

Protocol for phenology observations.

- a Leaf observations.** At the time of each bird observation, record the developmental stage each of three individual buds on one sugar maple tree that you have previously marked with a wire. Use codes 0-6 as defined below
- 0 no change from winter conditions unexpanded buds only
 - 1 bud swelling noticeable
 - 2 budbreak; small leaves becoming evident but <1 cm long
 - 3 leaf 1-3 cm in length
 - 4 leaf 3-6 cm in length
 - 5 leaf >6 cm length but still expanding
 - 6 leaf fully expanded
- b Bird observations.** From near your focal sugar maple tree, watch and listen for American Robins and Northern Cardinals for 10 min on each of three mornings per week (ideally Mon, Wed, & Fri). Record species identity and number of individuals. Optional: note any other bird species that you hear singing. Use the following 4-letter codes for each bird species. If you see other species singing, add their names here and create your own code.
- | | | | |
|--------------------|------|------------------------|------|
| *American Robin | AMRO | Veery | VEER |
| *Northern Cardinal | NOCA | Ovenbird | OVEN |
| Eastern Phoebe | EAPH | White-throated Sparrow | WTSP |
| Winter Wren | WIWR | Song sparrow | SOSP |
| Hermit Thrush | HETH | | |
- c Snow cover.** Estimate the percentage of ground that is covered with snow within 50 meters (1/2 of a football field) of your sugar maple tree. (Imagine a grid of stakes in the ground that are evenly spaced to make a 10 x 10 m checkerboard. What percentage of the stakes would be going through snow. Estimate as 0, 10, 20, ... or 100%.
- d Weather.** Indicate one of the following weather codes.
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|-------------------|-------|
| Sunny | Sun |
| Cloudy, no precip | Cloud |
| Rain | Rain |
| Sleet | Sleet |
| Snow | Snow |
- e Comments.** Optional field.