



Gopher

➤ ANY one who has ever dug a small hole in the ground should stand in awe of the earth-moving prowess of the pocket gopher. This little rodent, standing about half a hand high, weighing at the outside about a pound, and rarely exceeding a foot in length even with his long tail included, is a digging fool.

It has been estimated that in a good night's work in sandy soil a diligent gopher can dig a tunnel 300 feet long and one gopher high. This is all the more remarkable since the gopher, unlike the mole which compresses the earth by brute force as it worms its way through the ground, actually excavates the displaced earth by carrying it to the surface.

In other words, a foot-long gopher can dig a tunnel 300 times its own length overnight. A rough equivalent would be for a soldier to dig 300 slit trenches in one night, providing shelter from shrapnel for his entire company. To make the analogy valid, of course, the soldier would have to perform this feat without tools. And even so a ditch is easier to dig than a tunnel.

A gopher digs dog-fashion, loosening the dirt with its front feet and in the same motion throwing it backward underneath its body. It has heavy muscular shoulders and short powerful forearms, plus strong sharp claws which are very well suited to the job of digging.

After the gopher has loosened one load, it turns an agile somersault to face about in the opposite direction. Then, using a swimming motion not unlike the breaststroke, it pushes the load with its chest back up the tunnel to the surface.

Gophers are vegetarians. Their life is almost wholly subterranean, spent in tunneling through the earth in search of forage. Their food is made up of roots, bulbs and tubers. For this reason they are frequently a great nuisance to farmers and gardeners who find their feeding habits very destructive.

Pocket gophers get their name, not because they would fit into a pocket, but from a remarkable external cheek pouch where they store their food. These little

pockets, one on each side, are fur-lined. As the gopher cuts off bits of food it stuffs them into the pockets. The animal works rapidly, using both paws somewhat like a small boy stuffing cookies into his pants pockets when no one is looking.

When the pockets are filled to the gopher's satisfaction, it scurries off through its elaborate tunnel to one or another of its storerooms. These are small galleries especially built for the pantry purpose. Here the gopher stores his groceries against future hunger. Then he goes back to work, digging and foraging.

Science News Letter, June 3, 1950

## AERONAUTICS

### Protection from Stunning Saves Lives in Crashes

➤ FEWER lives might be lost from fire in a crashed plane if passengers were not stunned by the crash shock, the National Fire Protection Association was told by Edward R. Dye of Cornell Aeronautical Laboratory.

Back-facing seats, securely anchored, with strong well-padded backs to support the entire spine and head, were suggested by him for passenger protection. Life safety from fire in aircraft accidents depends heavily on the ability of the passengers to evacuate the plane, he stated.

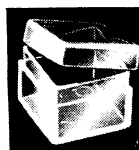
From reports covering commercial airplane crashes where survival has been limited, primarily from fire following a crash, he continued, many of the passengers had been subjected to such inertia induced shock that they could not help themselves from the wreck due to their dazed condition.

Another suggestion made by Mr. Dye to promote safety in case of a fire in a plane involves the location of all passengers aft of the wings. As stated by him, this would permit taking full advantage in a crash of the energy-absorbing characteristics of the airplane structure, and would also put the passengers in a position where the fuel will be thrown forward and away from them during the crash period.

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## DENTISTRY

### Cattle Fungus May Play Part in Tooth Decay

➤ THE fungus which causes lumpy jaw disease in cattle may play an active part in tooth decay in humans.

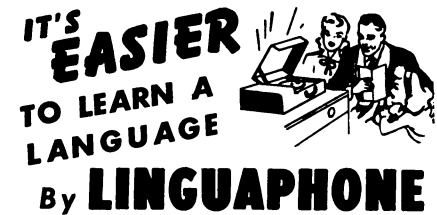
This ray fungus, or a germ enough like it to be its twin brother, has been regularly found in advancing decay spots in tooth dentin, Drs. G. W. Burnett and H. W. Scherp of the University of Rochester School of Medicine and Dentistry reported at the meeting in Baltimore of the Society of American Bacteriologists.

Dentin is the part of the tooth between the enamel and the pulp.

When they put this organism with dentin in broth in test tube experiments, the dentin lost an average of 16% of its weight in three weeks. At the same time the organic matrix of the dentin became accessible to chemical changes and breakdown.

After the dentin had been exposed to the action of the fungus for 30 days, it had the characteristic dark-brown color often seen in the dentin of a decayed tooth. These same fungi removed parts of the protein of decalcified dentin though they did not disintegrate it.

Science News Letter, June 3, 1950



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