

GEOLOGY

Winds Caused Pattern

Winds, not meteors, suggested as cause for regular pattern of Carolina "Bays" after world-wide study of special lake groupings known as oriented lakes.

► WINDS, NOT METEORS, caused the regular pattern of the much-disputed Carolina "Bays," or "Pocosons," as well as other groups of lakes found in southwest United States, Alaska and Australia.

This explanation for the puzzling Carolina "Bays" is put forth by Dr. W. Armstrong Price, professor of geological oceanography at the Agricultural and Mechanical College of Texas, after a world-wide study of special lake groupings known as oriented lakes. These are groups of elliptical, or egg-shaped, lakes and lake basins in which the long diameters of most of the basins lie in the same direction.

According to students of meteors, there seems to be no place in the world, Dr. Price reports, where such regularly patterned oval lakes were caused by meteor impact. Celestial bombardment was the explanation first put forth to explain existence of the Carolina "Bays."

The meteor theory, however, does not explain the occurrence or shape of the "Bays" for two main reasons: first, the known meteor craters are said to be round, not elliptical, and second, they all have highly disturbed rim folds, not merely rim ridges—the former being lacking at the "Bays." Moreover, no fragments of meteorites, commonly abundant at true meteor craters, have been found around the "Bays."

Dr. Price believes that the patterned lake groupings originated and got their chief growth when the climate was drier, like that of regions marginal to deserts. These regions are treeless prairies with the upper levels of groundwater lying fairly deep below the ground surface. During long or short periods when these lakes held water, the strong, dry-region winds shaped them into rounded and oval forms by active wave and current erosion, sweeping up the eroded sand into smooth beach ridges.

During some periods when the lakes were dry, winds were strong enough to blow loose sand and silt out of the basins. Percolating rain waters leached the walls and floors, loosening the sediments and making them vulnerable to wind scour. Large deposits of these materials exist in many deep basins, in others have blown completely away. Some lakes are shaped mainly by the wind-transported materials.

The basic cause of the oval shapes is irregularity in the wind circulation, making one axis longer than the other. In many cases the initial elongation was due to the basins originating in parallel, elongated depressions either wind-scoured or between

long dune ridges. Thin sheets of dune sand were more widespread at times of drier climates than would be supposed, having been entirely blown away from large areas.

Wind irregularity under a former, drier climatic regime is responsible for the beautiful pattern of the Carolina "Bays" as well as for other oriented lakes, Dr. Price has concluded. Many of these lakes are now changing shape since the wind directions and strengths have changed.

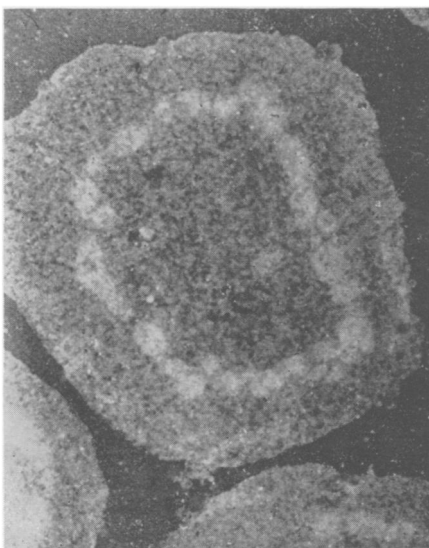
Science News Letter, November 24, 1951

MEDICINE

Red Blood Cells Washed To Show Virus Inside

► WHEN RED blood cells are washed by a special process so that only their outer membrane, or covering, remains, certain disease viruses that get inside the blood cells can be seen with electron microscopes, scientists at the Institute of Biological Sciences in Montevideo, Uruguay, find.

The red blood cell washing process, which showed type O virus of hoof and mouth disease inside the cells, was developed by the Argentine professor, Dr. Eduardo de Robertis, Dr. Bernardo Epstein



VIRUS IN CELLS—Red cell membrane showing groups of virus in the form of a ring. The viruses are of hoof and mouth disease.

of the Institute of Animal Biology of Montevideo, and Dr. N. M. Fonseca of the University of Brazil at Rio de Janeiro. Details are reported in the journal *SCIENCE AND INVESTIGATION* (April).

Science News Letter, November 24, 1951

MEDICINE

Can Find Cancer Five Years Before Symptoms

► ONE KIND of cancer in women can be discovered and treatment started five to seven years before typical symptoms appear to send the woman to her doctor, Drs. Rodney B. Nelson and Albert W. Hilberg of the U. S. Public Health Service find.

Their findings were made through examination of more than 3,000 women at a clinic formerly operated by the U. S. National Cancer Institute at Hot Springs, Ark.

The kind of cancer that can be discovered in this very early, preinvasive stage is that which attacks the cervix of the uterus.

In their examinations the two doctors employed the cytologic test and the biopsy. The former is the taking of a smear from the surface of the cervix, while the latter is the taking of a small specimen of tissue. Results of both these tests are disclosed in laboratory examination of the material to determine whether cancer cells are present. The cytologic test is made first and usually indicates whether a biopsy should be made.

"Under the conditions of this study," Drs. Nelson and Hilberg reported, "the combined accuracy of the two techniques in diagnosing carcinoma of the cervix approaches 100%."

Science News Letter, November 24, 1951

AERONAUTICS

Ten Turboprop Engines Give New Flying Boat High Speed

► TEN TURBO-PROP engines in the new British giant flying boat, the Princess, will provide a cruising speed of 380 miles an hour. The first of this type of 140-ton craft is now out of the hangar and is being completed on an apron on the water front. It will be ready for flight tests early next year.

The Princess is a product of Saunders-Roe works, Cowes, Isle of Wight. Designed originally for a civil transport, it is now planned to use it to carry troops. The civil version would accommodate 105 passengers. As a troop carrier, its capacity is 200 fully equipped men.

Three of these flying boats are actually under construction. They will be able to make 3,500-mile non-stop flights, which is sufficient for linking strategic seaports between Britain and the East. The engines to be used are Bristol Proteus turbo-props, and the ten will give an aggregate output of 35,000 horsepower.

Science News Letter, November 24, 1951