

Anniversaries of Science

June 29, 1895—Thomas Henry Huxley, naturalist and protagonist of Darwin's theory of evolution, died.

But if I may speak of the objects I have had more or less definitely in view since I began the ascent of my hillock, they are briefly these: To promote the increase of natural knowledge and to forward the application of scientific methods of investigation to all the problems of life to the best of my ability, in the conviction which has grown with my growth and strengthened with my strength, that there is no alleviation for the sufferings of mankind except veracity of thought and of action, and the resolute facing of the world as it is when the garment of make-believe by which pious hands have hidden its uglier features is stripped off.

It is with this intent that I have subordinated any reasonable, or unreasonable, ambition for scientific fame which I may have permitted myself to entertain to other ends, to the popularization of science; to the development and organization of scientific education; to the endless series of battles and skirmishes over evolution; and to untiring opposition to that ecclesiastical spirit, that clericalism, which in England, as everywhere else, and to whatever denomination it may belong, is the deadly enemy of science.

—Huxley: *Autobiography*.

Science News-Letter, June 25, 1927

July 1, 1811—Publication by Avogadro of a paper in which he first used the word "molecule" and in which he showed that many elementary molecules contain more than one atom marked an advance in theoretical chemistry.

M. Gay-Lussac has shown in an interesting Memoir . . . that gases always unite in a very simple proportion by volume, and that when the result of the union is a gas, its volume also is very simply related to those of its components. But the quantitative proportions of substances in compounds seem only to depend on the relative number of molecules which combine, and on the number of composite molecules which result. It must then be admitted that very simple relations also exist between the volumes of gaseous substances and the numbers of simple or compound molecules which form them. The first hypothesis to present itself in this connection, and apparently even the only admissible one, is the supposition that the number of integral molecules in any gas is always the same for equal volumes, or always proportional to the volumes. Indeed, if we were to suppose that the number of molecules contained in a given volume were different for different gases, it would scarcely be possible to conceive that the law regulating the distance of molecules could give in all cases as simple as those which the facts just detailed compel us to acknowledge between the volume and the number of molecules.

—Avogadro: *Essay on a Manner of Determining the Relative Masses of the Elementary Molecules of Bodies and the Proportions in which they Enter into these Compounds*.

Science News-Letter, June 25, 1927

July 2, 1897—The patent for the Wireless Telegraph was granted to Marconi in England.

Wireless Telegraphy, or telegraphing without any wires at all, from one point to another through space, is the most modern and startling development in telegraphy. To the average mind this is highly suggestive of scientific imposition, so intangible and unknown are the physical forces by which it is rendered possible, and yet this is one of the late achievements of the Nineteenth Century. . . .

In March, 1899, Signor Guglielmo Marconi, an Italian student, then residing in England, successfully communicated between South Foreland, County of Kent, and Boulogne-sur-Mer, in France, a distance of thirty-two miles across the English Channel . . . The Marconi system of wireless telegraphy was practically employed with useful effect April 29, 1899, on the "Goodwin Sands" light-ship to telegraph for assistance when in collision twelve miles from land and in danger of sinking. It was also used in October, 1899, on board the "Grande Duchesse" to report the international yacht race between the "Columbia" and the "Shamrock" at Sandy Hook. Lord Roberts also made good use of it in his South African campaign against the Boers. According to Signor Marconi its present range is limited to eighty-six miles, but it is expected that this will be soon extended to 150 miles.

Byrn: *Progress of Invention in the Nineteenth Century* (1900).

Science News-Letter, June 25, 1927

ASTRONOMY

Will See Eclipse From Air

For the first time in history an astronomer will observe a total eclipse of the sun from his own airplane. Gerald Merton, F. R. A. S., will fly over England to see and photograph the eclipse of June 29. Merton was a pilot in the Royal Air force during the war. He recently bought an airplane of his own for scientific use. With him will be Maj. P. H. Hepburn, F. R. A. S., war aviator and formerly president of the British Astronomical Association.

Another attempt to photograph the eclipse from the air, and so to rise above the clouds that may prevent terrestrial observations, will be made by two astronomers from the Royal Observatory at Greenwich, William M. H. Greaves, chief assistant, and William W. Witchell, head of the Observatory's Magnetic and Meteorological Branch. They will fly in a Handley-Page air liner provided by a London newspaper. At first, it was stated they had agreed to make the trip merely for the fun of it, but that now they expect to secure good observations.

With the large machine they have chosen, they hope that difficulties from vibration will be minimized, and the pilot thinks that he will be able to keep the machine pointed at the sun.

Science News-Letter, June 25, 1927

First Glances at New Books

AN INTRODUCTION TO BIOLOGY—Alfred C. Kinsey—*Lippincott's*. This book is designed for use as a high school text, but it is ambitious in its range of topics. It includes not only the customary sections on classification, structure and functions of plants and animals and a discussion of hygiene, but also branches out into distribution and ecology, and especially into considerations of the relations between the various organisms and man. It is also an excellent example of the reaction that seems to be following the epidemic of timid deletions, by text-book writers, following the anti-evolution outbreak. More space than ever is devoted to evolution, and the treatment of this topic is one of the best-thought-out in the whole work. And whether it was deliberate or only a "happenstance," the prominence given in this section to the work of the monk Mendel can hardly do otherwise than make Fundamentalist inquisitors squirm.

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THE SEVEN SEALS OF SCIENCE—Joseph Mayer—*Century* (\$3.50). An outline of the history and achievements of mathematics, astronomy, physics, chemistry, biology, geology and psychology, showing their relations to each other and to other fields of knowledge. "Social studies," he says, "if they are to be worthy of the name of science, must build upon the natural sciences and particularly upon geology, biology and psychology."

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SCIENCE OF TODAY—Sir Oliver Lodge—*Harper* (\$1). A brief and readable account of modern atomic physics by an author who contributed much to the development of its early stages.

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THE WAR ON MODERN SCIENCE—Maynard Shipley—*Knopf* (\$3). A review of the warfare of the Fundamentalists against the teachings of science. Data from all parts of the United States are presented, and the situation presented as it stood at the close of the year 1926.

Science News-Letter, June 25, 1927

NEW CONCEPTIONS IN COLLOIDAL CHEMISTRY—Herbert Freundlich—*Dutton* (\$2). An authoritative account of some of the modern concepts in the chemistry of colloids.

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