

SCIENCE NEWS

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HURRICANES

AMERICAN hurricanes, that bring such destruction each year to property in the Gulf and Atlantic coastal states and to vessels in the neighboring waters, are similar in origin, action and direction of movement to the typhoons of the west Pacific which American forces will experience before the summer is over. They are destructive whirling masses of air, heavily laden with water, on opposite sides of the earth but both north of the equator.

The season for both hurricanes and typhoons is about the same, the summer and early fall months. Both originate over the oceans a little north of the equator in the regions where the trade winds are dying out and merging into the doldrums or calms. They usually form when the equatorial calms reach their most northerly extension. The heat and moisture of the doldrums are contributing factors.

The Caribbean Sea is usually regarded as the breeding place of the American hurricane. The Caribbean and the Atlantic to the east is more correct. The 50- to 100-mile-wide circular movement of air moves westward due to the deflective force of the rotation of the earth, then to the north and the northeast. The forward motion is relatively slow, 10 to 25 miles per hour, but the whirling movement of the air in the storm may be over 100 miles an hour. They may travel northward across the gulf of Mexico to strike the coast of Texas and Louisiana, or farther east to strike the gulf coast of Florida. Frequently they pass along the east coast of Florida and northeasterly along the Atlantic coast.

The most destructive American hurricane of modern times was the one in 1900 that destroyed Galveston, Texas, and took some 6,000 lives. Florida has been the southern scene of the most destructive ones since then. A hurricane in September, 1939, extended into New England, took a toll of about 500 lives and destroyed millions of dollars worth of property in the six New England states and on Long Island.

Heavy rain usually accompanies a hurricane. Heavy rain and high tides caused much of the loss of life in the Galveston disaster. More than 24 inches of rain fell in 24 hours during a hurricane in North Carolina. This is the heaviest recorded rainfall in a single 24-hour period in the United States.

The origin of the name, hurricane, is not certain. Columbus was probably the first white man to encounter the West Indies or American storm now known by that name. He, or some of his followers, learned the native Caribbean name, which was "huracan" on some of the islands, and "furan" on others. Only the spelling beginning with "H" survived the sixteenth century. Whatever the original name, the American hurricane and the west Pacific typhoon can be known as twin brothers.

ITEMS

For the second time in just a day over two months, an astronomer named du Toit, on the staff of the Harvard

Observatory at Bloemfontein, South Africa, has picked up a new comet. The discovery was made at 3:00 A.M., Greenwich time, on June 11, which is the equivalent to 11:00 P.M., EWT, June 10, in this country. The preceding du Toit comet was first observed on April 9. The new du Toit comet is an inconspicuous object, of only tenth stellar magnitude, and thus invisible to the naked eye. Its position, in the southern hemisphere constellation of Sculptor, puts it out of reach of telescopes in this country. Its position when discovered was in right ascension 1 hour 8 minutes, declination minus 20 degrees—celestial equivalents of longitude and latitude. A check on its motion showed that it was traveling fairly rapidly in a southwesterly direction.

A LARGE-SCREEN television receiver for the home and an improved radio-phonograph with a new electronic reproducer, both displayed recently for the first time, will bring better pictures after the war to homes and a realism never before obtained in recorded music, it is claimed. Both are developments of the General Electric Company. The television receiver produces a picture on a screen 16 by 22 inches and has several features that give brilliance and contrast not obtained by prewar receivers. It uses a five-inch cathode ray tube, a parabolic mirror and a correcting lens to project the picture to a flat mirror and then to the screen. While additional improvements may later be made, it is now a satisfactory receiver that can be produced commercially as soon as war conditions permit. Technical details of the postwar radio-phonograph have not yet been released, but superior performance is accomplished by improvement of all elements of the phonographic system from pick-up to loudspeaker. More perfect tonal balance is achieved at both high and low volume, and the reproduction is free from chatter, needle radiation and scratch prevalent in former machines.

PEANUTS, long regarded lightly as of interest only to small boys and circus elephants, are steadily rising in the scale of industrial and agricultural respectability. The U. S. Department of Agriculture is finding new and more efficient uses for them, in addition to their already big-business role as producers of a high-grade vegetable oil. The high-protein meal left after oil extraction has long been used as livestock feed; but now industry comes forward to compete with livestock for a share of it. Peanut protein has been found useful in adhesives, paper sizings and fabric coatings, by chemists at the Southern Regional Research Laboratory in New Orleans. The sugary liquor remaining after protein extraction can be used as a culture medium for a food yeast, thereby providing an additional source of protein for livestock feeding. At the Northern Regional Research Laboratory in Peoria, Ill., chemists have developed a method for using ground-up peanut hulls instead of ground cork as a basis for crown cap liners for bottles.