

Anniversaries of Science

December 28, 1870.—The “flash spectrum” of the reversing layer of the sun was caught by Prof. C. A. Young during an eclipse at Xerez de la Frontera, Spain.

The eclipse of December 28, 1870 . . . is memorable for the discovery by Young of the “reversing layer” of the solar atmosphere. This term is now applied to a shallow stratum resting immediately upon the photosphere, the absorption of which produces the principal dark lines of the solar spectrum, but which, being incandescent, gives a spectrum of bright lines by its own light when the light of the sun is cut off. This layer is much thinner than the chromosphere, and may be considered to form the base of the latter. Owing to its thinness, the phenomenon of the reversed bright lines is almost instantaneous in its nature.

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

December 30, 1691.—Robert Boyle, the chemist, died.

I must not look upon any body as a true principle or element, but as yet compounded, which is not perfectly homogeneous, but is further resolvable into any number of distinct substances, how small soever . . . I mean by elements, as those chymists that speak plainest do by their principles, certain primitive and simple, or perfectly unmingled bodies; which not being made of any other bodies, or of one another, are the ingredients of which all those called perfectly mixt bodies are immediately compounded, and into which they are ultimately resolved.

—Boyle: *Sceptical Chymist*.

December 31, 1844.—Manilla dropped one day from its calendar to rectify a mistake made in the 16th century.

To the first circumnavigators the necessity of altering their day on passing the meridian of 180° was unknown, and so it came about that—the error persisting until quite recent times—Hong-Kong and Manilla called the same day Monday and Sunday.

—Guillemard: *Life of Ferdinand Magellan*.

January 1, 1801.—Guiseppe Piazzi discovered Ceres, first known of the asteroids.

Between the orbits of Mars and Jupiter lies a large gap of space, in which, according to Bode's law, should lie a planet 2.8 times as far from the sun as our earth. Beginning about the year 1800, astronomers have been filling this gap with little planets, none of them nearly as big as our moon, and ranging from a diameter of 500 miles down to, comparatively speaking, mere rocks of but a few miles in size. In all, nearly a thousand have already been discovered, and it seems probable that if we could detect every one, however small, the number would be almost countless.

—Abbot: *The Earth and the Stars*.

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GEOLOGY

Shovel Digs Out Sharks

More fossil fishes and sharks are being turned out in a day by a power shovel operating in the region to the west of Cleveland, Ohio, known to geologists as the Big Creek basin, than the patience of old time collectors would bring to light in a whole season. Since lots are being laid out in this section of Cleveland shale prized by scientists for its fishy relics of a past age, the Cleveland Museum of Natural History has obtained the cooperation of one of the land companies and funds from friends to manipulate a steam shovel. Though Big Creek is only one foot deep, sharks five feet long are caught by the shovel while the bungalows creep closer every day. Many choice fishes, millions of years old, are being saved to science that would otherwise be lost, according to Dr. J. E. Hyde, curator of geology of the Cleveland Museum.

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BIOLOGY

Evolution Fight in Carolina

The evolution issue, thought dead in North Carolina, threatens to crop up again at the coming session of the legislature. A fundamentalist committee has a bill in preparation, which they state they will introduce early in January.

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PSYCHOLOGY

Child Intelligence

A quick method of rating intelligence by means of the crude, angular, moon-faced “men” that all children like to draw has been evolved by Dr. Florence L. Goodenough, of the Institute of Child Welfare at the University of Minnesota.

Dr. Goodenough collected 4,000 imaginary drawings of men made by children from four to eleven years old. The men ranged from cubistic scrawls by the youngest and least intelligent children up to portraits of considerable realism with such details as five fingers, buttoned shoes, eyelashes and moustache. The drawings were rated according to the proportions of the human figure and the amount of detail shown.

The girls tended to range slightly higher in intelligence than the boys, by this test, Dr. Goodenough found. She suggests as a possible explanation that a child who perseveres in the face of difficulties and who gives careful attention to details is likely to make a higher score on the drawing test than another child who has equal ability but lacks these particular characteristics.

“It is possible that a slight superiority of girls over boys in traits such as these may account both for their more rapid progress in school and their higher average on the drawing test,” she states.

Because the test does not require a verbal explanation in order that the children may understand what they are to do, it is considered particularly suitable for investigating the mentality of deaf children and children from foreign homes.

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ZOOLOGY

Spiders in Snows

Tiny spiders, the highest-up animals on earth, living 4,000 feet above any vegetation on the Himalayan slopes, are some of the survivals of the fittest described by Major R. W. G. Hingham, naturalist to the Mt. Everest expedition, in the Annual Report of the Smithsonian Institution for 1925 just published.

The minute creatures were found on islands of broken rock surrounded by snow and ice with no sign of life around them so that for food they must eat each other, said Major Hingham.

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Fruit dealers are using heated cases in which to display bananas.