Abbreviated NEON Small Mammal Trapping Protocols

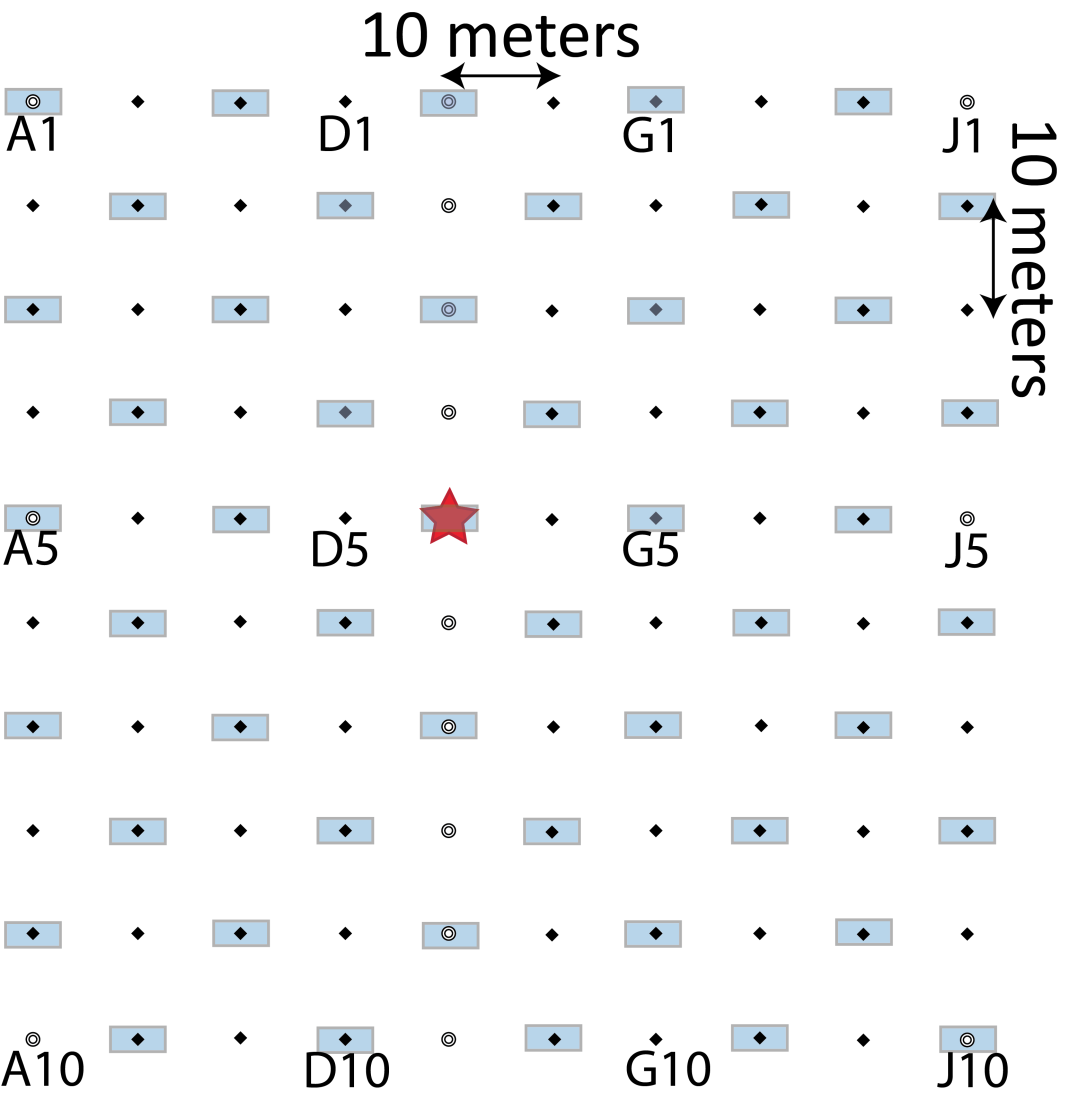
*This document is adapted from NEON Document NEON.DOC.000481 in May 2017. It is only intended for use with the educational teaching module outlined in McNeil and Jones, TIEE, 2017. For all other purposes see the original document: NEON.DOC.000481.*

**Definitions**

Small mammal: Any mammal that is (1) nonvolant (incapable of flight); (2) nocturnally active; (3) forages predominantly aboveground; and (4) is greater than 5 grams but less than approximately 600 g.

Sampling bout: The one night of trapping per abundance/diversity grid intended to occur monthly, or every other month, around the new moon and includes all trapping grids.

Trapping grid:



*Note: these abbreviated protocols do not include all PPE, training, nor safety protocols. They are intended to provide a basic understanding of how trapping and processing occur.*

Sampling frequency:

1. Small mammal sampling shall occur in bouts, with a bout comprised of three consecutive (or nearly) nights of trapping on pathogen grids and one night of trapping on the diversity grids. Sampling shall occur year-round, where personnel resources and weather conditions permit, with a minimum of four bouts per year for all grids at relocatable sites and a minimum of 6 bouts per year for all grids at core sites.

Setting out traps:

1. Traps are set in the evening, no more than 3 hours before sunset. The last trap should be set as the sun sets.
2. Trapping grids consist of 100 Sherman traps. However, in the event that conditions prevent setting of all traps on a given night, a minimum of 75 traps should be set to constitute a night of trapping. In D04 and D20, trapping grids will also include 50 Tomahawk wire mesh traps (to catch larger species that are present in these areas).
3. Place trap, complete with nest materials and bait, within 1m of the grid point. Whenever possible, place traps near shrubs, downed logs, burrows, or other microsites that offer shelter or potential runways.

Collecting traps:

1. Begin checking traps the following morning starting at dawn (within 30 mins after civil twilight).
2. Check all traps for captures.
3. Remove all traps.

Processing samples

1. Record the plotID and trapID (trap coordinate) on datasheet.
2. Processing includes:
   1. Marking with a unique tag (target and opportunistic species).
   2. Identification to species where possible (all captures).
   3. Assessing age, sex, and reproductive condition, and taking standard measurements (i.e., hind foot length and weight).
   4. Additional measurements (e.g., ear length, tail length, and/or total length) shall be taken when relevant to species identification (target and opportunistic species).
   5. Presence of ticks by life stage (target and opportunistic species).
   6. Blood collection for pathogen analyses (target species in appropriate condition).
   7. Fecal sample collection for physiological analyses (target and opportunistic species).
   8. Ear tissue for genetic analyses (target and opportunistic species)
   9. Clipped whiskers and hair for potential isotopic analyses (individuals of the dominant genus at a site).
3. When done, double check all data has been correctly entered.
4. Release individual at point of capture.