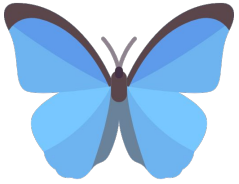
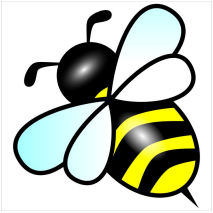
VERMONT CENTER FOR ECOSTUDIES
Uniting People and Science for Conservation

Broadening Participation in Community Science

Case Study: Adopt a Plant Project

By: Onome Ofoman, Desirée L. Narango (PhD)

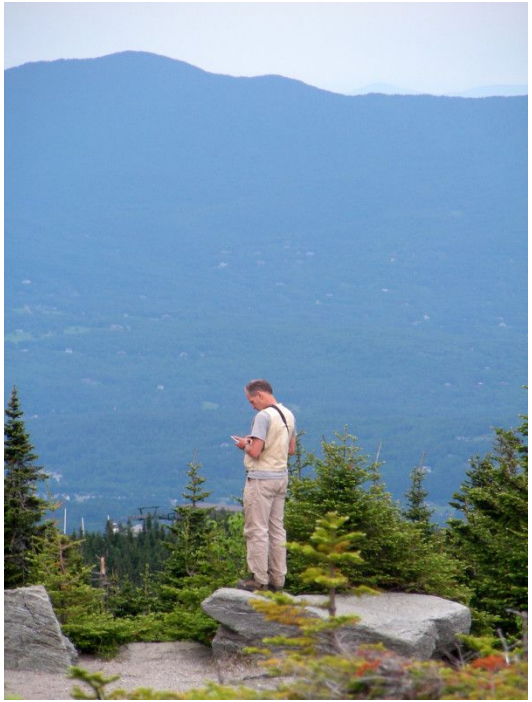




Community Science

aka. citizen science, participatory science, volunteer powered science, volunteer environmental monitoring, etc

The **collection and analysis of data** relating to the **natural world** by members of the **public**, done in **collaboration** with people in the **scientific community**.



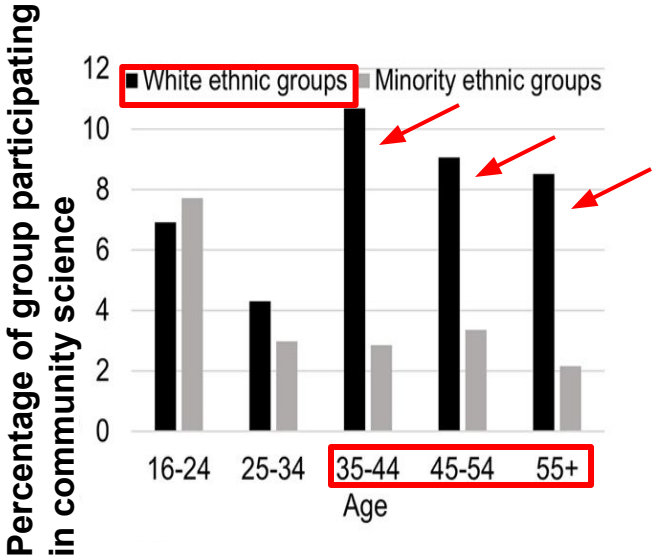
Counting birds as part of the Vermont Breeding Bird Survey

