Pollinator Counts on Cultivars of Annual Bedding Plants

An Assessment of Pollinator Preference
By Michelle Wisdom
Project Objective

• To count the number of pollinator visits to cultivars of fifteen different annual plants
• Due to pollinator decline, it is important to know and understand pollinator preference. My project will focus on annual Zone 4 bedding plants, although successful pollinator-friendly landscapes should encourage succession blooming of annuals, perennials, and woody landscape plant material.
• Two things to define...
What is a Cultivar?

- A cultivar is a cultivated variety... selected by man, maybe hybrid, may be naturally occurring, that has been selected for a particular attribute or combination of attributes.
Straight species versus cultivar
What is a pollinator visit?

• An insect landing on a flower, with intentional interest in forage
• Insects classified as honey bee, bumble bee, butterfly, or “other”
• “Other” included other bees, flies, wasps, beetles, ants, hummingbirds
Project Parameters

- Fifteen cultivars- Otto list, random selection
- Date, time of day
- Flower bloom stage
- Weather conditions: temperature, wind speed, cloud cover, humidity
- Time- one minute increments, in one meter square area of cultivar bed
- Pollinator
# Data Collection Sheet

<table>
<thead>
<tr>
<th>Scientific name</th>
<th>Common name</th>
<th>Cultivar</th>
<th>Time</th>
<th>Bloom Stage</th>
<th>Pollinator</th>
<th># of Visits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lantana camara</td>
<td>Lantana</td>
<td>'Chapel Hill Yellow'</td>
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<tr>
<td>Dahlia</td>
<td>Dahlia</td>
<td>'Dark Princess'</td>
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<tr>
<td>Salvia splendens</td>
<td>Scarlet sage</td>
<td>'Flare'</td>
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<tr>
<td>Gaillardia pulchella</td>
<td>Blanket flower</td>
<td>'Plume Red'</td>
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<tr>
<td>Zinnia</td>
<td>Zinnia</td>
<td>'Zahara Rose'</td>
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<tr>
<td>Pentas lanceolata</td>
<td>Egyptian star cluster</td>
<td>'Graffiti Pink'</td>
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<tr>
<td>Antirrhinum majus</td>
<td>Snapdragon</td>
<td>'Liberty Classic'</td>
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<tr>
<td>Salvia coccinea</td>
<td>Texas sage</td>
<td>'SJ Pink'</td>
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<tr>
<td>Helinium amarum</td>
<td>Sneezeweed</td>
<td>'Dakota Gold'</td>
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<tr>
<td>Melampodium</td>
<td>Butter daisy</td>
<td>'Showstar'</td>
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<tr>
<td>Cuphea llavea</td>
<td>Bat Face</td>
<td>'Sriracha Pink'</td>
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<tr>
<td>Tagetes patula</td>
<td>French marigold</td>
<td>'Jane Bright Yellow'</td>
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<tr>
<td>Agastache</td>
<td>Giant hyssop</td>
<td>'Heather Queen'</td>
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<tr>
<td>Gomphrena globosa</td>
<td>Globe amaranth</td>
<td>'Fireworks'</td>
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<tr>
<td>Gomphrena haageana</td>
<td>Globe amaranth</td>
<td>'Strawberry Fields'</td>
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</tr>
</tbody>
</table>

- DATE:  
- TEMP:  
- WIND SPEED:  

- CLOUD COVER:  
- HUMIDITY:
Counts began June 15, 2015 and ended July 23, 2015

Twenty three counts, during random times of day (from as early as 9:19 a.m. to as late as 3:40 p.m.) and all kinds of weather conditions, minus pouring rain!
The results were...
Sneezeweed and Hyssop

Helenium amarum ‘Dakota Gold’
Sneezeweed (200 visits)

Agastache cana ‘Heather Queen’
Giant Hyssop (193 visits)
Butter Daisy and Texas Sage

Melampodium paludosum ‘Showstar’ Butter Daisy (180 visits)

Salvia coccinea ‘Summer Jewel Pink’ Texas Sage (171 visits)
The top four plants accounted for 70% of pollinator visits

• Remaining eleven plants were responsible for 30% of pollinator activity:
  Marigold, Snapdragon, Zinnia, Lantana, Scarlet sage, Bat-face Cupea, Pentas, Blanket flower, two different species of Globe Amaranth, and Dahlia

However, Antirrhinum majus deserves a shout out!
An honorable mention to Snapdragon—only 44 visits but they were sweet!
Conclusions

• Cultivars make a difference- know which one to plant (S. coccinea or S. splendens)
• Pollinators prefer sunny conditions
• Flies are prolific pollinators
• Bloom time affects activity
• Time of day affects activity on certain plants (S. coccinea)