

CHRONOLOGY

Celebrations for Virgil Held One Year Too Early

MANY celebrations have been held in Italy this year of the 2000th anniversary of the birth of the great Latin poet Virgil, but they have really been held a year too early. Dr. Pio Emanuelli, astronomer at the Vatican Observatory, has pointed out that the actual bimillenary comes next year, in 1931.

The reason for this is that there was never a zero year. The year 1, A.D., immediately followed the year 1, B.C. Therefore an event that took place in 5 B.C., for example, would have its tenth anniversary in 6 A.D. The first anniversary would be in 4 B.C., the second in 3 B.C., the third in 2 B.C., the fourth in 1 B.C., the fifth in 1 A.D., the sixth in 2 A.D., the seventh in 3 A.D., the eighth in 4 A.D., the ninth in 5 A.D., and the tenth in 6 A.D. Simply subtracting the years B.C. from the anniversary desired, which would seem at first sight to be the correct method of finding it, would give the incorrect result of 5 A.D. for the tenth anniversary.

The date of Virgil's birth is taken as 70 B.C., and subtracting this from 2000 gives 1930. But one year must be added to make up for the lack of a zero year, and so the actual two thousandth anniversary will occur next year, whether it is celebrated or not.

Science News Letter, October 4, 1930

CHEMISTRY—ENGINEERING

Latest Disaster May Reveal New Facts on Exploding Dust

THE FIFTH and most severe of five dust explosions that have occurred in a month is now being investigated by the U. S. Department of Agriculture. David J. Price, engineer in charge of grain dust explosion work in the department's bureau of chemistry, has been sent to Decatur, Ill., to study at first hand the disastrous explosion which occurred there on Saturday, Sept. 20, in a starch plant.

Just before departing, Mr. Price told Science Service that the plant in which the explosion occurred was a very modern one, and was considered to be one of the most progressive in the practice of methods for the prevention of explosions. Yet an explosion occurred, with five deaths resulting and two more injuries that were expected to be fatal.

Because the explosion occurred despite all precautions, Mr. Price thinks that the study of its effects may reveal some hitherto unknown facts about dust explosions.

The first of the recent series of dust explosions occurred on August 20, in Baltimore, when a grain elevator was demolished with five deaths. This, also, was a very modern plant, in which all recommended precautions were taken. The next two were cattle feed plants, in Kansas City and Minnesota, with three and two deaths each. Then occurred one in a tobacco plant in Richmond, which, fortunately, resulted in no loss of life. Mr. Price stated that this was one of the first explosions of tobacco dust, which is not ordinarily as hazardous as dust of other kinds, such as grain.

Dust becomes explosive when floating in the air, so that each particle has a plentiful supply of oxygen to enable it to burn rapidly. The same dust, if in a pile, might not burn, and might even extinguish a match plunged into it.

Science News Letter, October 4, 1930

ASTRONOMY

Tempel's Second Comet on Regular Visit to Earth

TEMPEL'S second comet, last seen on its visit in the summer of 1925, has again returned to the neighborhood of the earth. Prof. George Van Biesbroeck, of the Yerkes Observatory at Williams Bay, Wisconsin, picked it up on the evening of Sunday, September 21. Dr. Edwin B. Frost, director of the observatory, has announced. The comet was within approximately the diameter of the full moon of the place predicted for it by Dr. A. C. D. Crommelin, famous English authority on cometary orbits. Dr. Crommelin made his prediction of the location of the planet about a year ago.

When Dr. Van Biesbroeck picked it up, it was close to the boundary between the constellations of Scorpio and Ophiuchus.

Tempel was a European astronomer who first discovered this comet in 1873. Since then it has been observed on seven returns, including the present one, and it comes back once in about five and a fifth years. It never becomes bright enough to be seen with the naked eye. At present it is of about the twelfth magnitude, visible only through large telescopes.

Science News Letter, October 4, 1930

IN SCIENCE

AVIATION—METEOROLOGY

Greatest Darkness Brought By Smoke After Dawn

SO FAR AS visibility over a distance is concerned, the greatest darkness of the day comes after dawn, not just before, as the old adage has it, according to a report made to the U. S. Weather Bureau by F. H. Weck, based on studies made during the first quarter of 1930 at the Chicago airport. At 4 A. M., in March, it was possible to see horizontally for a distance of eight miles, but a little after 7 A. M., it was cut down to three and a half miles, he found. He ascribes this condition to the stoking of household furnaces after the man of the house arises, thus increasing the amount of smoke coming from them.

As the day advances, the visibility increases, and drops again in the late afternoon, as household furnaces are fired again, and factory fires banked for the night. That the difference is due mainly to smoke, which in turn depends on the amount of coal consumed, is shown, Mr. Weck said, by the fact that the average visibility was better for the month of March than for the month of January.