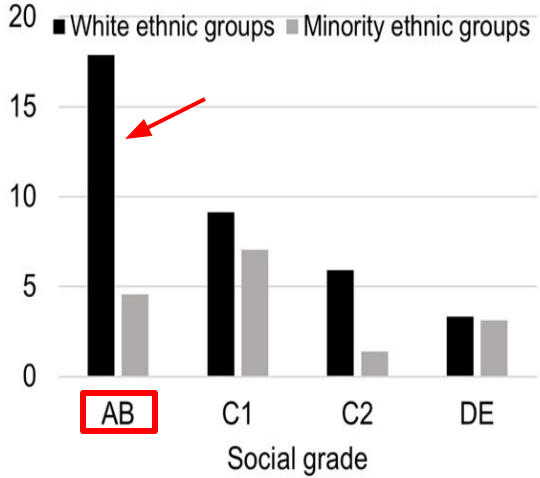
Benefits of Community Science

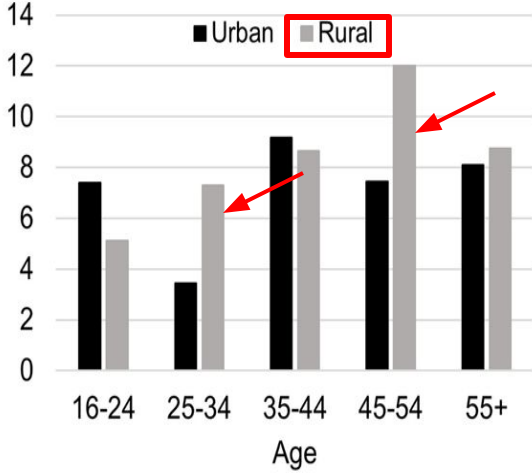
- Democratizes science
- Enables large scale data collection
- Fosters public scientific awareness and provides avenues for taking action
- Develops skills and provides job opportunities

A community scientist from the Vermont Loon Conservation Project

Who is the Average Community Scientist?







Source: Pateman, et al. Citizen Science (2021).

Opportunities in Community Science

How do we:

1. integrate community needs and questions into research topics?
2. ensure a diverse participant base?
3. verify the validity of collected data?

A VCE Mountain Birdwatch community scientist on their survey route

Case Study: Adopt a Plant Project

How do plant ecotypes impact insect populations?

- 12 perennial flowering plants
- 3 ecoregions
- 6 common gardens
- 1,080 individual plants in the ground
- **1,200 extra plants**

VCE team at the common garden in Woodstock, VT

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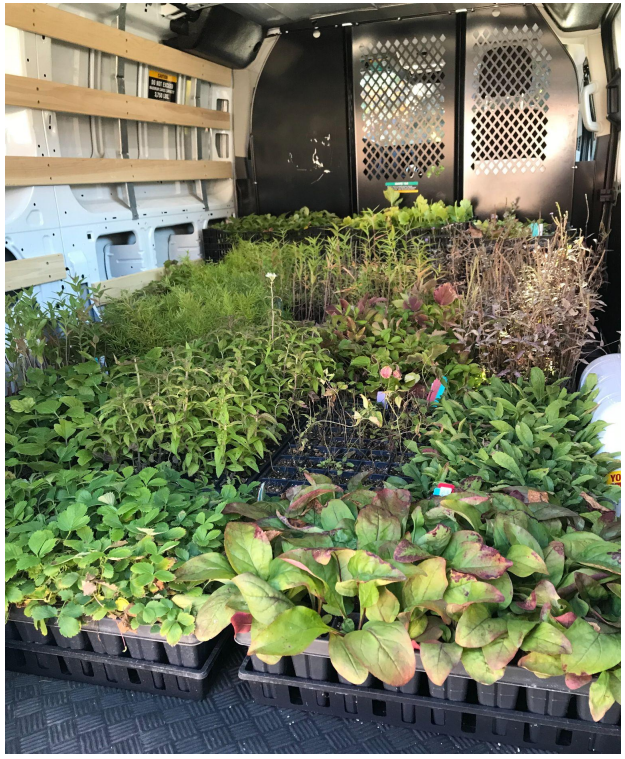
Native Plant Trust
Conserving and promoting New England's native plants

One Hive Foundation

‘Adopt a Plant’ Community Science Project

Objectives

1. Conduct science
2. Engage new VCE participants
3. Provide a low stakes entry point to contribute



Plants being picked up from the Native Plant Trust

‘Adopt-a-Plant’ Community Science Project

General Steps

Fall/Winter: Recruit participants

Spring: Distribute plants

Spring/Summer: Participants submit data

Two of our most requested plants: Monarda fistulosa (Wild bergamot) and Verbena hastata (Blue Vervain)

Secondary Research: Including Diverse Participants

Bombus ternarius (Tricolored bumblebee)

1. Frame research question to align with community priorities

Source: Pandya, R.E. (2012), Frontiers in Ecology and the Environment.

