

# Pollinator Counts on Cultivars of Annual Bedding Plants

An Assessment of Pollinator  
Preference

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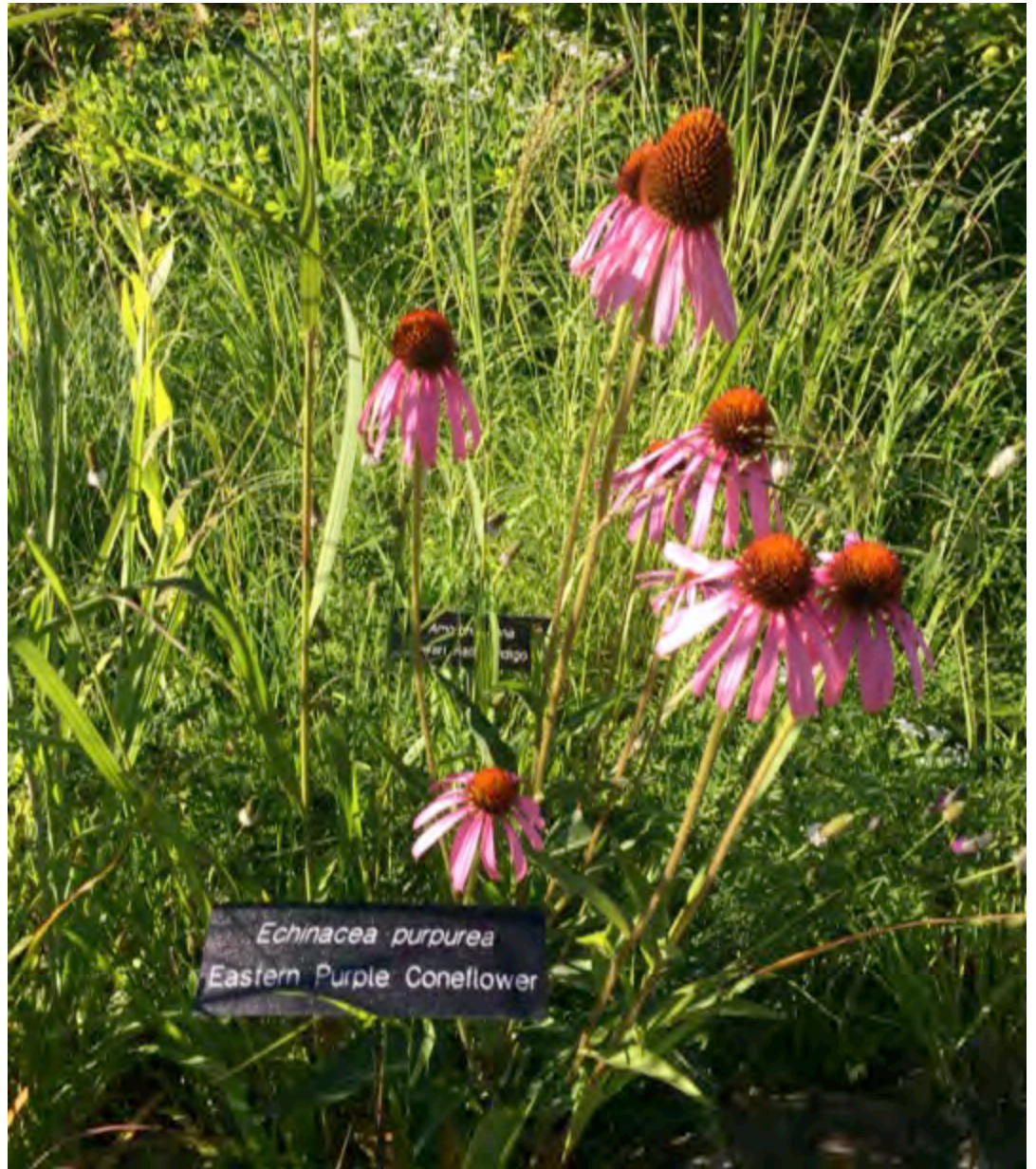
# Project Objective

- 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

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

-DATE:

-TEMP:

-WIND SPEED:

-CLOUD COVER:

-HUMIDITY:

