

# Conifers

## Deciduous

### Breaking needle buds

One or more breaking needle buds are visible on the plant. A needle bud is considered "breaking" once a green needle tip is visible at the end of the bud, but before the first needle from the bud has unfolded and spread away from the developing stem, or from other needles in a bundle. *How many buds are breaking?* Less than 3 (<3); 3 to 10 (3-10); More than 10 (>10)

### Needles

One or more live unfolded needles are visible on the plant. A needle is considered "unfolded" once it begins to spread away from the developing stem enough that its point of attachment to the stem is visible, or from other needles in a bundle so that it is no longer pressed flat against them. Do not include dried or dead needles. *What proportion of the canopy is full with needles?* Less than 5% (<5); 5-24%; 25-49%; 50-74%; 75-94%; 95% or more (95+)

### Colored needles

One or more needles (including any that have recently fallen from the plant) have turned to their late-season colors. *What proportion of the canopy is still full with green needles?* 95% or more (95+); 75-94%; 50-74%; 25-49%; 5-24%; Less than 5% (<5)

### Falling needles

One or more needles are falling or have recently fallen from the plant.

### Pollen cones

One or more fresh male pollen cones (strobili) are visible on the plant. Cones have overlapping scales that are initially tightly closed, then spread apart to open the cone and release pollen. Do not include wilted or dried cones that have released all of their pollen but remain on the plant. *How many fresh pollen cones are present?* Less than 3 (<3); 3 to 10 (3-10); More than 10 (>10)

### Open pollen cones

One or more open fresh male pollen cones (strobili) are visible on the plant. Cones are considered "open" when the scales have spread apart to release pollen. Do not include wilted or dried cones that have released all of their pollen but remain on the plant. *How many fresh pollen cones are open?* Less than 3 (<3); 3 to 10 (3-10); More than 10 (>10); *Peak opening (P):* One half (50%) or more of the pollen cones on the plant are open and still fresh.

### Pollen release

One or more male cones (strobili) on the plant release pollen when gently shaken or blown. *How many pollen cones release pollen?* Less than 3 (<3); 3 to 10 (3-10); More than 10 (>10); *Peak pollen (P):* One half (50%) or more of the pollen cones on the plant release pollen.

### Unripe seed cones

One or more unripe female seed cones are visible on the plant. *How many seed cones are unripe?* Less than 3 (<3); 3 to 10 (3-10); More than 10 (>10)

### Ripe seed cones

One or more ripe female seed cones are visible on the plant. *How many seed cones are ripe?* Less than 3 (<3); 3 to 10 (3-10); More than 10 (>10)

### Recent seed cone drop

One or more mature seed cones or seeds have dropped or been removed from the plant since your last visit. Do not include obviously immature seed cones that have dropped before ripening, such as in a heavy rain or wind, or empty seed cones that had long ago dropped all seeds but remained on the plant. *How many mature seed cones have dropped seeds or have completely dropped from the plant?* Less than 3 (<3); 3 to 10 (3-10); More than 10 (>10)

Please see the species profile page for complete information about the phenophases for each species.

## Plant Phenophase Datasheet

**Directions:** Fill in the date in the top row and circle the appropriate letter in the column below.

**y** (phenophase is occurring);

**n** (phenophase is not occurring);

**?** (not certain if the phenophase is occurring).

Do not circle anything if you did not check for the phenophase. In the adjacent blank, write in the appropriate measure of intensity or abundance for this phenophase (see left-hand column for details).

**Species:** \_\_\_\_\_

**Plant Nickname:** \_\_\_\_\_

**Site:** \_\_\_\_\_

**Year:** \_\_\_\_\_

**Observer:** \_\_\_\_\_

Do you see...?	Date:	Date:	Date:	Date:	Date:
Breaking needle buds	y n ? _____	y n ? _____	y n ? _____	y n ? _____	y n ? _____
Needles	y n ? _____	y n ? _____	y n ? _____	y n ? _____	y n ? _____
Colored needles	y n ? _____	y n ? _____	y n ? _____	y n ? _____	y n ? _____
Falling needles	y n ? _____	y n ? _____	y n ? _____	y n ? _____	y n ? _____
Pollen cones	y n ? _____	y n ? _____	y n ? _____	y n ? _____	y n ? _____
Open pollen cones	y n ? _____	y n ? _____	y n ? _____	y n ? _____	y n ? _____
Pollen release	y n ? _____	y n ? _____	y n ? _____	y n ? _____	y n ? _____
Unripe seed cones	y n ? _____	y n ? _____	y n ? _____	y n ? _____	y n ? _____
Ripe seed cones	y n ? _____	y n ? _____	y n ? _____	y n ? _____	y n ? _____
Recent seed cone drop	y n ? _____	y n ? _____	y n ? _____	y n ? _____	y n ? _____
Check when data entered online:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Comments:</b>					

