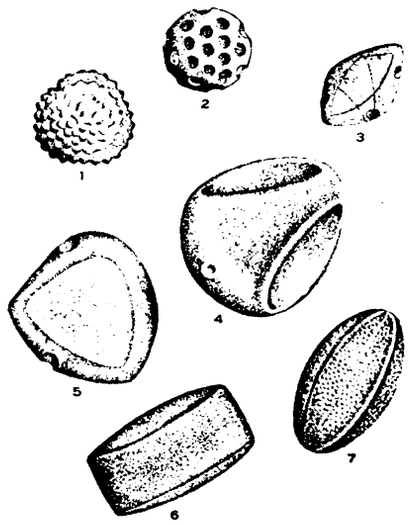


*HOW IT LOOKS*

***These are pollen granules, very highly magnified. 1. Common Ragweed. 2. Russian thistle. 3. Hemp. 4. Corn. 5. Hickory. 6. Oak. 7. Sagebrush. (From Durham's "Your Hay Fever")***

The bigger the grain the more rapidly it will fall through the air. So we find the smallest pollens are the most abundant in the air: ragweed, practically all the grasses, most of the hardwood trees.

The wind-borne pollens of pines and other similar evergreens are an exception to this rule. They, however, achieve buoyancy through another mechanism. Their moderately large grains are each equipped with a pair of hollow air sacs, that look very much like waterwings, and perform in the air very much as waterwings do for timid swimming pupils in the water.

Wind-pollination, for all it seems a hit-or-miss (usually miss) method, must not be for that reason only thought of as a mark of primitiveness in plants, or a sign of low place on the evolutionary scale. True, hardwood trees are usually assigned a spot near the bottom of evolutionary lineups among plants, and orchids, which are as far removed as possible from wind-pollination, are set at the top of their particular division of the plant kingdom. But grasses are also rather advanced plants, evolutionally speaking; and the most prolific of all wind-pollinators, the pesky but successful ragweeds, are composites, and thus among the very aristocracy of plants. They are, indeed, unacknowledged but close cousins of the sunflower—which at least one of our great political parties will tell you without hesitation is the noblest of all vegetables.



*Science News Letter, August 15, 1936*

ASTRONOMY

# Radio Data From Eclipse Seem Unlikely To Be of Much Value

HOPES that radio observations of the recent eclipse of the sun on June 19 in Siberia would be highly valuable were dimmed when scientists at the National Bureau of Standards revealed results of experiments made in Washington during the eclipse period. Although few people realized it, a great magnetic storm struck the world just before and during the eclipse.

Despite general cloudiness and other unfavorable weather conditions, which ruined the visual and photographic observations of many eclipse expeditions from the United States and other nations, it was generally felt that the radio observations would be successful.

There was world-wide cooperation on the radio tests on the recent eclipse. While scientists on the eclipse path were taking their observations of the reflections of radio signals from the ionizing layers miles above the earth's surface, scientists S. S. Kirby, T. R. Gilliland, N. Smith and S. E. Reymer in Washington took similar measurements which were to establish the normal pattern of the world's radio "roof" half way round the world. Thus, it was hoped, the effect on the layers of the moon's shadow due to the eclipse could better be ascertained.

What decreases the hopes that the eclipse radio observations will be of value is the discovery that on the two days preceding the eclipse, the eclipse day itself and the following day, the ionizing layers indicated a severe magnetic storm which made the whole world picture a greatly abnormal one.

Even if the actual observations in the eclipse zone are different from the usual pattern it will be difficult to estimate just how much of the abnormality was due to the solar eclipse and how much was due to the known magnetic storm.

The National Bureau of Standards observations, just reported (*Physical Review,* Aug. 1), mark a new step in what should become standard practice in future eclipse studies with radio.

While the effect of the sun's eclipse on the reflecting layers has been observed before in the actual eclipse zone, there has previously been no attempt to learn what were the normal world-wide conditions and to use this knowledge as a check against the eclipse readings.

*Science News Letter, August 15, 1936*

PSYCHOLOGY

# Fatigue on the Road Increases Accident Risks

TO THE experienced automobile tourist, rolling along a smooth highway for something like seven hours in a day is a simple matter. If he has stopped for a generous lunch and another time or two to stretch his legs and pick up a snack to eat or drink, he probably does not even feel tired.

Psychologists tell us, however, that this man is not mentally as efficient as he was at the start of his drive in the morning. Eye and hand do not work together with the same accuracy that they did. Vision is not so keen. It takes him longer to think. In short, temporarily he is what insurance men would call a "poor accident risk."

Details of psychological tests given to drivers at the beginning and the end of a day on the road are made public in a report by Drs. A. H. Ryan and Mary Warner, of Chicago, Ill., to the *American Journal of Psychology.*

Driving requires, among other things, fine discriminations through the eyesight and the muscular sense, sustained attention and complex movements, the scientists explain. Tests which would measure exactly these same abilities in the laboratory were chosen as a means of checking up on the efficiency of the drivers taking part in the experiment. Ability to keep the attention on a task was scored by means of a test of mental addition and another which required the calling off of the names of some 1,200 different colors. Other tests included measures of eyesight, steadiness on the feet, reaction of the skin to pressure from a blunt instrument (an index to action of the blood vessels) and coordination of the eye with the hand.

A decidedly lowered efficiency on the part of the driver was revealed by these tests given after the long drive when the results were compared with per-