



ENDANGERED SPECIES

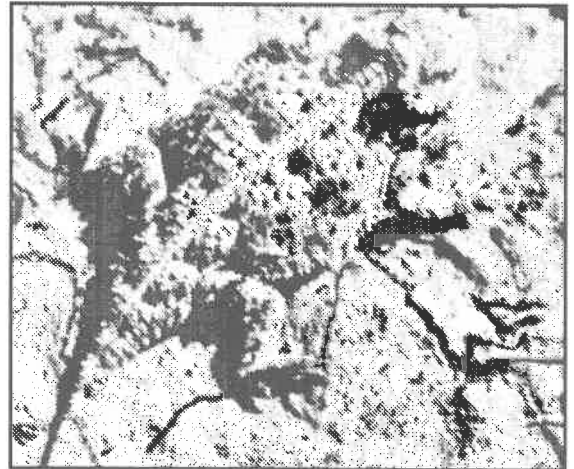
Status: State Rare

SHORT-HORNED LIZARD

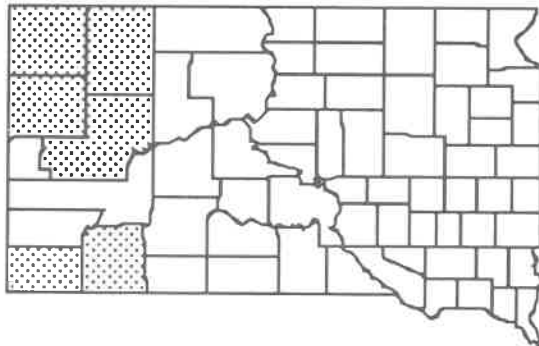
(*Phrynosoma douglasii*)

Description

The name "*Phrynosoma*" means "toad body." In common language the short-horned lizard and its relatives are referred to as "horned toads" even though these animals are really reptiles, not amphibians. The only "horned toad" in South Dakota, the short-horned lizard, is easily identified by its wide, flat body with the back and rear of its head covered with short spines. It has a reddish head and brownish to gray body color with two rows of dark blotches down its back. Adults reach 5 inches (12.7 cm) in length.



Distribution



Known throughout most of the high, arid plains from Kansas to Canada and into the adjacent eastern Rocky Mountains, the short-horned lizard is found in the western South Dakota counties of Butte, Fall River, Harding, Meade, Perkins, and Shannon. Previously, the species was reported from Pennington County, but there are no recent records. Most of the

Badlands National Park provides ideal habitat for this species but the only current records from there are in Shannon County. Further research is needed to determine its current status and distribution.

Natural History

Tolerant of the cold of the northern Great Plains and the higher mountain elevations, the short-horned lizard prefers open, flat areas where it forages for ants, grasshoppers, and other small *invertebrates*. Its well-camouflaged coloration make it an effective predator. The lizard hunts during the day from late spring to fall, when cold temperatures force it to burrow under ground or seek refuge in rodent burrows. Horned lizards have excellent eye sight and rely on movement to detect prey; they pay no attention to sta-

tionary objects. While stalking moving prey, horned lizards twitch their tail, much as a cat does when watching birds. Before striking, they watch their prey with their heads cocked to one side. With a flick of a tongue and the snapping of jaws the prey is captured. Ants are their most common prey.

These lizards can survive in areas with little water since their nitrogen wastes are excreted as uric acid, the most water-conserving form of waste. Their habit of burying in soil during hot, dry spells also aids in water retention.

At two years of age, the females reach sexual maturity and give birth to an average of 14 to 17 young. The short-horned lizard is an *ovoviviparous* species, that is, the females produce eggs but fertilization is internal and the eggs develop within the female.

As with most of its horned lizard relatives, the short-horned lizard exhibits the ability to eject blood from the corner of its eyes when handled roughly. Some authorities think this may repel predators, while others feel it serves to regulate

body temperature in some manner. Whatever the case, it startles people to see blood mysteriously appear and it probably has helped some lizards escape.

Significance

The short-horned lizard has played an important role in the food chain of the northern Great Plains and shortgrass prairies. This lizard contributes to a healthy, biologically diverse ecosystem by preying on a wide range of *invertebrates* and, in turn, becoming a food source for larger predators, such as hawks and snakes.

Conservation Measures

The short-horned lizard is listed as rare in South Dakota and, as such, is protected from collection, capture, and disturbance. Population numbers are monitored and habitats protected through the South Dakota Natural Heritage Program. Threats include the loss of habitat to development and agriculture, the loss of prey species from agricultural practices, and human exploitation.

Glossary

Invertebrates - animals without a backbone, such as worms and insects.

Ovoviviparous - a reproductive behavior in which females produce eggs that develop within the female.

Uric acid - the driest form of waste that is produced by kidneys of vertebrates.

References and Selected Resources For Teachers

Baxter, G.T. and M.D. Stone. 1980. Amphibians and Reptiles of Wyoming. Wyoming Game and Fish Department.

Milne, Lorus J. and Margery J. Milne, 1950. Notes on the behavior of horned toads. American Midland Naturalist, 44(3) p. 720-733.

Reeve, W.L. 1952 Taxonomy and distribution of the horned lizards genus *Phrynosoma*. University Kansas Sci. Bull., 34(14):817-960.

Smith, Hobart M. 1956. Handbook of Amphibians and Reptiles of Kansas. Miscellaneous Pub. No. 9. University of Kansas, Museum of Natural History.

Stebbins, Robert C. 1966 A Field Guide to Western Reptiles and Amphibians. Houghton Mifflin Co. Boston, MA.

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