

DRAFT
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South Florida

Survey Protocol for the Key Largo Woodrat and Key Largo Cotton Mouse

This protocol is to determine the presence of the Key Largo wood rat (*Neotoma floridana smalli*) and Key Largo cotton mouse (*Peromyscus gossypinus allapaticola*) on a site. When live trapping for small mammals in areas known to be, or potentially inhabited by these species implementation of the following guidelines are essential to assure that data are collected in a standardized way and to preclude or minimize mortality of these endangered species.

1. Individuals conducting the trapping should have previous experience in live trapping, handling, and identification of small mammals including the difference in juvenile black rats (*Rattus rattus*) and woodrats.
2. The trapping area should include all tropical hammock areas within the project area.
3. Trapping should be conducted in a grid with live-traps spaced at 10 m (33 ft) intervals for areas less than 5 ha (12.3 acres) and 25 m (82 ft) spacing in areas greater than 5 ha. The geographical position via GPS of the start and end of each transect or corners of the grid should be recorded. The grid layout will be site specific and the sampling design should be reviewed with the Service.
4. One raccoon-proof trap should be used per station.
5. Traps should be operated for four consecutive nights per trapping season or until a Key Largo woodrat is caught. If a Key Largo cotton mouse is caught it should be released and trapping continued.
6. Traps should be checked each morning no later than 30 minutes after sunrise. All traps should be closed after checking and reset late each afternoon to preclude mortality during the day. Each trap should be visually inspected before closing to assure no small mammals or other animals are inadvertently left in the trap. Bait should be removed from the traps and taken off site so as to reduce the attraction of ants.
7. When nighttime temperatures are forecast to be less than 15°C (59°F), a ball of cotton batting (or similar synthetic material) should be placed in each trap for insulation purposes. Trapping should not be conducted when nighttime temperatures are forecast to be below 10°C (50°F), without prior coordination from the Service.
8. Bait should consist of rolled oats mixed with peanut butter.
9. Trapped small mammals are highly susceptible to attack and mortality from fire ants (*Solenopsis* spp.). If fire ants are a problem the traps can be checked earlier in the night (10-12 PM) to reduce the exposure of captured mammals.

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10. Duration of trapping is variable depending on the habitat quality and proximity to existing populations. Typically four seasonal trapping periods are adequate to reduce the chance of the presence of woodrats to a reasonable level.
11. Captured woodrats and cotton mice should be carefully handled and a written plan for their disposition in place before sampling begins. Mortalities of any woodrats or cotton mice should be reported to the Service as soon as possible.
12. Disturbance by raccoons (*Procyon lotor*) can impede an effective woodrat and cotton mouse survey. Large Havahart type live-traps should be used to capture raccoons in the survey area. State law prohibits the transport of raccoons off site. Therefore, any raccoons caught should be released each morning following the checking of the small mammal traps.
13. Any non-native species (e.g., black rats) captured during trapping should be humanely euthanized.
14. A trapping plan including sampling layout, woodrat and cotton mouse handling protocol, and euthanizing procedures should be submitted to the Service at least 60 days prior to sampling for review and approval.
15. A trapping report should be sent to the Service within 60 days of trapping completion. The trapping report should include a site description, vegetation types, location and number of traps, and daily catch records. The daily catch records should include the number and identification of all animals captured, weather conditions, and trap status (missing, lost, disturbed, etc). The trapping report should be submitted to the project biologist

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