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POCKET MICE POCKET FARMERS'
PROFITS BUT PREDATORS ARE
POLICE, INVESTIGATORS FIND

Depredations by pocket mice on grain crops in the dry-farming areas of the West have been studied by the Bureau of Biological Survey, U. S. Department of Agriculture.

Reports of crop losses from the mice in eastern Washington of from 5 to 20 percent--as high as 50 percent in a few instances--caused this careful study of the food and breeding habits of pocket mice. Research was conducted near Lind, Wash., for 15 months. Seasonal investigations were made in 2 other years. The findings are set forth in the bulletin, "Pocket Mice of Washington and Oregon in Relation to Agriculture."

The pocket mouse is the natural prey of almost any predacious bird or mammal. Shrikes, marsh hawks, red-tailed hawks, short-eared owls, and burrowing owls are outstanding enemies. During the investigations, tails from the carcasses of 205 pocket mice were taken from the nest of one burrowing owl.

Farmers are cautioned against misguided zeal in the destruction of predatory birds, an important check against destructive rodents. Mammals that prey on pocket mice include the badger, skunk, weasel, and coyote and, in the rodent group, grasshopper mice and white-footed mice.

Pocket mice derive their name from external fur-lined cheek pockets, in which they transport seed and grain to underground burrows. They are vegetarians. Hence, the bulletin points out, they apparently contribute nothing to the benefit

of the agriculturist as do other mammals and birds that compensate for their ravages by destroying harmful insects.

Crop destruction by pocket mice is greatest in the spring and early summer, Biological Survey investigators found. During this period they swarm about wheat-fields and climb the stalks of maturing grain, bending them to the ground. The mice then gnaw off the heads and feed on the tender kernels. As the crop ripens they thresh out and store the hardening grain.

Pocket mouse nests are generally located at the terminus of a single burrow running from 34 to 76 inches below the surface. Food is not stored in the nests but in small underground chambers a few inches below the surface and branching off from the main tunnel. Mice that remain in a fallow field will, of course, have stored a conglomeration of seed and grain in their food caches and farmers trying to grow pure seed often find numerous tufts of volunteer, or "outlaw" wheat sprouting from the rodents' grain stores. To safeguard the purity of the seed strain this "outlaw" wheat must be hoed out, sometimes at considerable trouble and expense.

At sowing time, pocket mice follow drill rows and dig up the sprouting seed. Depredations of this type are less serious, the bulletin states, than to ripening grain, and are less after fall than after spring seedings. In the autumn there is usually plenty of waste grain to be had in the stubble. Pocket mice require no water other than that obtained in their food. They appear to thrive when kept in captivity and supplied with no food but dry grain.

Breeding usually occurs in June. The period of gestation is 21 to 28 days. Many females raise second litters, each litter averaging five young. While pocket mice have increased to the proportions of a pest in some localities their rate of reproduction is not such as would permit them suddenly to become a plague, Biological Survey investigators assert.

Copies of the new publication, Technical Bulletin 608, may be obtained at 10 cents each from the Superintendent of Documents, Washington, D.C.