

SALAMANDER CENSUSING INSTRUCTIONS

Strip Censusing

1. Strip censuses for salamanders will be conducted on rainy nights in June when the woods are dripping wet.
2. On the first three rainy nights all of the bird census lines (4200m) will be censused. From these censuses, the five most and five least populous 100m sections will be identified and these sections will be censused on three additional nights.
3. Censuses will begin after 2000 hours.
4. Crews will consist of two people. Three crews are necessary to census 4200m in a reasonable time.
5. To census a line, the crew members walk beside each other, slowly scanning a 2m-wide strip centered on the census line. Salamanders >1m from the census line are not counted; thus the effective census area is 2m wide x 4200m long = 8400m².
6. For each block (100m of census line) the block number and beginning time are recorded. Record the ending time if it is not the same as the beginning time for the next block.
7. The species of salamander and number of individuals (use slashes) are recorded for each block. If any individuals are above the ground, their height should be estimated in centimeters. If no individuals are found write "None" in the species block. Place any unidentifiable specimen in a plastic bag and bring it back to the field station.

Quadrat Searching

1. On the day following the strip censuses 40 randomly located 1m² quadrats will be searched for salamanders. One search will be conducted in each block.
2. The plots will be located by reference to a four-digit number from a random number table. Record the random number in the left margin. The first two digits will determine how many meters to proceed into a block along the transect line. The third digit determines whether the quadrat is on the right (even number) or left (odd number). The fourth digit determines the perpendicular distance from the transect line to the 1m² quadrat center.
3. The quadrat is delineated by a collapsible PVC frame. Because it is possible that salamanders will move deeper

into the litter in response to disturbance, it is advisable to talk quietly and walk softly during the following steps.

4. Vegetative characteristics will be determined as follows:

Tree layer (>5m): % coverage (nearest 10%)
 dominant species

Shrub layer (1–5m): % coverage dominant species

Herb layer (<1m): % coverage dominant species

Ground cover: % each component

See “Relevé Instructions” for how to estimate percentage coverage. A species must account for at least 25% of the strata coverage to be considered dominant. Write “mixed” if no species is dominant. The ground cover components are: dry litter, wet litter, log, tree bole, tree root, moss, lichens, soil, rock, and water (see “Tree Regeneration Instructions” for more detailed definitions).

5. Sift through all leaf litter and the loose organic pad searching for salamanders. Begin by removing the litter from the perimeter of the quadrat in case salamanders try to escape by moving laterally. Turn over rocks; tear apart rotten logs. Remove material as it is searched.
6. Identify and count all salamanders found. If a female with a clutch is found count the number of eggs and describe its location as precisely as possible (e.g., species of log, depth in log, etc.). If no salamanders are found write “None” in the species column.
7. Replace the litter and salamanders on the quadrat.

Equipment

Flashlights or headlamps

Clipboard

Pencils

Watch

Tape measure

Compass

Data sheets

Plastic bags and labels

Quadrat frame

Date: archive

File name: Herparch.ins

