

# THE SCIENCE NEWS-LETTER

*A Weekly Summary of Current Science*

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## ARCTIC EXPLORATIONS MAY LOCATE ORIGIN OF STORMS

At least thirteen Arctic explorations are planned for the coming summer, and some of them may locate the cradle of the storms that sweep the north Atlantic Ocean, Dr. William Herbert Hobbs, professor of geology and director of the geological laboratory at the University of Michigan, said in a recent radio talk from station WCAP.

"If certain studies in Greenland, for instance, are successfully carried through," said Prof. Hobbs, "they will be of great practical as well as scientific importance, for what I have in mind is nothing less than the careful observation of the origin of the storms of the North Atlantic and Europe in the cradle where they begin their existence, and in the same early stage of their career the icebergs which are such a peril to the navigation of Atlantic waters.

"Northern storms and northern icebergs, the great perils in the navigation of the north Atlantic, alike have their breeding ground in the great flattened dome of ice which like a gigantic white cap covers almost the entire continent of Greenland - an area 1200 miles in length with an average breadth nearly one-half as great.

"The coldest place on the globe is not, as popularly supposed, the North Pole, The winter temperature at the North Pole is certainly quite warm if compared to parts of Siberia or British America. In fact, throughout the long winter season at points along the coasts of these barren land areas the winds which blow from the direction of the North Pole are the warm ones, while those from the south are correspondingly cold."

"The coldest place where temperatures have been measured throughout the year is located in Siberia, but it is certain that in the heart of Greenland and of the Antarctic the winter cold is much more intense, for even in the midst of summer the mid-Greenland air temperatures have been found to be more than 30 degrees below zero. It is therefore of prime importance to find out more about the air conditions over Greenland. One of the several polar expeditions which are being organized this year, that of the University of Michigan, has been planned to study carefully the meteorological conditions of this very critical and significant area by establishing and maintaining for a year a number of weather observing points to be served by aeroplane transportation."

Prof. Hobbs maintains that it is this intense cold of the interior area of Greenland which is responsible for the havoc-making storms that issue from its margin.

"The intensely cold ice-caps of Greenland and the Antarctic" he continued,

"are the refrigerators of the earth above which the high currents of air which have traveled from the equator are sucked down and drained off as though through a gigantic shaft, and from the bottom of this shaft they are poured out in all directions toward the margins of the ice-cap to make their return to the furnace on the equator, thus making of our air circulation a complete circuit."

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#### TAXI DRIVERS PICKED BY NEW TESTS

A new and promising set of drivers' tests, which reproduce traffic conditions of city streets by means of apparatus in a laboratory, has been devised, and is being used by taxicab companies in seven cities as a means of selecting drivers.

The tests, which are the work of Dr. A. J. Snow, of Northwestern University, are not finally perfected, but a preliminary report of them appears in a recent issue of the *Journal of Applied Psychology*, because, the author says, "of the popular and misleading publicity that has appeared in newspapers and magazines" and because of the insistent demand of the automobile industry to know the facts about them.

The tests are said to be equally suited to selection of pilots for any transportation vehicle--street car, electric elevated line, steam or electric railway, and passenger or freight motor car. They are being used by different taxicab companies in Chicago, Cleveland, Pittsburgh, South Bend, Toledo, Omaha, and Louisville.

The method of picking drivers is illustrated by Dr. Snow's test of "perception of space and motion". Two toy automobiles, whose motion is controlled by a system of pulleys and weights, are mounted on a board 20 feet long. A fixed scale of numbers is marked three inches apart along tracks on the board. The prospective taxi pilot stands facing the apparatus, 15 feet away. The vehicles are moved at different speeds in various directions, according to eight different prearranged combinations. The driver is asked at a given signal to indicate at what point the two cars will pass or overtake one another. The experimenter records the error between the driver's estimate and the actual point of passing, and also the rapidity of his responses, his speed of learning and constancy of attention.

"The theory underlying this test," Dr. Snow explains, "is that the subject who is unable, with any degree of accuracy or promptness, to make the necessary judgment suffers from a visual defect, which makes him an undesirable candidate for a pilot of any transportation vehicle. It should be understood, of course, that for each test a learning period has been established. In this period the instructions are explained until the applicant can demonstrate to us an understanding of them."

Another test measures the emotional stability of a driver during an emergency by requiring him to throw certain switches at certain signals, at the same time that he receives a slight electric shock.

Recklessness is tested by having him guide a small metal pencil through miniature traffic lanes on a board. The lanes vary in width and length and have sharp turns and curves. Electrical apparatus attached to the board shows the