

Conifers

(needle bundles)

Emerging needles

One or more emerging needles or needle bundles (fascicles) are visible on the plant. A needle or needle bundle is considered "emerging" once the green tip is visible along the newly developing stem (candle), but before the needles have begun to unfold and spread away from others in the bundle.

How many needles or needle bundles are emerging? Less than 3 (<3); 3 to 10 (3-10); More than 10 (>10)

Young needles

One or more young unfolded needles are visible on the plant. A needle is considered "young" and "unfolded" once it has spread away from other needles in the bundle (and is no longer pressed flat against them), but before it has reached full size and turned the darker green color of mature needles on the plant.

How many young needles are present? Less than 3 (<3); 3 to 10 (3-10); More than 10 (>10)

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).

Do you see...?	Date:	Date:	Date:	Date:	Date:
Emerging needles	y n ? _____	y n ? _____	y n ? _____	y n ? _____	y n ? _____
Young 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"/>

Comments:

Do you see...?	Date:	Date:	Date:	Date:	Date:
Emerging needles	y n ? _____	y n ? _____	y n ? _____	y n ? _____	y n ? _____
Young 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"/>

Comments:



Species: _____

Plant Nickname: _____

Site: _____

Year: _____

Observer: _____