

Anniversaries of Science

September 17, 1789—Enceladus, which with Mimas is an innermost satellite of Saturn, was discovered by Herschel.

Among all the beautiful and wonderful sights which the heavens afford, the four leading ones, perhaps, are the glories of the rising and setting sun, a total solar eclipse, the aurora with its weirdly dancing polar streamers, and the telescopic view of the planet Saturn. To see that silvery ball, so delicately poised within its wonderful rings, is a sight that never fails to charm, however familiar.

Like Jupiter, Saturn shows spots upon its surface occasionally though far less conspicuously than Jupiter. From observing them, the time of rotation is known. It is 10h 14m at the equator and longer towards the poles, as with Jupiter and also with the sun. This planet is the least dense of any of them, indeed only 0.7 the density of water, and thus little more than half the density of Jupiter. It is as well provided with moons as Jupiter, for each has nine. The ninth satellite, discovered in 1898 by W. H. Pickering, makes its revolution in opposite direction to the others.

—Abbot: *The Earth and the Stars*.

Science News-Letter, September 10, 1927

September 19, 1848—Hyperion, seventh satellite of Saturn, was discovered by Lassell.

And deeper yet, like molten opal shining
My belt of rainbow glory softly streams,
And seven white moons around me inter-
twining

Hide my vast beauty in a mist of dreams.
—Noyes: *Watchers of the Sky*.

Science News-Letter, September 10, 1927

September 20, 1519—Magellan's fleet of 5 ships set sail from Spain. Three years later one of them returned, having circumnavigated the globe.

Tuesday, the 20th of September, 1519, a favorable breeze having sprung up, he gave the order to weigh, and a little later the ships cleared the river and commenced the memorable voyage which, through almost unparalleled suffering and disaster, was to win an immortal name for its survivors as the first circumnavigators of the globe.

—Guillemard: *Life of Ferdinand Magellan*.

Science News-Letter, September 10, 1927

Seedless Grape Bred

A new variety of seedless grape, similar to the "Sultanina" of the warmer lands of Europe and Southern California but able to withstand New York winters, has been produced by a cooperative breeding project of the state experiment station at Geneva and the New York Botanical Garden, according to Dr. A. B. Stout of the latter institution. A Sultanina vine, which produces pollen but no seeds, was chosen as the male parent, and crossed with another light-skinned grape which produces a very few seeds.

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MEDICINE

Glass Passes Health Rays

Tuberculosis victims, rickety babies and other shut-ins can now enjoy the health-giving rays of sunlight indoors. The council on physical therapy of the American Medical Association has tried out the various glass substitutes on the market that have been designed by ingenious manufacturers to admit the ultra-violet rays cut out by ordinary window glass, and have found four that pass muster of both spectroscopic and biological tests.

Two of the samples tested are transparent to the visible rays of sunlight as ordinary window glass though one can be supplied in an opaque form if desired. Both partake of the nature of true glasses but are more expensive. They will probably find considerable use ultimately, in solariums, nurseries, schools, and playrooms.

The other two samples are of a less permanent character and did not rank quite so high in the tests as the first two in their power to admit anti-rachitic rays. One is composed of a wire-mesh screen filled with some sort of celluloid material while the other is a thin, fairly loosely woven cloth treated with a paraffin-like substance. These are opaque but more or less unbreakable and sell at a lower figure than window glass.

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PHYSIOLOGY

Man Eats Little of Total

Burning 8,900,000,000,000 tons of coal, 8,900 times as much as the world produces in a year, will release about as much energy as contained in the sunlight captured annually through the production of plant foods. Of this huge total, the human race uses less than two-tenths of a per cent., according to an estimate made by Dr. John M. Arthur, of the Boyce Thompson Institute for Plant Research.

Every day each one of the 1,700,000,000 human beings of the earth consumes about 2,000 calories of food. Even meat comes indirectly from plants. The human race is therefore dependent on photosynthesis, the process by which the plant uses sunlight to form food. The total consumption of food during the year by man amounts to about 1,200,000,000,000,000 calories. All of the other animal life, vertebrate or invertebrate, large or microscopic, on the globe as estimated to consume about six times this amount.

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BOTANY

Bananas Still Plenteous

Despite the news that the United Fruit Company has sent for an expert to recommend plantings of other fruits in huge areas where banana wilt has made the growing of bananas unprofitable, there is no chance that the words of the one-time popular song, "Yes, We Have No Bananas" will ever come true, according to Dr. W. A. Orton, scientific director of the Tropical Plant Research Foundation.

Although banana wilt has caused the loss of millions to the commercial banana industry in Central America, and continues to spread, the situation is far from hopeless, said Dr. Orton. One variety naturally resistant to the disease has been found, the Cavendish banana. This variety is small and not very well adapted to trade, since it must be shipped in special containers, but the fact that it is not subject to banana wilt is in itself encouraging. The development of resistant strains of desirable varieties was recommended some time ago by E. W. Brandes of the U. S. Bureau of Plant Industry. Experiments in this field have been carried on for some time by the United Fruit Company, and although they have so far met with little apparent success, they may at any time do so.

Another hopeful sign in the fight against banana wilt was the recent investigation by Prof. J. Knudson, of Cornell, of the relation of the chemical content of the soil to susceptibility to wilt. He found that bananas grown in soil with a large lime content were not apt to be subject to the disease.

Research in the banana wilt field will eventually yield a solution of the problem, Dr. Orton said, and insure to the public an endless supply of desirable varieties of this important fruit, which leads all others in food value and surpasses most of the vegetables in energy value and tissue-building elements.

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GENERAL SCIENCE

Pharmacists Celebrate

Delegates to the seventy-fifth annual meeting of the American Pharmaceutical Association recently celebrated the diamond anniversary of their organization at St. Louis. Some five hundred pharmacists reported and discussed the latest developments in the field of pharmacy.

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The sword attached to a swordfish is sometimes three feet long.