and H. L. Keil, G. H. Coleman and others, J. B. Culbertson, L. Chas. Raiford, L. C. Bauguess and C. P. Berg, N. A. Clark, H. S. Olcott, H. Gregg Smith[1] and W. H. Seegers, on such widely diverse topics as: "The Progressive and Step-wise Decarboxylation of Furantetracarboxylic Acid" (Gilman); "The Effect of Substituents in the Formation of Thio-carbanilides by Various Methods" (Raiford); "The Rôle of Liver in Growth, Reproduction and Lactation" (Smith and Seegers); and "The Determination of Manganese in Biological Material" (Clark). The meeting was well attended and close attention was given to all the thirteen interesting papers. A joint dinner for all the chemists was ably presided over by Dr. Ben Peterson, of Coe College, who called upon Drs. Culbertson, of Cornell College, and F. E. Brown, of Iowa State College, for short addresses.

Geology: John E. Smith, *chairman.* The meeting of the geology section was instructive and well attended. Among the papers on stratigraphic geology were: "Section at Ft. Dodge Limestone Company's Mine"; "Stratigraphy of the Hopkinton Formation in Jones, Jackson and Clinton Counties"; "Iowa Stratigraphy on Methodical Scheme"; "The Kansas City Formation in the Pammel Park Area"; "Some Buried Pictured Rocks"; "The Structure of the Des Moines Series at Redfield, Iowa." On glacial geology were presented papers on "Contrasted Till Relief" and "Pleistocene Geology of Central Iowa." Papers related to geology were: "Possible Migration in the Very Dawning Period of Pueblo Culture" and "The Carbon Dioxide Cycle in Nature." An excellent paper on "The Status of the Devonian Beds at Middle Amana" was also presented.

Mathematics: L. M. Coffin, *chairman.* In addition to a number of papers on the history and teaching of mathematics, papers were presented on number theory, potential theory, geometry, differential equations, statistics, probability theory, mathematics of finance and mechanics. The joint dinner was addressed by Professors Smith, Rietz, Rusk and McGaw.

Physics: H. J. Plagge, *chairman.* The physics section of the Iowa Academy of Science met at Coe College, Cedar Rapids, Iowa, on April 21 and 22. All sessions were unusually well attended, and twenty-five papers, covering recent developments and investigations, were presented. At the annual dinner, held at the Roosevelt Hotel, Friday evening, Dr. G. W. Stewart spoke on the subject "Physics 'round the World," basing his lecture on his recent tour around the globe.

Psychology: Leigh C. Douglass, *chairman.* A total of twenty-eight papers, covering a wide range of subjects, was presented in the psychology section. These papers, when classified, are as follows: abnormal, 3; art, 2; child, 3; education, 8; emotions, 2; music and speech, 5; physiological, 5. One of these papers, by Professor C. A. Ruckmick, of the State University of Iowa, on "What We Don't Know about Emotions," in which he summarized the research work that has been done in this field and charted the fields to be explored, was presented at the dinner meeting.

Zoology: Elery R. Becker, *chairman.* There were fifteen papers presented in the zoology section. Of these, three were concerned with the physiology of sex, two were purely physiological, four were anatomical in nature, two dealt with the parasitic protozoa, one presented the life history of the firebrat, two may be classified as ecologic, and one was of a systematic nature. One noticeable feature of the program was that most of the papers were given by the younger workers.

JOSEPH C. GILMAN,
Secretary

[1] Deceased.

THE KANSAS ACADEMY OF SCIENCE

THE sixty-fifth annual meeting of the Kansas Academy of Science was held at the Kansas State College, Manhattan, from April 13 to 15. The program consisted of approximately 160 papers given in general sessions on Friday and Saturday forenoons, April 14 and 15, and in the sectional meetings. Sectional programs in biology, chemistry, physics, psychology and junior academy were held on Friday afternoon. The entomology sectional program was held on Saturday afternoon under the auspices of the Kansas Entomological Society. A total attendance of 293 was recorded at the programs.

Dr. Philip Fox, director of the Adler Planetarium, Chicago, delivered the main address on April 14, at 8:15 P. M., under the auspices of the Science Club and Sigma Xi at Kansas State College. His subject was "The Architecture of the Heavens." At the annual banquet earlier in the evening the retiring president of the academy, Dr. Robert Taft, of the University of Kansas, delivered the presidential address on "Old Photographs, a Brief Review of the History of American Photography in the Period 1840–1880." Dr. Paul B. Lawson, of the University of Kansas, opened the annual meeting by a lecture on spiders in the evening of April 13.

