Eastern Spadefoot

Scaphiopus holbrookii

PA Status: Threatened Species

General characteristics. The eastern spadefoot toad is similar in appearance to the true toads. However, its skin is smooth and covered with minute tubercles, unlike true toads, which have rough, warty skin. It is the only spadefoot east of the Mississippi River. The adult size of the spadefoot is 1¾ to 2¼ inches, averaging a little less than the American and Fowler's toads.

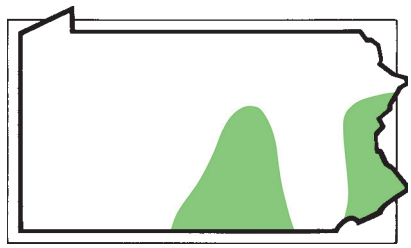
The eastern spadefoot has a built-in repellent, as do all other amphibians, including toads. Skin secretions emitted from glands can cause irritation, especially to mucous membranes, even on humans. The secretions can be fatal to certain predators.

Identification. The primary key to identifying the eastern spadefoot is the hard sickle-shaped spade on each hind foot. This horny, sharp-edged tubercle can be found at the base of the shortest toe; there is only one spade. On the true toads, each foot has two enlarged tubercles, only one of which is sometimes hardened and spade-like (See Figure III-13). Also, unlike true toads, the spadefoot has teeth on the upper jaw.

The skin of the eastern spadefoot is relatively smooth and covered on the back and sides with tiny, scattered tubercles. The body color can range through various shades of brown to yellowish or grayish to nearly black. The lighter shades frequently are mottled with darker pigments. There may be two light lines starting at the eye and continuing down the back. These lines, if present, are irregularly shaped and yellowish. Sometimes a light line also runs along each side of the body. The underside of the eastern spade- foot is white to grayish and unmarked.

The tympanum, or external eardrum, is distinct and obvious. The parotoid glands, on the other hand, are inconspicuous and appear to be absent. The eyes are prominent, elevated well above the upper surface of the head; the iris is golden. The pupil is black and vertically shaped, not horizontal as in the case of the toads.

Range. In Pennsylvania, the eastern spadefoot resides in a split range. Populations are found in southcentral Pennsylvania in the Susquehanna River Valley from the Maryland border to the northcentral part of the state. The range becomes more narrow as it moves northward. The spadefoot also occurs along



the extreme eastern edge of the state, beginning in the southeast corner where it follows the Delaware River Valley north to Monroe County. Its range extends into parts of New England and as far south as central Florida. Its western boundary is Missouri.

Habitat. The eastern spadefoot especially likes sand, gravel or loose loam into which it can quickly burrow for protection. In the eastern United States, this species may be at home in forested or brushy areas, even cultivated land. However, other species of the spadefoot in more arid areas of this country usually are restricted to the preferred sandy soils more common to those areas.

The eastern spadefoot seeks protection from adverse weather and predators by digging furiously into the loose soil. Using a backward digging movement and the spade on its hind legs as a digging tool, the spadefoot can be inches underground in a very short time. The burrow is dug nearly vertically five to 10 inches deep. The spadefoot can spend weeks, even months, under- ground, coming out only on warm, damp evenings to survey its surroundings or seek a meal. If it has time only to dig a very shallow hole, or if it wants to sit near the mouth of a deeper burrow, the spadefoot is able to assume a position that fills the opening. Facing outward, the spadefoot rests its chin on the front feet with the head bent downward. Tucking its feet in close and with eyes shut, the spadefoot expands its lungs to cause its sides to puff out, filling the passageway. Under these circumstances, the spadefoot is difficult to detect or grab, and closing off the entrance, it prevents any intruder from getting in behind.

Figure III-13

Feet

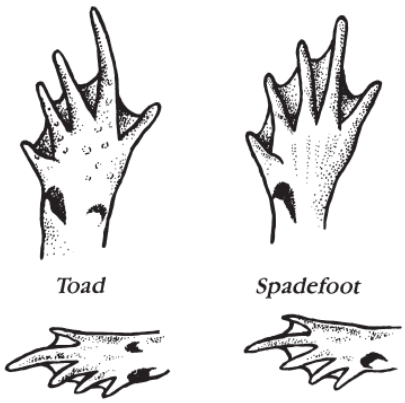


Figure III-14

Eyes