Science News Letter, October 4, 1930

EDUCATION—BIOLOGY

Drawing Found Not Helpful To Students of Science

THE DRAWING of specimens in laboratory notebook, a time-honored method of impressing the structure of plants and animals upon the mind of the students taking courses in elementary biology, has been tried and found wanting by Lourene Taylor, instructor in plant biology at the University of Oregon.

The trial was made on 178 students, 91 of whom made their own drawings. For the others ready-made drawings were provided which the student had merely to label correctly. It was found that the students who did not draw got along a little better on the average than those who labored with the original drawings.

Science News Letter, October 4, 1930

E FIELDS

SEISMOLOGY

Study Toy Houses Shaken By Synthetic Earthquakes

SYNTHETIC earthquakes, manufactured in a small steel platform and allowed to act on model houses and buildings built in the Stanford University, California, engineering school, are teaching engineers how to build the structures which will withstand the severe shakings of the earth that occur sometimes in California and other parts of the world. Prof. Lydik Jacobsen, of Stanford, has reported to the National Academy of Sciences his researches upon the horizontal part of the earth shaking. The small size houses are shaken in various ways by being placed on the platform mounted on wheels.

Science News Letter, October 4, 1930

MEDICINE

Study Shows Tonsil Removal Is Not a Sure Protection

REMOVAL of the tonsils does not give a child sure protection against many or in fact any of the usual health hazards of childhood, Dr. Albert D. Kaiser of Rochester, N. Y., has reported to the American Medical Association. Dr. Kaiser's report is based on a study of over 4,000 Rochester school children.

Removing a child's tonsils and adenoids has become so common a procedure that approximately half the older children of American cities have had this done, Dr. Kaiser estimated. The operation is commonly performed in the hope of relieving or preventing great variety of conditions. Actually it benefits some but not all of them, Dr. Kaiser's studies showed.

Sore throats were impressively fewer in the children whose tonsils had been removed. Likewise fewer of these children had scarlet fever, diphtheria and inflammation of the glands of the neck.

Acute head colds and inflammation of the inner ear were appreciably reduced during the first three years following removal of the tonsils, but were not much affected during a ten-year follow-up period.

Laryngitis, bronchitis and pneumonia not only were not benefited by removal of tonsils but actually occurred more frequently in children whose tonsils were removed.

These children were less likely to get a first attack of rheumatic fever, St. Vitus' Dance, growing pains or rheumatic heart trouble, but removing the tonsils did not seem to help recurrent attacks of these conditions. The children whose tonsils were removed at an early age were least likely to have these diseases.

Science News Letter, October 4, 1930



GENERAL JOHN J. CARTY

GENERAL SCIENCE

Science Award in Honor of General John J. Carty

A NEW honor and award that will be given to leading scientists of the future was established through the acceptance by the National Academy of Sciences of a trust fund of \$25,000 presented by a group of officials of the American Telephone and Telegraph Company in honor of General John J. Carty, who recently retired from active connection with the scientific research of that organization.

The John J. Carty Medal and Award for the Advancement of Science which will be supported by this fund may be "either for specific accomplishment in some field of science or for general service in the advancement of fundamental and applied science."

The donors of the fund explain that the award was established as a testimonial to General Carty's "noteworthy contributions to the advancement of fundamental and applied science and in appreciation of his great service for many years in developing the art of electrical communication."

Science News Letter, October 4, 1930

METEOROLOGY

100 Lightning Flashes Per Second Causes Static

Radio static is due entirely to lightning flashes, in the opinion of physicists attending the recent meeting of the British Association for the Advancement of Science held at Bristol. This idea disagrees with opinions of scientists elsewhere, notably in France, but Sir Ernest Rutherford and Sir Oliver Lodge, deans of British physics, backed up the opinions of their younger contemporaries.

Approximately a hundred lightning flashes per second occur throughout the world and the British studies show that atmospheric or static also occur at the rate of a hundred a second. Instruments have been devised to record the distance, direction, intensity, and waveform of each atmospheric.

It is expected that this work will prove of advantage to aircraft as it will allow the location of distant storms that might endanger air transportation.

Science News Letter, October 4, 1930

EDUCATION

High Schools to Get Books For Best Scientific Essays

DECISION to offer \$1,800 worth of books to high schools submitting the best essays on scientific subjects by students has been made by a special committee of the American Association for the Advancement of Science. The date for final submission of essays has been set for March 15, 1931.

Early notification from schools interested in entering students in the essay contest is requested by the executive committee, headed by Dr. Otis W. Caldwell, with offices at 433 West 123d Street, New York City.

Among the list of forty-four proposed subjects for the essay writing are:

"How has science changed my everyday life?"; "What great inventions not yet made are needed in the modern world?"; "My greatest teacher and why (not limited to science)"; and "My own scientific experiments, why I made them and what I gained from them."

If the student essays show sufficient merit, it is proposed that they shall be brought out in book form. Besides the prizes to the twenty schools which will divide the \$1,800 in books among them, the committee expects to award winning students with "Recognitions of Achievement," if the essays are worthy.

Science News Letter, October 4, 1930