, as a part of the *Transactions*. The total attendance of members and guests—534 at Washington—marks the character of the meetings in 1938 and the growing import of the union as a factor in the progress of

geophysics in the United States. The attendance at the regional meetings also emphasizes this progress.

Included in the minutes are the reports of officers and of standing, special and research committees. Especially noteworthy are those of the newly formed planning and project committee and of the two committees on geophysical and geological study of oceanic basins and on geophysical and geological study of continents. These show the many problems calling for intensive theoretical research and potential possibilities of their applications in profound problems of earth physics.

The respective presidents, vice-presidents and secretaries of the union and its sections for three-year terms, July 1, 1938, to June 30, 1941, except as otherwise noted, are:

Union: R. M. Field; W. C. Lowdermilk; J. A. Fleming (1937-1940).