

Anniversaries of Science

August 10, 1927—Watch for the Perseid meteors.

Science News-Letter, August 6, 1927

August 10, 1846—Congress passed the Act establishing the Smithsonian Institution.

The bequest, in the language of the testator, was, "to found at Washington an establishment, under the name of the Smithsonian Institution, for the increase and diffusion of knowledge among men."

According to this, the Government of the United States is merely a trustee. The bequest is for the benefit of mankind, and any plan which does not recognize this provision of the will would be illiberal and unjust.

The institution must bear and perpetuate the name of its founder; and hence its operation ought to be kept distinct from those of the Government, and all the good which results from the expenditure of the fund should be accredited to the name of Smithson.

The object of the bequest is twofold: first, to *increase*; and second, to *diffuse* knowledge among men. These two objects are entirely distinct, and ought not to be confounded with one another. The first is to enlarge the existing stock of knowledge by the addition of new truths; and the second, to disseminate knowledge, thus enlarged, among men. The distinction is generally recognized by men of science, and in Europe different classes of scientific and other societies are founded upon it.

Again: the will makes no restriction in favor of any particular kind of knowledge, and hence all branches are entitled to a share of attention. Smithson was well aware that knowledge should not be viewed as existing in isolated parts, but as a whole, each portion of which throws light on all the other, and that the tendency of all is to improve the human mind, and to give it new sources of power and enjoyment. The most prevalent idea, however, in relation to the will, is that the money was intended exclusively for the diffusion of useful or immediately practical knowledge among the inhabitants of this country, but it contains nothing from which such an inference can be drawn. All knowledge is useful, and the higher the more important. From the enunciation of a single scientific truth may follow a hundred inventions, and the higher the truth the more important the deductions.

—Joseph Henry in address on the Smithsonian Institution published in 1854.

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August 11, 1877—Asaph Hall discovered Deimos, outer satellite of Mars.

At the opposition of Mars which occurred in August, 1877, the planet was unusually near the earth. Asaph Hall, then in charge of the 26-inch telescope at the Naval Observatory in Washington, took advantage of this favorable circumstance to make a careful search for a visible satellite of the planet. On the night of the 11th of August he found a faint object near the planet. Cloudy weather intervened, and the object was not again seen until the 16th, when it was found to be moving with the planet, leaving no doubt as to its being a satellite.

On the night following an inner satellite much nearer the planet was observed. This discovery, apart from its intrinsic interest, is also noteworthy as the first of a series of discoveries of satellites of the outer planets. The satellites of Mars are difficult to observe, on account not merely of their faintness, but of their proximity to the planet, the light of which is so bright as to nearly blot out that of the satellite. Intrinsically the inner satellite is brighter than the outer one, but for the reason just mentioned it is more difficult to observe. The names given them by Hall were Deimos for the outer satellite and Phobos for the inner one, derived from the mythological horses that drew the chariot of the god Mars. . . .

Owing to the minuteness of these bodies it is impossible to make any measures of their diameters. These can be inferred only from their brightness. Assuming them to be of the same color as Mars, Lowell estimates them to be about ten miles for Deimos and somewhat more for Phobos.

—Simon Newcomb: *Mars* in *Enc. Brit.*

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May Adjust Glands

MEDICINE

When a prima donna hurls her bouquet at her manager and says she cannot, cannot sing in the presence of such imbeciles, the temperamental outburst is probably due to some lack of adjustment in her various ductless glands.

Temperament is largely a matter of the balance of the glands of internal secretion, such as the thyroid, pituitary, and the reproductive glands, Prof. Julian Huxley, of the department of comparative anatomy at Oxford, told members of the British Science Guild in a recent lecture.

It may well be, he declared, that the applied physiology of the future will discover how to modify this factor. Many men of sedentary life who came back from the war with altered temperaments, he pointed out, had probably "discovered their adrenals." The violent activities into which they were forced made demands upon these and other glands that their previous life had never done. The glands responded by increased activity, setting up a new equilibrium, which seemed preferred by the body to the old. Consciously or unconsciously the lives of such men became adjusted so they continue on a different plane.

"We are sure to discover more and more of the means of playing on this complex system within us and eliciting from it the vital harmonies which we desire," Professor Huxley stated. "Efficiency after all is based on physiology."

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Xenon, a very rare gas, occurs in the atmosphere to the extent of .000009 per cent.

SEISMOLOGY

Two Quakes in Seven Years

The earthquake of May 22 in the Kansu province of China happening so soon after that of 1920 in the same region sets a new record. Never before in the knowledge of Commander N. H. Heck, in charge of the U. S. Coast and Geodetic Survey's earthquake investigations, have two such severe shakes in the same region occurred so close together. It was Commander Heck and his associates, using data gathered from seismograph observatories by Science Service, who located the position of the quake long before reports from the devastated area reached civilization.

In the quake of 1920, an estimated total of half a million people were killed, but according to reports from the region the casualties of the May earthquake numbered about 100,000. The 1920 quake was a little nearer to Peking, but other reasons are probably responsible for the lower loss of life in this latest one.

The Kansu province has been described as the "Wild West of China." Like our own wild west in the early days, it is a very unsettled region, and there have been frequent uprisings among the people of the region, who are largely Mohammedans. The last great uprising was in 1895, and since then the people have abandoned the cities in great numbers. Kulang, which is one of the cities reported as being destroyed, was described a few years ago by travelers, according to the National Geographic Society, as being nearly deserted and in ruins. Had the cities been as heavily populated as in past years, the loss of life would have been far greater, as the earthquake was one of the most severe on record.

It was across the Nan Shan Mountains, which lie near Thibet, that the May earthquake seems to have been most severe. A little distance to the north of the devastated region runs the famous Great Wall, which ends about 200 miles to the west of it. Practically through the region there ran in the past one of the great high roads into China. In recent times a railroad along the same route has been proposed. The great earthquakes do not necessarily mean that such a project is unsafe, however. Though the country contains geological evidence of earthquakes in the past, until 1920 none had occurred within historic times. Perhaps the shakes in 1920 and 1927 have relieved the strain of the region, and no more will occur for centuries.

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