

Survey, Washington, D. C., have been interpreted and a preliminary "fix" given to the epicenter, or point of greatest disturbance.

This is calculated as having been in latitude 6 degrees south, longitude 74 degrees west. It was a "deep-focus" quake, with the rock-slip that caused it occurring 350 kilometers (about 200 miles) beneath the earth's surface. Time of origin was 8:31.3 p. m., Eastern Standard Time, on Friday, Dec. 13.

This earthquake was recorded on instruments at the University of Califor-

nia, Berkeley; the University of Wisconsin, Madison; Canisius College, Buffalo; Georgetown University, Washington, D. C.; St. Louis University, and the observatory of the U. S. Coast and Geodetic Survey at Tucson, Arizona.

Several years ago, a severe earthquake "back of the Andes," that caused considerable damage and loss of life, reported itself through the seismographs a full three weeks before messengers on foot managed to struggle through the tumbled mountain ways and bring the news to the nearest telegraph station.

Science News Letter, December 28, 1935

PLANT PHYSIOLOGY

Movies Show Plants Dancing, Getting Dazed on Monoxide

Reverse of Slow Motion Speeds Movements of Plants To Make Visible Their Rhythmic "Dance of Life"

PLANTS moving with rhythmic grace as though in an esthetic dance, plants getting "blind drunk" on a whiff of poisonous carbon monoxide, featured a botanical movie show put on at a meeting of the New York Academy of Sciences, by Dr. William Crocker, of the Boyce Thompson Institute for Plant Research, Yonkers, N. Y.

In the "Dance of Life" pictures, the plants, being rooted, perforce emulated some of the modernist human dancers, who "move everything but the feet." They swayed and undulated from side to side, slowly raised their leaves in unison, like arms, and slowly lowered them again. Tips of twining plants circled like the heads of snakes. Roots "wormed" through the earth.

It was all done by the opposite of the process used in making slow-motion movies. In taking slow-motion pictures, the camera is run at greatly increased speed while taking, and the finished films projected at ordinary speed, thereby greatly slowing down the apparent rate of motion. In the films shown by Dr. Crocker, the "time-lapse" process was used. In this, the camera is set up in front of the plant and the motor-operated shutter is set for exposures at intervals of several minutes, hours or even days. In this way the plant's motions, imperceptible to the eye, are "condensed," and become evident when the film is projected at normal speed. The hundred days of a corn plant's life can

be packed into five minutes of projection.

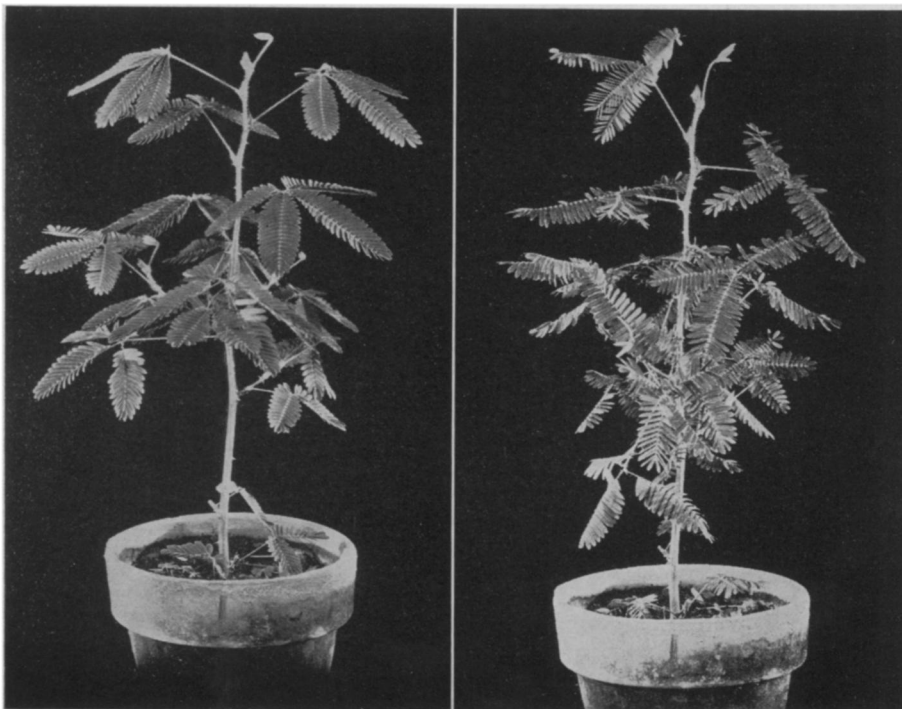
The graceful, sinuous "dance" of a growing plant is due to the fact that not all its cells expand at the same rate. Consequently, one side of the stem, or

leaf, or other organ is always growing a little faster than the other, and pushes the tip in the opposite direction. Then the other side grows faster for a while, and the plant sways the other way.

Plants were shown getting intoxicated on two different gases, ethylene and carbon monoxide. The first gas, which has been much used for producing ripe color on fruits, stimulating seeds and cuttings to grow etc., affects plants in very low concentrations. When used as a mixture of one part in a half-million of air, its first effect was stimulating. The growing tissues on the upper sides of tomato and sunflower leaf-stems grew faster, causing the leaves to turn downward. The youngest leaves were most sensitive, but soon the mature leaves "noticed" it also. Restored to clean air, the plants recovered and the leaves returned to position, though the older ones could not quite get back to normal.

Mimosas, or sensitive plants which can fold down their leaves when touched or otherwise stimulated, were so affected by carbon monoxide that they would not react, even to heat. They were like intoxicated persons who can be burned without noticing it. Yet their recovery by the morning after was complete, with no noticeable hangover.

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DIZZY FROM GAS

Just a mild dose of carbon monoxide (the poison that you get from automobile exhausts) turned the neat and dignified Mimosa, or sensitive plant (left) into the dizzy specimen on the right. But the plant was all right again next morning.