

(5) In conclusion, may I remark that there appears to be hardly any branch of science in which it would not be helpful to plot frequency-distributions. Such graphical representations not only help to prevent erroneous judgments but, to the practised eye, convey also a wealth of information.

A. F. DUFTON

GREENBANK, GARSTON
HERTFORDSHIRE

A TEST FOR HEAVY WATER IN WATER FROM DEEP OIL WELLS

THE writer has found that the density of water associated with petroleum does not differ from that of ordinary surface water within the limits of mea-

surement, estimated to be not more than two parts per million. The two samples examined were from oil wells slightly more than five thousand feet deep. The geological formation of the source in one case was Oligocene and in the other, Upper Eocene. In each experiment five gallons of water containing oil and water impurities were purified by fractional distillation with the usual precautions and the density of the final sample (800 ml) was determined by the float method of Richards.

The writer is indebted to Mr. George Corless, of the Humble Oil and Refining Company, and to Mr. Gordon B. Hanson, of the Petroleum Rectifying Company, for the collection of the samples.

ARTHUR F. SCOTT

SOCIETIES AND MEETINGS

THE VIRGINIA ACADEMY OF SCIENCE

THE Virginia Academy of Science held its twelfth annual meeting at the State Teachers College at Harrisonburg on May 4 and 5, with a registered attendance of 355.

At the council meeting a resolution was adopted favoring a new and more effective pure food and drugs act. At the open meeting on Friday night Dr. I. A. Updike, of Randolph-Macon College, gave a striking demonstration of the cold-light producing power of 3-aminophthalhydrazide.

The annual prize of fifty dollars was awarded to Dr. E. P. Johnson, of the Virginia Polytechnic Institute, for a paper entitled "The Etiology and Histogenesis of Leucosis and Lymphomatosis of Fowls." Three other papers were such close competitors for the prize that their authors were given honorable mention and a special certificate was issued to each. These were: Mr. Ladley Husted, of the Blandy Experimental Farm of the University of Virginia, "Cytological Studies on the Peanut, *Arachis*, II. Chromosome Number, Morphology and Behavior, and Their Application to the Problem of the Origin of the Cultivated Forms"; Dr. Rolland J. Main, of the Medical College of Virginia, "Diurnal Changes in Alveolar Carbon Dioxide as Effected by the Visceral Control of Respiration"; and Dr. E. G. Pickels, of the University of Virginia, "Adaptations of the Air-Driven Ultracentrifuge."

The ultracentrifuge developed at the University of Virginia was demonstrated in action and its adaptation to biological research emphasized. This centrifuge runs on and by air and the only practical limit to its speed is the ability of the steel rotor to hold together. A large number of biological exhibits and demonstrations were shown, especially such as could be used in teaching high-school science. There was

also a symposium on the teaching of high-school chemistry.

The following officers were elected for the coming year:

President: Dr. William T. Sanger, of the Medical College of Virginia; *President-elect*: Professor Ida Sitler, of Hollins College; *Secretary-Treasurer*: Dr. E. C. L. Miller, of the Medical College of Virginia; *Councilor*: Dr. F. L. Robeson, of the Virginia Polytechnic Institute.

For the Section of Astronomy, Mathematics and Physics: *Chairman*, Dr. C. L. Albright, of the University of Richmond; *Secretary*, Professor Mary J. Cox, of Hollins College.

For the Section of Biology: *Chairman*, Professor Robert P. Carroll, of the Virginia Military Institute; *Sub-Chairman*, Dr. Harry G. Walker, of the Virginia Truck Experiment Station; *Secretary*, Professor George W. Chappellear, Jr., of the Harrisonburg State Teachers College.

For the Section of Chemistry: *Chairman*, Dr. John H. Yoe, of the University of Virginia; *Secretary*, Dr. Robert E. Hussey, of the Virginia Polytechnic Institute.

For the Section of Education: *Chairman*, Dr. W. J. Gifford, of the Harrisonburg State Teachers College; *Secretary*, Professor A. M. Jarman, of the University of Virginia.

For the Section of Geology: *Chairman*, Mr. William M. McGill, of the Virginia Geological Survey; *Secretary*, Dr. Marcellus H. Stow, of Washington and Lee University.

For the Section of Medical Sciences: *Chairman*, Dr. James H. Kindred, of the University of Virginia; *Secretary*, Dr. Harvey B. Haag, of the Medical College of Virginia.

For the Section of Psychology: *Chairman*, Dr. John M. McGinnis, of Hollins College; *Secretary*, Dr. R. C. Sommerville, of Lynchburg College.

The meeting next year will be held the first week in May at the University of Richmond.