

METEOROLOGY

Erratic Gulf Hurricane "Licked" by Land Wind

Gulf-Born Storm Forced to Double on Its Tracks; Inland Weather Favors Fall Agricultural Work

"SCREWY," though slang, is nevertheless an accurate characterization of the conduct of the Gulf hurricane that threatened the Gulf ports of Texas during the last week in August, and then put out to sea again, bound no one knew whither. Its course could almost be charted with a corkscrew.

It was not in any respect a typical autumnal tropical storm in its coming, and in its howling retreat over the thrashed-up waters of the Gulf it was just as atypical, C. L. Mitchell of the U. S. Weather Bureau told Science Service. It was driven back, "licked," by a high-altitude land wind from the north.

It was not a large storm, as hurricanes go, but what there was of it was pretty intense. When it approached Galveston, meteorologists expected it to go on ashore, wreak what damage its strength enabled, and then blow itself out over the wide plains of Texas. That is the ordinary, or "orthodox" thing for a hurricane to do. People on the Gulf coast, warned of its coming, made things as secure as possible and then got out of the way.

Instead of striking as expected, however, it veered back toward the east, whence it had come, and when last heard of it was still doing its dervish dance out over the Gulf, some 280 miles to the south of the Mississippi delta.

Meteorologists were as baffled as laymen over this abnormal behavior, until reports of pilot balloons launched at inland points in the South and West began to come in. These showed that a strong wind at high altitudes had steadily pressed against the westwardly drifting storm from the Gulf, amounting in effect to a counter-attack which it could not overcome or pierce, so that in the end there was nothing to do but retreat.

This saving high-level north wind was born of a great, persistent area of high pressure, that moved in with the recent cool wave from the Northwest and had much to do with the beneficial

rains that have fallen in the Midwest and Southwest. The "high" constituted a citadel of even, steady weather which the violent but small off-shore storm could not penetrate, and from which the land-wind sortie issued to drive it back.

In its birth no less than in its behavior, the storm was atypical, Mr. Mitchell said. The usual autumnal hurricane comes into being somewhere out over the South Atlantic, drives up through the Caribbean, and makes its landfall somewhere in the West Indies, on the South Atlantic coast of the United States, or on the Gulf coast of this country or Mexico.

Not so the present storm. It apparently originated right in the Gulf of Mexico itself, for its presence was first reported somewhere to the southward of the Mississippi delta. Thence it fol-

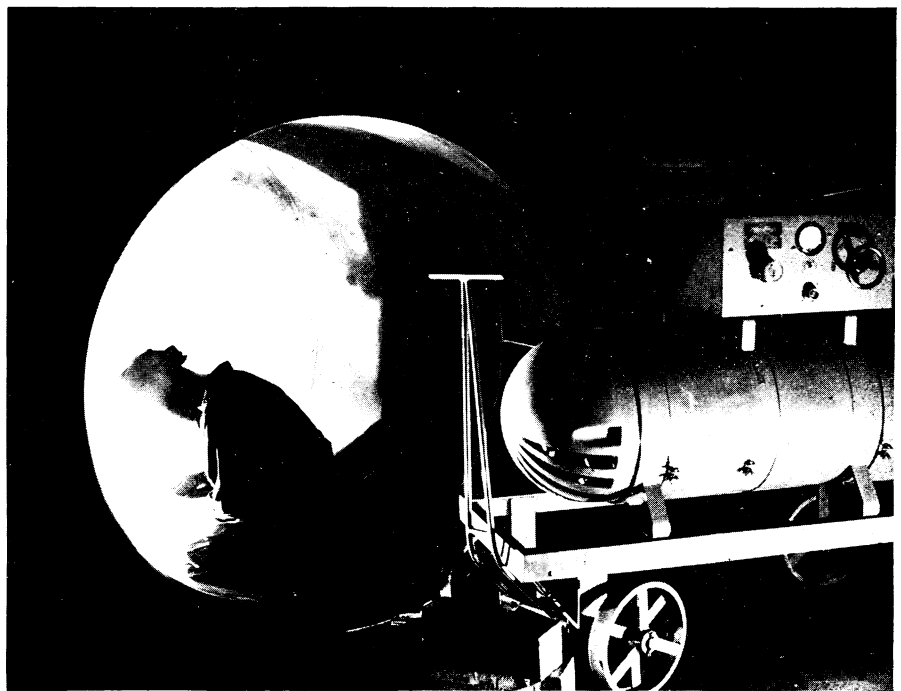
lowed its erratic course, first toward the west, then back again in an easterly direction.

This has been a freak season for marine storms anyway, Mr. Mitchell commented. There have been three so far, one in June and two in August, none of them of tropical Atlantic origin. The other August one originated off the Carolina coast and wound up on the shores of Texas.

