

weathermen will plot its path and figure when it will hit an area of great atmospheric instability. It is in these areas that thunderstorms are most likely to give birth to terrible tornadoes.

Thus it may be as much as five hours before the thunderstorm reaches the danger zone. This amount of advance warning should help citizens prepare themselves better for possible tornadoes.

**Thunderstorms Predictable**

Thunderstorms themselves usually can be predicted 24 to 36 hours in advance. The Weather Bureau boasts an 85% accuracy in predicting them. They travel 20 to 40 miles an hour, averaging about 25. They have internal gusts of wind sometimes lashing the earth at speeds of 70 miles an hour or more. Although they can be predicted for an area, a single thunderstorm cannot be pinpointed. Furthermore, weathermen cannot tell which storm will, and which storm will not, spawn a tornado.

Tornado-spawning thunderstorms themselves are vicious creations. Amid their crackling flashes of lightning, their winds shriek through deserted streets sometimes at 90 miles an hour. Their rain overflows street sewers. Their golfball-sized hailstones clatter noisily upon metal automobile roofs. Even if no twister is born, forewarning of such a thunderstorm is welcome knowledge.

The sharp eyes of Texas' radar network, coupled with the professional skill of weathermen, should provide Texas and its citizens with an enviable windstorm insurance policy.

When the radar screens show storms are brewing, movie cameras will begin recording the radar picture. The cameras will shoot four frames a minute. When projected at normal speed, the film strip will condense several hours of "storm" into a few minutes.

Each of these films will be duplicated. The recording station will get a copy, Texas A. & M. will get a reel, as will the Weather Bureau. Scientists then will launch an elaborate research program aimed at ferreting out the mysterious personality of the short-

lived tornadoes. The Weather Bureau will compare films received from several stations, all showing the same storm, and will learn what it can from the movies.

In time, the tornado menace should be greatly reduced if weathermen can flash accurate warnings ahead of twisters in time to save hundreds of lives. Weathermen themselves hope they will learn enough from the radar network so that they can eliminate the guesswork in tornado predicting.

Other states are watching the radar program in Texas. Oklahoma and Louisiana have asked to be hooked into the project. Illinois has been reported intensely interested in it.

Assuming the radar network does a creditable job, it seems likely that similar networks will spring up to cover completely "tornado alley," a wide swath of fertile farmland through the central United States stretching from Texas and Louisiana into Minnesota and Wisconsin. Tornadoes twist through this alley on the heels of spring as the season moves northward, touching growing things with its green thumb. The economic savings implied by such a network reach into the billions of dollars.

**Many Sets Available**

The Weather Bureau has about 80 more of the outdated radar sets it can provide communities that want to establish electronic eyes for their local weather outposts. It costs about \$10,000 to modify one of the outdated machines for weather service, but this is \$50,000 less than a shiny new set costs. Oklahoma and Louisiana have already requested sets.

Mr. Little said the Weather Bureau hopes to equip all airport weather stations east of the Rockies with storm-watching radar, and he said this probably will be done in time. However, because of limited funds, the Weather Bureau hopes the communities themselves will contribute as Texas communities have.

Needless to say, Weather Bureau meteorologists are enthusiastic over these matchless machines. In the vernacular of the punster, the radar sets will let weathermen predict up a storm.

Science News Letter, February 13, 1954

**MATH IS FUN**

By Joseph Degrazia, Ph.D.

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**PHOTOGRAPHY**

**"Soft Snow Blanket" Wins Photograph Award**

**See Front Cover**

➤ SHOWN ON the cover of this week's SCIENCE NEWS LETTER is a silver medal winner in the Chicago Natural History Museum's annual nature photography show, being displayed this month in the Stanley Field Hall of the museum.

Taken by Bosworth Lemere of Santa Barbara, Calif., the picture, entitled "Soft Snow Blanket," won first prize in the general and scenic division of the national photography contest.

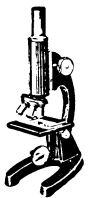
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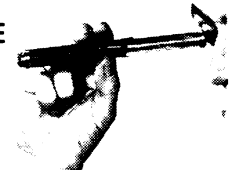
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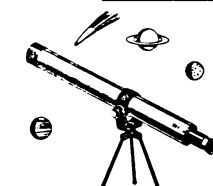


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