but they have all diminished in numbers or have even completely disappeared. Cactoblastis is distributed in the egg stage. The eggs are laid in chains, or "egg-sticks"; these can be handled and transported without injury, having first been glued to strips of paper or placed in wax-paper quills. Field workers, traveling roads and trails through prickly-pear land, pin the paper strips or quills to cactus plants. When the insects are once established in any locality no further distribution is necessary except to isolated and non-contiguous areas.

Cactoblastis larvae devour the interior of the cactus branches, readily boring from one joint to another and even penetrating the roots; furthermore, their activities are accompanied by rotting due to bacteria and fungi. When only the above-ground parts of the cactus plant are destroyed by an onslaught of Cactoblastis a regrowth takes place from the roots, but this new growth is very succulent and is soon destroyed by a succeeding attack of the moth borer.

At the present time (1940) prickly pear infestation has been reduced from 75 to 95 per cent. of that in 1925. In the greater part of formerly infested areas the pest is under complete control; the scattered remaining plants are not a menace—indeed, they are of value for breeding of Cactoblastis. Areas of former dense prickly pear are now being used for crops, for dairying and for grazing. The great bulk of former prickly pear territory is now reclaimed; it will never revert to its previous useless state.

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THE DENS AND BEHAVIOR OF THE DESERT TORTOISE

STUDIES of the desert tortoise, *Gopherus agassizii*, have shown a definite behavior pattern in which the individuals tend to congregate together in winter dens during cold weather, spread out over nearby areas during moderate weather, and descend into short individual burrows when it is too hot. The studies have been carried out on the Beaver Dam Slope in extreme southwestern Utah since 1936. The area selected was particularly favorable for the winter den concentrations, hence it is not certain at present whether this pattern is general over all its range.

More than 200 tortoises have been marked for individual identification by burning the letter U into different plates or combinations of plates on different individuals so that each one so marked could be definitely identified. During 33 visits to the area, tortoises have been recaptured from time to time, the number of recaptures of individuals ranging from 0 to 11 times. The total captures of tortoises reaches nearly 500 up to date.

The 68 winter dens we have studied are found mostly in compact gravel banks, and usually extend from 5 to 30 feet horizontally into the bank. In cross-section, they are somewhat oval; in length they may be straight, bent, forked or have enlarged chambers. The size does not generally permit entrance by man, but several have been excavated to permit investigation.

The dens are regularly occupied from November to February inclusive, although there undoubtedly is a slight amount of movement from den to den during these months. March and October appear to be the months of transition. During March, fewer and fewer, and during October, more and more are found in the dens. From April to September inclusive, the dens are deserted except for occasional stragglers.

During this period, the tortoises are scattered over the surrounding terrain, usually as solitary individuals, occasionally as copulating pairs. As long as the temperature is comfortable, they do not appear to bother about shelter. As the days get warmer, they tend to move into the shade of a bush, but when the days get hot and the ground vegetation parched, they resort to the summer holes.

These summer holes dip sharply downward 3 or 4 feet and are usually deep enough to protect the tortoises from the torrid heat of midday. They usually emerge at night when the temperatures are more propitious.

The territory covered by individual tortoises, indicated at least in part by plotting the points of capture on a map, is not large. Some individuals with at least 10 capture records do not cover an area of more than ten acres. Others wander farther afield, but the largest territory indicated up to date is only about 40 acres. These records, while not necessarily conclusive, at least indicate that the tortoises are closely restricted to a small territory.

A more detailed report of these studies will be published elsewhere at a later time.

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ELECTRIC FENCES THAT REPEL DEER

PROTECTION of growing crops against deer by the use of electric fences has become an acute necessity in many parts of Texas. In agricultural areas which also contain suitable range for deer, the perennial question of balancing these conflicting interests has engaged alike the attention of landowner and sportsman, and with some success. For the past two years experimentation with several kinds of fences in central Texas has resulted in the selection of the most successful type. Improper installation and therefore failure of such fences to do any good has resulted in hasty