The officers elected for 1933–34 were: *President,* J. W. Hershey, McPherson College, McPherson; *First Vice-president,* W. H. Matthews, Kansas State Teachers College, Pittsburg; *Second Vice-president,* E. A. Marten, University of Wichita, Wichita; *Secretary,* G. E. Johnson, Kansas State College, Manhattan; *Treasurer,* H. A. Zinszer, Fort Hays Kansas State College, Hays. The chairmen of sections are: *Biology,* H. E. Crowe, Friends University, Wichita,

and (vice-chairman) Elsa Horn, Kansas State College, Manhattan; *chemistry,* W. W. Floyd, Ottawa University, Ottawa; *physics,* G. W. Maxwell, Kansas State College, Manhattan; *psychology,* J. B. Stroud, Kansas State Teachers College, Emporia; *entomology,* P. A. Readio, University of Kansas, Lawrence; *Junior Academy,* Hazel E. Branch, University of Wichita, Wichita. Additional *members of the executive council* are: Robert Taft, University of Kansas, Lawrence; F. U. G. Agrelius, Kansas State Teachers College, Emporia; L. Oncley, Southwestern College, Winfield. Dr. F. C. Gates, of the Kansas State College, Manhattan, was reappointed editor.

State aid to the extent of $300 a year was reported by the chairman of the state aid committee, Dr. W. J. Baumgartner, of the University of Kansas at Lawrence. The 1934 meeting will be held in Wichita.

GEORGE E. JOHNSON,
Secretary

THE TEXAS ACADEMY OF SCIENCE

THE summer meeting of the Texas Academy of Science was held at College Station, where it was the guest of the Agricultural and Mechanical College. At the banquet on May 19, a class of thirty-three new members, all from the faculty of the college, was introduced to the membership. Following the banquet Dr. Mark Francis, widely known for his work on Texas tick fever and for his interest in the paleontology of the Gulf Coast, delivered an illustrated lecture relative to his findings in Texas. At the conclusion Dr. E. N. Jones, president of the academy, presented Dr. Francis with a certificate of life fellowship. Saturday was given over to three field trips. The botanical section under Dr. R. G. Reeves, of A. and M. College, visited locations where the local flora was best represented. The geological section, headed by Dr. H. B. Stenzel, of A. and M. College, and Professor and Mrs. F. B. Plummer, of the University of Texas, visited some newly discovered fossil deposits near the college. The third section represented a combination of interests and made a tour through the eastern part of the state, visiting various points of biological and historical interest. At the meeting of the executive committee arrangements were made for the annual meeting to be held at Dallas on October 20 and 21, and the invitation of Dr. Edwin F. Carpenter, secretary-treasurer of the Southwestern Division of the American Association for the Advancement of Science, for a joint meeting in May, 1934, was referred to the regular session of the executive committee for consideration.

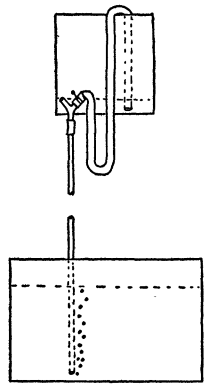
H. B. PARKS,
Secretary-Treasurer

SCIENTIFIC APPARATUS AND LABORATORY METHODS

A SIMPLE AQUARIUM AERATOR

IN the course of the school year it is frequently desirable to maintain aquaria, both of fresh and salt water, for intervals of a week or two. In order to accomplish this some system of aeration is usually necessary, but in many cases one feels that the purchase of an electric pump is hardly justified. Several fairly simple and efficient aerating devices have been described (Schaeffer,[1] Walker,[2] etc.), but they require that running water be available and limit the location of aquaria to within a few feet of a sink. The writer has been using, quite successfully, a very simple aerator, which can be constructed in a few minutes from materials available in most laboratories, requires no electricity or running water to maintain it, needs only a few minutes' attention a day, can not misbehave in such a way as to injure the contents of the aquarium or flood it with tap water, and allows the aquarium to be placed almost anywhere in the room.

Two lengths of glass tubing, one of one eighth inch diameter, the other a size larger; a Y tube preferably the size of the smaller glass tube; some rubber tubing for connections; and a screw tubing clamp are needed. The larger tube is bent in the form of a "constant level" siphon, as shown in the diagram, the inlet end



being bent slightly to one side so that water can enter freely, even when this end rests on the bottom of a container. The Y, preferably a glass one, especially if sea water is to be used, is connected to the outlet end of the siphon by just enough rubber tubing so that the screw clamp can be fitted on between the end of the siphon and the Y. The open end of the Y should stand a little above the intake end of the

[1] A. A. Schaeffer, SCIENCE, 31: 955, 1910.
[2] J. H. Walker, SCIENCE, 73: 709, 1931.