in Shelby County," F. W. Gottlieb, of Morristown.

"The Temperature Coefficient of the Surface Tension of Water," Arthur L. Foley, of Bloomington.

"Gaseous Fermentation in Sweetened Condensed Milk," O. F. Hunziker, of West Lafayette.

"Weed Problem in Indiana," Stanley Coulter, of Lafayette.

"The Water Balance of Desert Plants," D. T. MacDougal, of Tucson, Arizona.

"Indiana Fungi," J. M. Van Hook, of Bloomington.

"An Ecological Survey of the Lower Whitewater Gorge," M. S. Markle, of Richmond, and L. C. Petry.

"Timothy Rusts," A. G. Johnson, of Lafayette.

In the evening Dr. D. T. MacDougal, of the Desert Laboratory, at Tucson, Arizona, gave a very interesting and instructive illustrated lecture on "Desert Days and Desert Ways."

Professor Charles R. Dryer, of Terre Haute, was elected president of the academy and A. J. Bigney, of Moores Hill, secretary.

A. J. Bigney,
Secretary

SOCIETIES AND ACADEMIES

THE WASHINGTON ACADEMY OF SCIENCES

The 67th meeting of the Washington Academy of Sciences was held, under the direction of the president, Dr. F. W. Clarke, at the Cosmos Club on the evening of January 19, 1911.

Dr. F. M. Jaeger, professor of inorganic and physical chemistry in the University of Groningen, Holland, gave an address on "Anisotropic Liquids and so-called Fluid Crystals."

Numerous experimental researches have established the fact that in certain liquids, and under certain conditions, there are forces that act upon the molecules differently in different directions. Hence the conception of the liquid state as one characterized by irregular molecular motion is no longer tenable—a fact that fills the subject with interest and has led to many an ardent discussion.

Dr. Jaeger pointed out the similarity of solid crystals with easy gliding-planes, to liquid ones, and the analogy of their changes to those of polymorphic substances. He also described their phase transitions and in particular showed the properties of substances that melt successively to three or more stable liquid states.

By means of projections he showed such properties of liquid crystals as their form, dichroism and strong birefringence, and made clear his argument that the emulsion theories advanced by some to explain the observed phenomena, are only based upon the misunderstood turbidity due to birefringent liquid phases. He also illustrated the strange phenomena of "enforced" and "spontaneous" pseudo-isotropy, and showed the axial images of clear, uniaxial liquids and their strong rotating power.

Proceeding to the real anisotropic liquids, which he illustrated by the different properties of *p*-azoxypenetol, he discussed the principal differences between the spheres of such liquids and real crystals, their heat motion and their diffraction phenomena when mixed with other substances, and concluded with an elucidation of their magnetic induction.

The formal presentation of the paper and its discussion were followed, after adjournment, by experimental demonstrations to many of the more interested of the audience.

The 68th meeting of the Washington Academy of Sciences was held at the Cosmos Club on the evening of February 1, 1911, with President F. W. Clarke in the chair.

Dr. W. D. Bancroft, professor of physical chemistry in Cornell University, gave his lecture entitled "A Universal Law."[1]

The many chemists of the audience roundly applauded the claim that all branches of human knowledge are but portions of chemistry—mostly subordinate. They seemed highly to approve the idea of spelling "alchemy" with a double "l," and indeed the speaker's familiarity with things not generally called chemical went far to justify this notion.

The illustrations of the universal law were drawn mainly from that branch of chemistry commonly called biology, and those who still persist in calling themselves biologists instead of chemists accepted in good grace many a humorous and telling side remark.

When the lecture was over and the time for talking back came it seemed that most every one had something to say; but whether biologist or some other sort of chemist, each declared the meeting a great success, and since then has done much to make the "universal law" the universal topic.

W. J. Humphreys,
Recording Secretary

[1] See Science, February 3, 1911.