

# URBAN POLLINATOR ECOLOGY

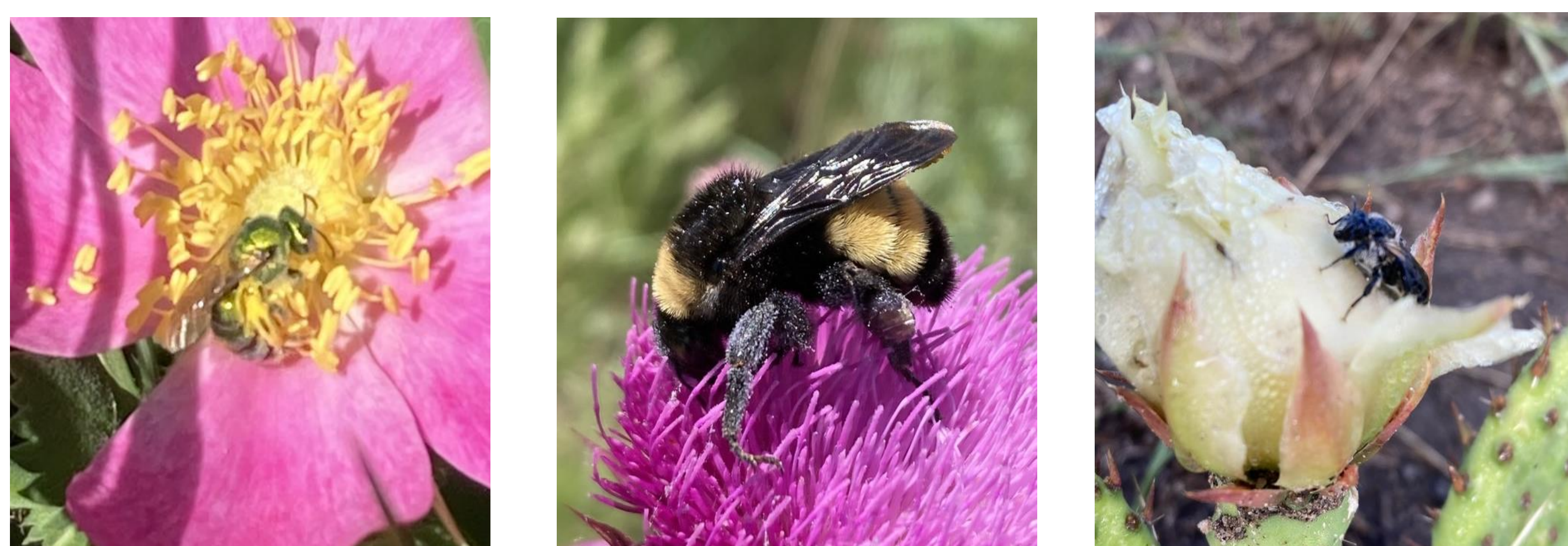
## DENVER COUNTY

Intern:  
Nancy Bartholomew

- Mentors:
- John Mola, PhD—Assistant Professor, Forest and Rangeland Stewardship
  - Veronica Champine, PhD—Research scientist, Animal Human Policy Center
  - Lisa Mason—Extension County Specialist, Horticulture

### INTERNSHIP INTRODUCTION

I assisted a Colorado State University team seeking to make climate-resilient planting recommendations to increase pollinator habitat in Denver parks. I contributed to data collection in the field and encouraged community scientists to also document pollinators in Denver's parks.



Snapshots of the native bee diversity we encountered in Denver's parks

### INTERNSHIP GOALS

1. Learn about field entomology skills, basic bee identification, and the challenges native pollinators face
2. Provide informal science education about native pollinators and their conservation to parkgoers
3. Encourage community members to observe and document pollinator diversity in Denver parks

### APPLICATION TO MY EDUCATION

As a Wildlife Biology major, this internship provided me with my first real fieldwork experience. It introduced me to entomology, insect conservation, and the challenges and joys of both urban ecology and community science.

### INTERNSHIP ACTIVITIES



Netting for bees in Commons Park

#### Fieldwork

- 3 visits to 25 Denver Parks
- Collected native bees along two transects
  - Recorded which flower each bee was on
  - Counted Western Honey Bees (*Apis mellifera*)
  - Engaged with curious parkgoers

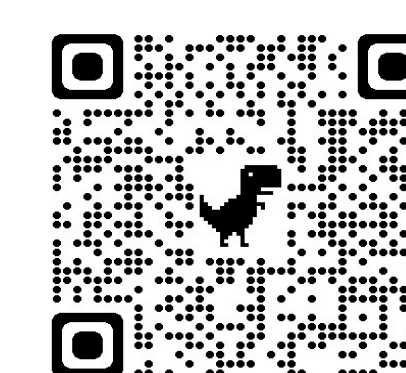
#### Community Science

Created iNaturalist community science project to encourage folks to observe and document butterflies and native bees in Denver parks



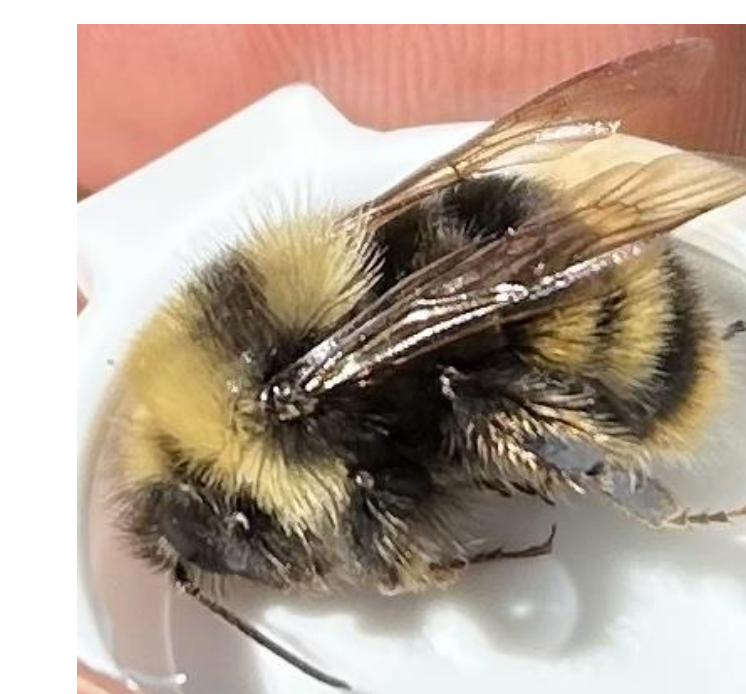
The banner of my iNaturalist project

*If you spend time in Denver parks, I invite you to join the project and upload your own pollinator photos!*



### WHAT I LEARNED

- How to recognize a bee!
  - Colorado has 946 native species, with a diversity of forms and life histories
- Considerations of entomological field project design
- Entomological field methods
- **Many parkgoers expressed support for pollinator conservation, but knew little about native bees**
  - Native bees often conflated with non-native honey bees
  - Much work to be done in educating the public about native bee diversity and conservation
- **Honey bees can harm native bees**
  - Competition
  - diseases
- Effective, robust community science would require much more volunteer training
  - To date, all photos submitted to my project have only been of honey bees and bumble bees



A rare Western Bumble Bee (*Bombus occidentalis*), which we found in Garfield Lake Park

### NEXT STEPS

- Management of iNaturalist project through October 15<sup>th</sup>
- Independent research project under my lead mentor, Dr. John Mola
- Community outreach on behalf of the Mola lab