

American Philosophical Society 200 Years Old

The following articles tell of some of the most significant achievements of science reported at the bicentenary meeting of the American Philosophical Society in Philadelphia, April 28-30.

The oldest scientific society in the United States, and one of the oldest in the world, has begun its third century of existence with the meeting of the American Philosophical Society. This society, founded by Benjamin Franklin, still meets in the same building which was constructed during Franklin's lifetime—one of the historic group of structures which includes Independence Hall.

When Franklin founded the organization in 1727 he probably never supposed that it would develop into anything as ambitious or long-lived as it did, for he tells of it in his autobiography as follows: "I had form'd most of my ingenious acquaintance into a club of mutual improvement, which we called the *Junto*; we met on Friday evenings. The rules that I drew up required that every member, in his turn, should produce one or more queries on any point of morals, politics, or natural philosophy, to be discussed by the company; and once in three months produce and read an essay of his own writing, on any subject he pleased."

By 1743 the club developed into a genuine learned society, the American Philosophical Society, and in 1771, while Franklin was again president, the society published its first volume of *Transactions*, which has been continued to the present. Nearly a hundred pages of the first volume is devoted to an essay on wine making, which the author, "Hon. Edward Antill, Esq., of New Jersey," recommends as a worthy occupation for the colonies.

During the American revolution, the society and its members were in prominence, and the first time the Declaration of Independence was read to the public, it was given from a platform which the members of the society had erected to observe the transit of Venus in 1769.

Photoelectric Halftone Cuts

The photoelectric cell, in which light is turned into electricity, and which makes television and the sending of photographs by telephone

lines possible, may be of use in photoengraving, in making illustrations such as those in this paper. Dr. Herbert E. Ives, of the Bell Telephone Laboratories in New York, who has been in charge of the development of these telephotograph and television methods, told of the new system.

In sending photographs over wire, use is made of a "light valve," which gets larger or smaller as the parts of the original picture over which the photoelectric cell passes vary in brightness. To use this for photoengraving, Dr. Ives suggests that a series of instantaneous photographs be made of the opening of the light valve on the plate. In the method of engraving now in use, the invention of Dr. Ives' father, Frederic E. Ives, a screen ruled with cross lines is placed over the plate when the original picture is being photographed. This makes the picture consist of dots, which can be seen under a magnifying glass. Where the original is light, the dots are small, and where it is dark, the dots are large.

By the new method proposed by Dr. Herbert Ives, the series of photographs of the light valve would give the varying size dots. This, he claims, would produce halftones having exact renderings of the tones of the original.

Orchid Sanitarium

An orchid farm in Panama, containing one of the most famous collections of the costly blooms in the world, has just been presented to the Missouri Botanical Garden. It will be used as a tropical adjunct of the St. Louis garden.

To the 7,000 species included in the original gift orchids from all parts of the tropical world will be added. It is expected to become one of the most complete collections in existence, Dr. Moore stated. One of the great advantages of this tropical station will be its utilization as a sort of orchid hospital for the rescue of rare plants that have gradually succumbed to the adverse climate of Missouri. Some of these valuable plants have been sent to the Canal Zone to recuperate. They will be shipped back to the United States when they have acquired a new lease on life.

Saber-Tooth Tiger Find

The saber-toothed tigers that roamed California in ages past and were trapped in the La Brea asphalt pools as though on gigantic flypaper sheets, have a new cousin from South Dakota. A complete skull of one of these giant cats with dagger-like eyeteeth, known to scientists as *Eusmilus*, was found in Dakota by the Princeton University expedition last summer, and has been subjected to critical study during the past year by Prof. W. J. Sinclair, who reported to the Society. The huge curving upper eyeteeth of these animals, projecting downward past the lower jaw, were much too large to permit ordinary biting, and it is believed that they must have been used for slashing and tearing at the throat or other exposed vital parts of the prey. This particular genus of the saber-tooth tigers has hitherto been known only from a few scattered fragments, and the Princeton skull has afforded the first real chance for a complete examination.

May Predict Atlantic Storms

Radio prediction of storms crossing the Atlantic Ocean steamship and airplane routes, broadcast from Greenland several days before they get where they can do any damage, is a possibility of the future, according to Prof. W. H. Hobbs of the University of Michigan. Prof. Hobbs told of the work of an expedition from the University of Michigan to Greenland to study the effect of weather conditions there on Atlantic storms. He believes that these storms originate over the great ice cap of this northern island.

Last year preliminary studies were made, which will be continued this summer. A meteorological observatory, equipped with weather instruments as well as radio apparatus, will be established in southwestern Greenland, as near as possible to the ice cap, where two scientists will remain for a year. One of these is Prof. J. E. Church, Jr., who has been in charge of the Mt. Rose Meteorological Observatory, two miles high in the Sierra Nevadas of California. He is an authority on snow surveys. The expedition this year will be in cooperation with scientists from Iceland, Germany and Roumania.

Science News-Letter, April 30, 1927