Two August "tropicals" striking Texas in itself constitutes a record, Mr. Mitchell reported. In 48 years of record, only half-a-dozen hurricanes have struck the Texas coast during the month of August. Never before, so far as can be determined, have the weather-gods bestowed upon it such a double doubtful favor.

Farmers over a wide area in the Ohio valley and the southern part of the Midwestern corn belt are now energetically pushing ahead with their fall plowing program, taking advantage of the thorough wetting down which the soil received from early autumn general rains. In Iowa, Minnesota and northwestern Wisconsin, other farmers followed their example, as the skies cleared after a second rain area that swept across the grain area on Aug. 28 and 29.

At the same time, they received encouragement from the fact that the cool



MODERN VULCAN

The fantastic figure performing the rite at the left is welding 315,000 pounds of stainless clad steel into the huge pipe, part of which is shown. When completed, the pipe will carry air under pressure. It is being built by the Cream City Boiler Company of Milwaukee, Wisconsin.

wave, that even brought light frosts in the northern parts of the corn belt, passed without bringing temperatures low enough to do material harm to the corn, which only a couple of weeks previously had been fighting for its life against hundred-degree midday heats, with dwindling soil moisture to draw on. Corn over practically the whole of the major crop areas is now safe from frost, J. B. Kincer, crop weather specialist of the U. S. Weather Bureau, stated.

The Midwest is not the only section that has been favored with saving rains, Mr. Kincer stated. Over the Southwest the rain-clouds moved, materially easing the situation, especially as it affected the cotton crop of northwest Texas and the late pastures everywhere. Failing supplies of drinking water for the stock were replenished, at least in part, and a small beginning was made in reducing the exceedingly serious moisture deficit in the soil.

Science News Letter, September 8, 1934

Rubbing mild soap, moistened, on mosquito bites is a simple remedy for the itching they cause.

RADIO—METEOROLOGY

Static From Hurricanes May Aid in Locating Them

IN TENSE radio static caused by ocean hurricanes as they sweep across southern waters may be used to locate these storms and chart their progress.

The University of Puerto Rico, working in collaboration with the University of Florida, proposes to undertake a research program on the location of hurricanes by the radio static they produce. The work will be under the direction of Dr. G. W. Kenrick, who is joining the University staff this year as visiting Professor of Physics. Dr. Kenrick is on leave from Tufts College, Medford, Mass.

Ample evidence exists, Dr. Kenrick declares, supporting the theory that hurricanes send out static which may be used to locate their position just as radio signals from an ocean liner may be used to locate its position by means of a radio direction finder.

Static from a hurricane, however, is only intermittent and can be easily confused with static arising elsewhere, Dr.

GEOGRAPHY

Geographers' Aid Needed In Readjusting World Relations

GEOGRAPHERS are still needed in the world, even though maps now show few "blank places." Many of the mountains, river courses and other features now confidently displayed on published maps have to be shifted and rearranged when explorers and survey parties come out with new data; and even of greater importance, men with really scientific knowledge of lands, their resources and their peoples are needed for the just rectification of boundaries and the establishment of commercial arrangements that can be expected to remain stable.

Ideas bearing on these points were laid before the meeting of the International Geographical Congress at Warsaw by its president, the well-known American geographer, Dr. Isaiah Bowman. Dr. Bowman is president of the

American Geographical Society, secretary of the National Research Council, and secretary of President Roosevelt's Science Advisory Board.

"Until expert knowledge of existing realities is available," Dr. Bowman said, "we shall not find those sought-for understandings of the world's peoples that are required to ease existing tensions. A rational change in relationships will not come by capricious action or through ignorance or provincialism. If we really understand how and why humanity is compartmented in its several regions we shall find adjustments less difficult to make even though we are at times oppressed by the complexities.

"The earth is a vast reservoir out of which man dips power. There is unequal access to that reservoir: the earth's benefits are unevenly distributed, and, in addition, as Prof. Penck has phrased it, 'There is no land of unlimited resources.'

"This is due in part to what we call the geographical layout. In part also it is due to the voltage of man's own mind, ever changing the significance of a given environment, searching out new advantages, developing new technical skills, seeking balance or proportion in community, regional and national life, extending the boundaries of knowledge and adapting the earth and humanity to satisfy material and aesthetic needs.

Uneven Distribution

"To take an example from a single field," Dr. Bowman continued: "Not always are desirable mineral deposits accessible—witness the geographical disposition of the coal beds of China; nor are they always required at the moment—witness the vast iron-ore deposits of Brazil.

"We have begun, but in no sense finished, our regional inventories of fact about the resources of the earth, the uses which we may make of them, the mutual adaptations. Nor has anyone yet been able to draw a clear line of distinction between matters under domestic control and those which can never be used rationally and fairly except through international consultation and agreement."

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