

METEOROLOGY

Escape Tornado Injury

► WHEN A tornado cloud appears, if you have time you should shut off the electricity and gas to your house immediately. Then you should retreat to the southwest corner of the basement if your house is frame. If you are in a building made of reinforced concrete or of steel, stand beside an inside partition on a lower floor.

If you are outside, lie flat in a ditch or culvert and hold on to a fixed object so you won't blow away. Protect your head against flying objects. If you are in a city, don't jump in your car and try to get away from the tornado because high winds, often carrying debris and hail, might wreck the car and even kill the occupants.

Those words of advice come from Dr. Edward M. Brooks, tornado expert of St. Louis University, who estimated that the chance in any given year of a person's being killed by a twister is only one in 400,000. Dr. Brooks said most persons killed by tornadoes are struck in the head by flying debris or later are burned to death in fires following in the wake of the swirling air funnels.

Although tornadoes are more likely to occur in a general area extending from Louisiana and Texas up to Iowa and South Dakota, they have been recorded in unlikely spots east of the Appalachians. The tornado season is roughly from March to August and the storms occur in the more northern parts of the country as the season progresses.

Dr. H. Wexler of the U. S. Weather Bureau said meteorologists do not know exactly how tornadoes are formed. They seem to occur, though, when warm, moist air currents blowing inland from the Gulf of Mexico meet cold air masses moving eastward from the Pacific, he said.

Latest techniques in weather prediction make it possible to estimate approximately where the two air masses will meet, but

actually pinpointing the spots at which tornadoes will occur is not yet possible.

Dr. Brooks said persons should learn to recognize local tornado signs and to watch the skies when forecasts call for severe local storms.

Tornado clouds often are very dark because of their thickness. They may have a greenish or a yellowish tint. Often they appear to have great lumps hanging ominously toward the earth like large drops of water clinging to a ceiling.

Violent thunderstorms often precede tornadoes. A roaring or buzzing sound is created when the tornado funnel sweeps across the ground. The noise has been heard up to 25 miles away and for as long as one hour before the tornado struck the observer's area. The noise occurs to a lesser extent even when the funnel is aloft. It often is accompanied by long, overlapping rolls of thunder which create a continuous background rumble, Dr. Brooks added.

Science News Letter, April 5, 1952

PSYCHOLOGY

Plastic Eyecaps Test Color Theories

► SIXTY MEDICAL students and doctors wore plastic eyecaps which seemed to envelop them in a red, blue, green or yellow fog in an experiment to throw new light on how you see colors. The results were described to the Eastern Psychological Association meeting in Atlantic City.

The formless diffused light under the caps was given color by shining light on them through a colored filter, for a period of ten minutes. Then the light was changed to a test color.

When the eye got used to the test color, the color completely disappeared—no color

was seen. If white light or darkness were used in the pre-test, it had no effect on the time of adaptation to the test color.

By contrast, if the color of the pre-test was the same as that of the test, the color vanished immediately.

The effects of pre-test color on adaptation time to a different color failed to fit in completely with any of the accepted theories of color vision, Julien E. Hochberg, of Cornell University, and William Triebel of Grasslands Hospital, Valhalla, N. Y., told the meeting. The experiment was conducted at New York Hospital, New York.

Science News Letter, April 5, 1952

SCIENCE NEWS LETTER

VOL. 61

APRIL 5, 1952

No. 14

The Weekly Summary of Current Science, published every Saturday by SCIENCE SERVICE, Inc. 1719 N St., N. W., Washington 6, D. C., NORTH 2255. Edited by WATSON DAVIS.

Subscription rates: 1 yr., \$5.50; 2 yrs. \$10.00; 3 yrs., \$14.50; single copy, 15 cents, more than six months old, 25 cents. No charge for foreign postage.

Change of address: Three weeks notice is required. When ordering a change please state exactly how magazine is now addressed. Your new address should include postal zone number if you have one.

Copyright, 1952, by Science Service, Inc. Reproduction of any portion of SCIENCE NEWS LETTER is strictly prohibited. Newspapers, magazines and other publications are invited to avail themselves of the numerous syndicate services issued by Science Service. Science Service also publishes CHEMISTRY (monthly) and THINGS of Science (monthly).

Printed in U. S. A. Entered as second class matter at the post office at Washington, D. C. under the act of March 3, 1879. Acceptance for mailing at the special rate of postage provided for by Sec. 34.40, P. L. and R., 1948 Edition, paragraph (d) (act of February 28, 1925; 39 U. S. Code 283), authorized February 28, 1950. Established in mimeograph form March 18, 1922. Title registered as trademark, U. S. and Canadian Patent Offices. Indexed in Readers' Guide to periodical Literature, Abridged Guide, and the Engineering Index.

Member Audit Bureau of Circulation. Advertising Representatives: Howland and Howland, Inc., 393 7th Ave., N.Y.C., Pennsylvania 6-5566 and 360 N. Michigan Ave., Chicago. STAte 2-4822.

SCIENCE SERVICE

The Institution for the Popularization of Science organized 1921 as a non-profit corporation.

Board of Trustees—Nominated by the American Association for the Advancement of Science: Edwin G. Conklin, Princeton University; Karl Lark-Horvitz, Purdue University; Kirtley F. Mather, Harvard University. Nominated by the National Academy of Science: Harlow Shapley, Harvard College Observatory; R. A. Millikan, California Institute of Technology; L. A. Maynard, Cornell University. Nominated by the National Research Council: Ross G. Harrison, Yale University; Alexander Wetmore, Secretary, Smithsonian Institution; Rene J. Dubos, Rockefeller Institute for Medical Research. Nominated by the Journalistic Profession: A. H. Kirchofer, Buffalo Evening News; Neil H. Swanson, Baltimore Sun Papers; O. W. Riegel, Washington and Lee School of Journalism. Nominated by the E. W. Scripps Estate: Frank R. Ford, San Francisco News; John T. O'Rourke, Washington Daily News.

Officers—President: Harlow Shapley; Vice President and chairman of Executive Committee: Alexander Wetmore; Treasurer: O. W. Riegel; Secretary: Watson Davis.

Staff—Director: Watson Davis. Writers: Jane Stafford, A. C. Monahan, Marjorie Van de Water, Martha G. Morrow, Ann Ewing, Wedsworth Likely. Science Clubs of America: Joseph H. Kraus, Margaret E. Patterson. Photography: Fremont Davis. Sales and Advertising: Hallie Jenkins. Production: Priscilla Howe. In London: J. G. Feinberg.

Question Box

ACOUSTICS

What are the two main problems of jet plane manufacturers? p. 218.

BIOCHEMISTRY

In what way has mental illness been linked to copper in blood? p. 216.

CHEMISTRY

How is alcohol made from wood wastes? p. 213.

MARINE BIOLOGY

What is the biggest animal known? p. 219.

Photographs: Cover, General Electric Company; p. 211, Republic Aviation Corporation; p. 213, Jensen-Salsbery Laboratories, Inc.; p. 215, Roosevelt Hospital; p. 218, U. S. Air Force.

MEDICINE

What are the seven danger signs of possible cancer? p. 214.

METEOROLOGY

How is the size of raindrops now being measured in New Hampshire? p. 215.

PSYCHOLOGY

Can dice be willed to fall a certain way? p. 217.

VITAL STATISTICS

Why is secrecy on birth and death certificates a problem? p. 216.