

Sand and Bluetail Mole Skinks

Survey Protocol South Florida

Two types of surveys are recommended for determining if skinks are present. The pedestrian survey, which is the least labor intensive protocol, is a meandering walking survey through suitable habitat and can determine presence, but not absence of skinks. The coverboard survey is more labor intensive, season specific, and required to support a final determination that skinks are presumed absent.

Pedestrian Survey

A pedestrian survey can be conducted year-round and is used to determine the presence of skinks. This survey should be conducted throughout all suitable skink habitats, focusing on bare sand patches within the survey area. Sand skinks leave distinctive “S” shaped tracks in bare sand (Fig. 1) that can be detected under appropriate environmental conditions (dry and windless) As such they are used as indicators of skink presence as they overlap in distribution with the bluetail mole skink and have the same conservation measures. Surveys should be avoided during periods when tracks are not likely to be observed, including after rainfall (tracks may wash out), when the soil is moist (tracks not left), or during excessively windy conditions (tracks obliterated). If uncertain whether tracks are made by skinks photodocument the tracks and provide in the survey report.

If the results of pedestrian surveys successfully detect skink tracks on any portion of the property, presence of skinks is confirmed. If the survey does not locate skink tracks a more intensive coverboard survey must be undertaken to reach a presumed absence conclusion.

Coverboard Survey

A coverboard survey can be used to detect the presence of skinks. Coverboards should be placed within suitable habitat at a minimum density of 100 coverboards per hectare (40 per acre). Coverboards should be placed in areas of bare sand or sparse vegetation adjacent to leaf litter or other detritus, ensuring full contact of the coverboard with the soil surface. Carefully rake or grade the soil to ensure full contact of the coverboard with the soil surface. Placement of soil from surrounding areas may be necessary under some coverboards where stems or roots preclude full contact of the coverboard with the soil surface. If insulation board is used as the coverboards, a shovel full of sand may need to be placed on top to prevent movement due to wind. The xeric scrub habitat where skinks are found is also home to many rare, federally listed plants. While setting up coverboard surveys, minimize impacts to the plant community. Record the geographic coordinates of all coverboard locations.

Coverboards should be 61 cm by 61 cm (2 ft by 2 ft) in dimension and may be constructed of 1.2 cm (0.5 in) or greater thickness plywood, masonite, rigid insulation board (without metallic sheathing), or other rigid material of the same dimensions.

Surveys should be conducted between March 1 and May 15. Negative results found during surveys conducted outside of this period are not considered adequate to conclude the presumed absence of skinks. Surveys should be conducted for a minimum of four times in consecutive weeks within the survey time window to conclude that skinks are absent.

Coverboards must be lifted and checked for tracks a minimum of once per week. Upon lifting each coverboard, check for tracks. The use of gloves during sampling is highly recommended as coverboards often attract venomous insects and reptiles. After checking for tracks and skinks, carefully smooth the soil surface with the edge of the coverboard and replace coverboard. During each site visit, look for and note tracks in sandy patches between coverboard locations. Once tracks or skinks are found in an area the survey can be ended.

Positive findings (skink tracks or skinks) from one or more coverboards indicate presence of skinks. Habitat alteration in these areas is likely to have a high risk of taking skinks. Absence of skink tracks within the surveyed area indicates a lower risk of taking skinks.

A survey report that includes the following, as applicable should be forwarded to the Service:

1. Project description including habitat description.
2. Habitat map over topographical map or aerial photograph of the project area including the path of pedestrian surveys, coverboard locations, and skink track locations.
3. Photodocumentation of tracks.
4. Field data sheets that include:
 - A. dates and starting and ending times of all surveys conducted;
 - B. weather conditions during all surveys, including average temperature, wind speed and direction, visibility, and precipitation;
 - C. total number of sand skink tracks observed; and
 - D. all skink observations.

The survey report should be included with the consultation package (Service 2004).

Literature Cited

U.S. Fish and Wildlife Service (Service). 2004. Guide to a complete initiation package. South Florida Ecological Services Office, Vero Beach, Florida.



Figure 1. Typical “S” shaped track of the sand skink (photographs courtesy of Randy Mejeur; Glatting Jackson Kercher Anglin Lopez Rinehart, Inc; 2000).