

# What Does a R



1. Usual way to study rumen contents of a cow or steer is to make a rumen fistula, a permanent door in the rumen, with a plug which can be removed when examination of stomach contents is desired. The operation isn't painful to the animal and doesn't interfere with movement or food intake.



4. The undigested rumen contents are taken out and placed in a tub, later to be returned. They contain the very necessary rumen flora, important in breaking down vegetable matter for further digestion.



2. The fistula plug is composed of two joined circles of inner tube, with a valve to inflate the core of the plug.

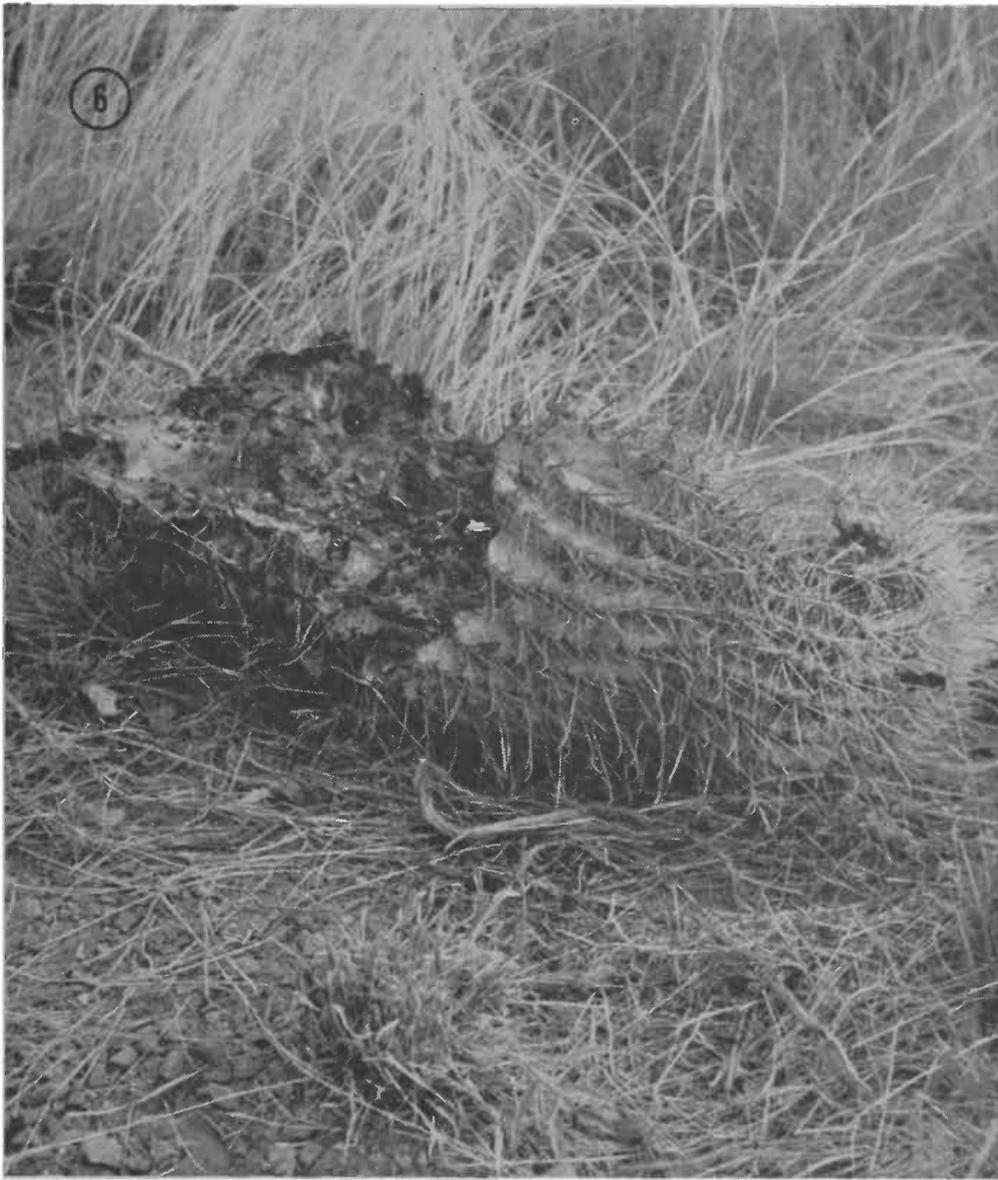
3. After the rubber plug is removed, the scientist removes rumen contents by hand.



5. When the rumen is emptied, the steer is turned free to graze. Dr. Shumway stands by a clump of mesquite trees and, using field glasses, tries to get an idea of which plants the animal selects to eat. This long distance view is later confirmed by removing the freshly grazed contents from the rumen.

# Do Steers Eat?

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6. Surprisingly, the steers (three were used in this study) disdained a plentiful stand of dry grass and chose the black, partly decomposed pulp of a dead barrel cactus. The cactus had been broken open some time before by a road grader.

8. After the newly-grazed rumen contents were removed, to be taken back to the laboratory for analysis, the previously removed rumen contents were returned, to replace both the vegetable matter and the rumen flora. Then the rubber plugs were replaced and the animals turned free until the next time. Such analyses of rumen contents are made on a monthly basis.



7. What a steer will eat! This thorn of a barrel cactus, enlarged to 1½ actual size, was found in the rumen of one steer. How in the world could the animal swallow it?

