of the reactions which are discussed. Photochemistry has been beset by apparent conflicts in experimental results more than most branches of chemistry. This is due to difficulties in experimental technique and to a lack of appreciation of all the variables which can effect the course of a photochemical reaction. The chief criticism of this book lies in the fact that most of the data are presented without an adequate attempt at critical evaluation. This leads all too often to the feeling that there are unresolvable differences of opinion in the interpretation of the data.

The parts of the book which deal with the biological effects of radiation are useful. Much of this material seems never to have been brought together in one place before. Lethal action, therapeutic effects, rickets and Vitamin D, and photosynthesis are among the subjects covered.

"The Chemical Action of Ultraviolet Rays" should be extremely valuable to any worker who wishes a handy reference book covering the field comprehensively. As already indicated any such comprehensive survey of the literature of a field is always of service.

W. ALBERT NOYES, JR.
UNIVERSITY OF ROCHESTER

SOCIETIES AND MEETINGS

NORTH CAROLINA ACADEMY OF SCIENCE

THE fortieth annual meeting of the North Carolina Academy of Science was held at Chapel Hill on April 25 and 26. The meeting was unusually well attended and an exceptional program was provided. The peak of attendance was approximately 300 and more than 80 papers were presented in the various scientific fields. The North Carolina Section of the American Chemical Society met at the same time and place with probably 75 attending to hear the 15 papers offered.

An innovation at the meeting was the setting aside of a definite time for demonstrations. This proved very successful for papers which were presented formally, as well as for those which consisted of the demonstration only.

The Poteat award was conferred on Miss Alma Whiffen, of the University of North Carolina, for her paper on "The Role of Chytrids in Cellulose Decomposition." The American Association grant for research went to Drs. C. H. Lindsley and N. Rosen for a study of the "Zeeman Effect in the Palladium Spectrum." Mr. John M. Stewart, a student of the Alamance High School, was awarded the project prize of $20.00, while the forestry essay prize of $20.00 was divided between William Anderson, of the Hayesville High School, and Omega Rice, of the Dorland-Bell School at Hot Springs.

A meeting was held for high-school teachers and sponsors of high-school science clubs. A program of especial interest to them was provided.

The university gave the academy a dinner, which was followed by the address of the president of the academy, Dr. J. L. Stuckey, on "Man and Minerals." The Elisha Mitchell Scientific Society entertained the academy after the address.

The committee reports were presented in mimeographed form, and these along with the treasurer's preliminary report was adopted. The secretary reported that about 80 members had been added to the roll during the year.

The following officers were elected for the ensuing year: *President,* R. E. Coker, of the University of North Carolina; *Vice-President,* C. N. Warfield, of the Woman's College of the University of North Carolina; *Secretary-Treasurer,* B. Cunningham, of Duke University (continues); *New Member of the Executive Committee,* D. B. Anderson, North Carolina State College; *New Members of the Research Grants Committee,* C. F. Korstian, Duke University, and J. N. Couch, of the University of North Carolina.

A more detailed report of the meeting will appear in the *Journal of the Elisha Mitchell Scientific Society.*

BERT CUNNINGHAM,
Secretary

SPECIAL ARTICLES

THE BIOTIN CONTENT OF TUMORS AND OTHER TISSUES

THE search for significant differences between the metabolism of normal and malignant cells has long occupied the attention of those concerned in a biochemical approach to the tumor problem. Of particular interest in this respect are substances of vitamin or enzyme nature, which in relatively minute amounts exert powerful regulatory influences on the growth of tissues. One of the more recently studied and most active of these compounds is biotin, or vitamin H, which is already known to be essential for the vital functions of many micro-organisms[1,2,3,4,5] and higher

[1] F. Kögl and B. Tonnis, *Zs. phys. Chem.,* 242: 43, 1936.
[2] P. M. West and P. W. Wilson, *Enzymologia,* 8: 152, 1940.
[3] R. Nilsson *et al., Ann. Landw. Hochschule Schwedens,* 7: 301, 1939.
[4] E. E. Snell and R. J. Williams, *Jour. Am. Chem. Soc.,* 61: 3594, 1939.