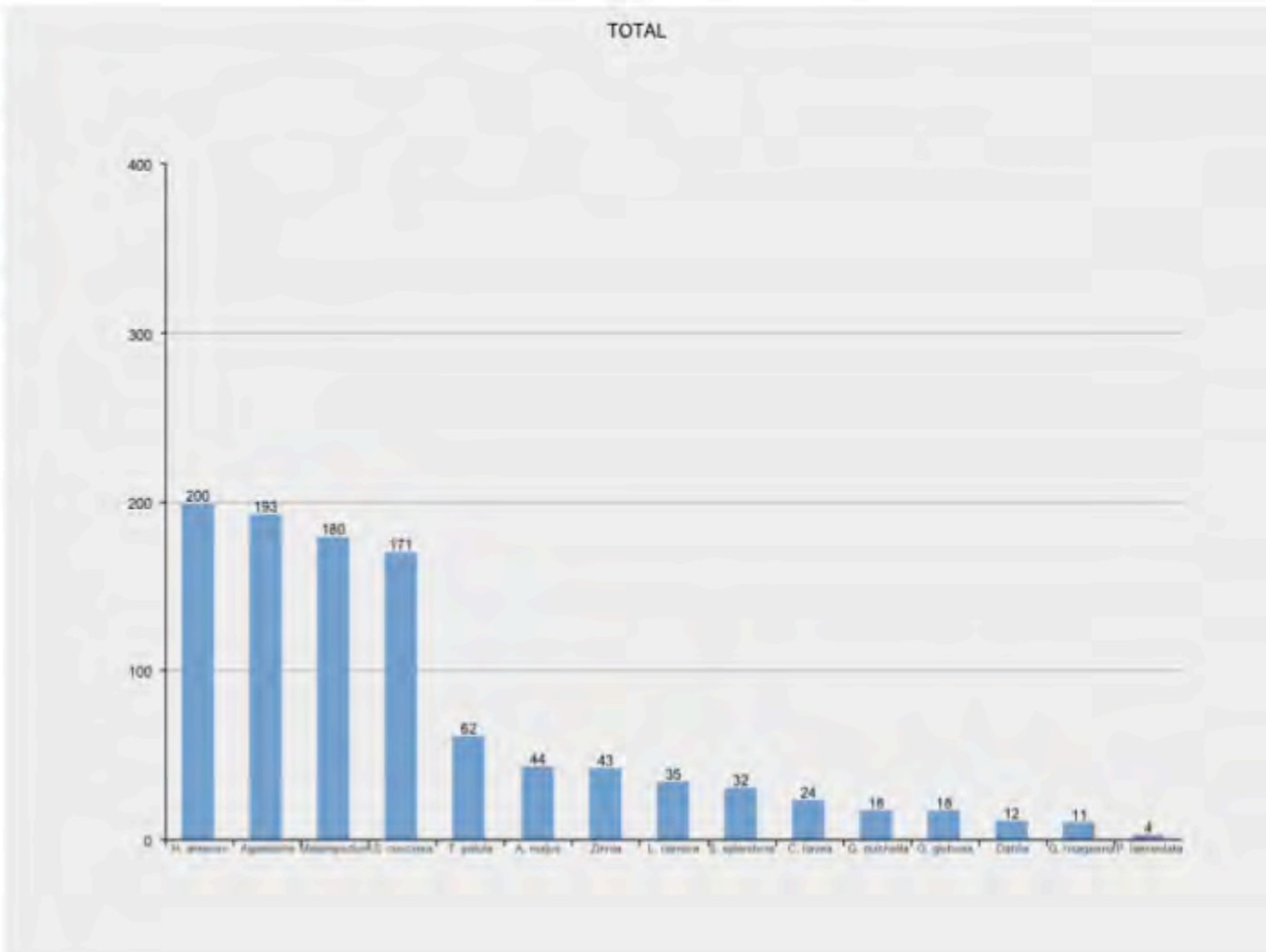
# Counts began June 15, 2015 and ended July 23, 2015

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...

Plant	TOTAL	
<i>H. amarum</i>	200	19.10%
<i>Agastache</i>	193	18.43%
<i>Melampodium</i>	180	17.19%
<i>S. coccinea</i>	171	16.33%
<i>T. patula</i>	62	5.92%
<i>A. majus</i>	44	4.20%
<i>Zinnia</i>	43	4.11%
<i>L. camara</i>	35	3.34%
<i>S. splendens</i>	32	3.06%
<i>C. ilavea</i>	24	2.29%
<i>G. pulchella</i>	18	1.72%
<i>G. globosa</i>	18	1.72%
<i>Dahlia</i>	12	1.15%
<i>G. haageana</i>	11	1.05%
<i>P. lanceolata</i>	4	0.38%
	1047	



# 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*)