



# Studying the gap between interest and understanding of bee pollinators

Lauren Bennett, OSU Masters of Natural Resources Graduate Student

Gail Langellotto, Ph.D., OSU Professor of Horticulture, Statewide Coordinator, OSU Extension Master Gardener Program

# Overview / Background

- Wilson et al. (2017) study catalyst for this research
- Study gaps between interest & understanding of bee pollinators & bee-friendly plants
- BROAD GOAL: Identify gaps in understanding to better target education and outreach efforts to provide more effective pollinator habitat



Source: <https://www.theguardian.com/environment/2019/jan/14/city-bees-allotments-gardens-help-arrest-decline-study>

# Research Methods

- n=1,902 respondents:
  - Pollinator training / coursework
  - Gardening practices
    - Plant for pollinators?
    - % of space dedicated to pollinators
  - Identify bees vs. non-bees
  - Identify flowers as good/poor resources for bees



Source: Matthew Shepherd, The Xerces Society



# Demographics

Master Gardener (30%)	Master Bee Keeper (3%)	Oregon Bee Atlas (3%)	Other trainings (12%)	No training (55%)
Trained by OSU Extension Services	Trained by OSU Extension Services	Intense 2-day training	Xerces Society courses	General public
Focus is on sustainable gardening practices	Focus is on sustainably managing honey bee hives	Bee Identification	NRCS training	No specialized training
			Entomology Degrees	
			Master Naturalist	
			Local soil & water conservation district class	

## Findings (n=1,902)

- 91% of all respondents plant for pollinators
- 90% garden at their home, 10% use community garden
- Varying ability to identify bees & bee-friendly flowers
  - Oregon Bee Atlas volunteers ranked the best
  - Tied for last - Master Gardeners & general public





# Bee Quiz

Use a scrap piece of paper and write “Bee” or “Non-bee” for each image below.







# Bee Quiz (n=1,902)



**53% guessed  
correctly**



**59% guessed  
correctly**



**80% guessed  
correctly**



**92% guessed  
correctly**



# Flower Quiz

Use a scrap piece of paper and write “Good” or “Poor” for each image below.







# Flower Quiz (n=1,902)



**98% guessed  
correctly**



**87% guessed  
correctly**



**60% guessed  
correctly**



**52% guessed  
correctly**



# Bee-friendly Pollinator Plant Characteristics

- Plants that provide accessible and high quality nectar and/or pollen
- Diverse flowering species
  - Variety of flower color, shape and size
    - Bees like white, yellow, purple, blue flowers
- Blooms throughout the entire growing season
- Native plants are best



Source: NRCS/USDA



## Discussion / Take-aways

- Similar results to Wilson et al. (2017) study
- Many areas for improvement, opportunity to educate
  - Discrepancies between bee & bee-friendly plant identification and knowledge, even among Master Gardeners



Source: City of Portland, Portland Parks & Recreation



Source: The Xerces Society



Source: City of Portland, Portland Parks & Recreation





# Acknowledgements

For help distributing the survey:

- The Xerces Society for Invertebrate Conservation
- Portland Parks & Recreation



Many thanks to everyone who responded to the survey!