Budburst-Making a Pollinator Observation

budburst
A project of the Chicago Botanic Garden

Materials:

- Data sheet and writing implement
- Timing device (e.g. wristwatch, phone, etc.)
- Meter stick
- Approximation of the temperature (e.g. phone weather app, outdoor thermometer, etc.)
- Clipboard (optional)

For the Nativars Research Project: Depending on your planting design and your personal preferences, you can observe a full species set (1 wild type & 4 nativars) simultaneously in a single 10-min observation period OR repeat this protocol as necessary to complete a 10-min observation period for each member of the set at the site.

Pre-steps:

Conduct pollinator observations at least once a week while plants are in flower. Before starting an observation, record the following information:

1. **Record the name of the observer, the date, and the location of the garden.**
2. **Record the approximate temperature (°F) and cloud cover.** Pollinators are most active on warm, sunny days between 10 am and 2 pm. If possible, make your observations during periods when all of these conditions are met.
3. **Measure the height of the each plant** from the soil to the tallest tip in centimeters (cm).
4. **Note the flowering stage of each plant** (early, middle, or late flower).
5. **Count the number of flowers or flower heads for each plant**, depending on what species you are observing. If >100 flowers or flower heads, estimate to the nearest 50.
    a. Flowers: Each floral structure contains only one flower (e.g. *Aquilegia*, *Penstemon*)
    b. Flower heads (aka composite flower): Floral structures are composed of many small flowers, called florets (e.g. *Symphyotrichum*, *Achillea*, *Rudbeckia*)

Now you are ready to start observing pollinators!

Pollinator Observations:

1. Record the start time of your observation period.
2. Sit or stand a comfortable distance from the plant from which you can clearly see insects but not interfere with their visitation (3-5 ft).
3. Each time a pollinator touches a flower, make a tally mark in the 'Pollinators Observed' data table for the appropriate plant and pollinator type.
4. Continue to observe for 10 minutes.
5. Record the end time of your observation period.
6. If you are monitoring plants individually, move to your next plant and start a new 10-minute observation period (return to step 1).
7. If you have completed your first set and are monitoring a second set, start a new data sheet and a new 10-minute observation period (return to step 1).
8. Submit your data online at budburst.org

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Observer: **Date:** **Location:**

Weather

Temperature (°F): Cloud cover (circle one): Sunny Mostly Sunny Mostly Cloudy Cloudy

Species	Plant Information				
	Plant 1	Plant 2	Plant 3	Plant 4	Plant 5
Plant name:					
Height (cm)					
Flowering Stage (circle one)	E M L	E M L	E M L	E M L	E M L
No. Flowers or Flower Heads*					

Flowering Stages: (E)arly = few (<5%) flowers emerged (M)iddle = many flowers emerged (L)ate = most (>95%) flowers wilted/fallen off

Pollinators Observed					
Start Time	am / pm	am / pm	am / pm	am / pm	am / pm
End Time	am / pm	am / pm	am / pm	am / pm	am / pm
Pollinator Group	Plant 1	Plant 2	Plant 3	Plant 4	Plant 5
Bumble bees					
Honey bees					
Small bees and flies					
Large bees and wasps					
Butterflies and moths					
Hummingbirds					
Beetles					
Not sure					

**depending on the type of plant you are observing, count individual flowers or flower heads. If >100, estimate to the nearest 50.*