Recruitment: Target Audience

American Copper on Asclepias tuberosa (Butterfly Milkweed)

1. Residents of VT, NH, MA
2. Urban and suburban residents
3. People who garden
4. Willing and able to collect data

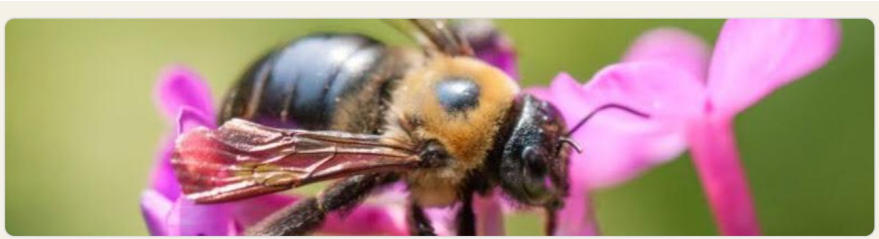
Secondary Research: Including Diverse Participants

Bombus ternarius (Tricolored bumblebee)

1. Frame research question to align with community priorities
2. Create opportunities for community leadership and bi-directional learning

Source: Pandya, R.E. (2012), Frontiers in Ecology and the Environment.

Recruitment: What We Did



VCE's 'Adopt A Plant' Project

Help us monitor pollinator visits to local and non-local ecotypes of native plants!

In many nurseries, most plants available for purchase are 'non-local ecotypes', i.e. they are grown from seed or seedlings sourced from different locations from where they are sold. Plants sourced from other ecoregions may differ in traits important for pollinators such as growth rate, number of flowers, flower timing, or attractiveness. VCE scientists and gardeners alike are wondering "Do non-local plants attract the same flower-visiting insects as local plants?"

You can help us answer this question by participating in a new research study. Participants watch plants until they bloom, then conduct weekly 5-minute watches per plant to record the number and type of pollinators that visit while the plants are blooming (likely between May and October 2025).

Sign-up Form Purpose:

- Understand participants
- Determine spatial extent of interest for strategic planning
- Solicit input on project design

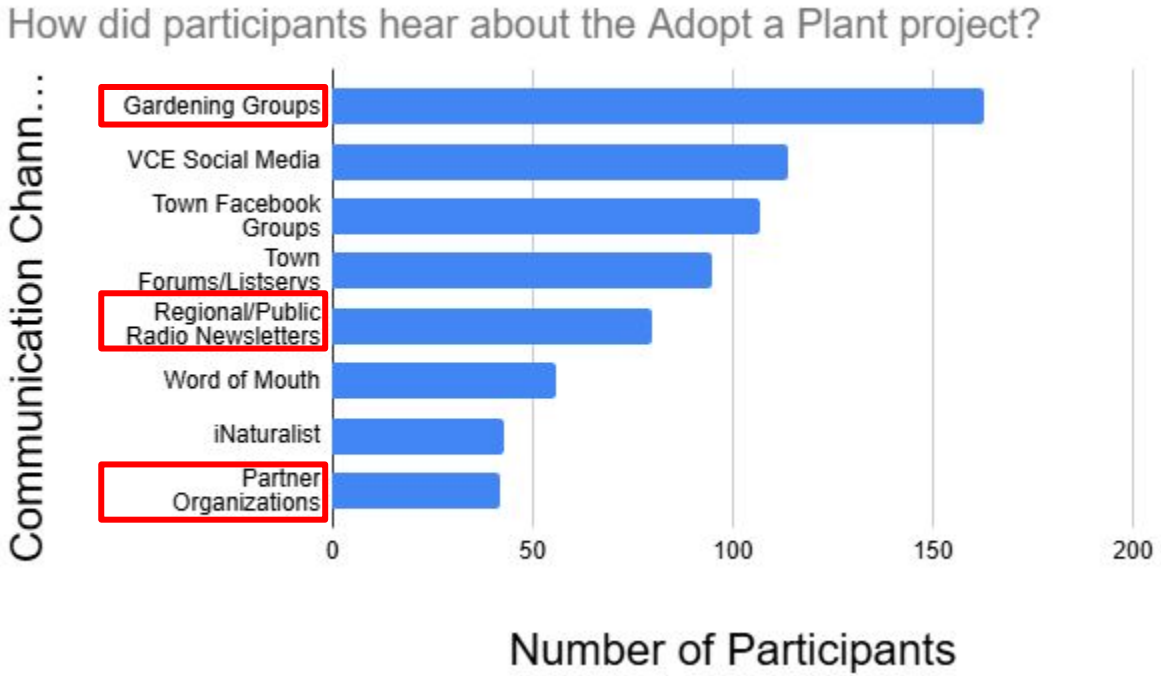
Secondary Research: Including Diverse Participants

Bombus ternarius (Tricolored bumblebee)

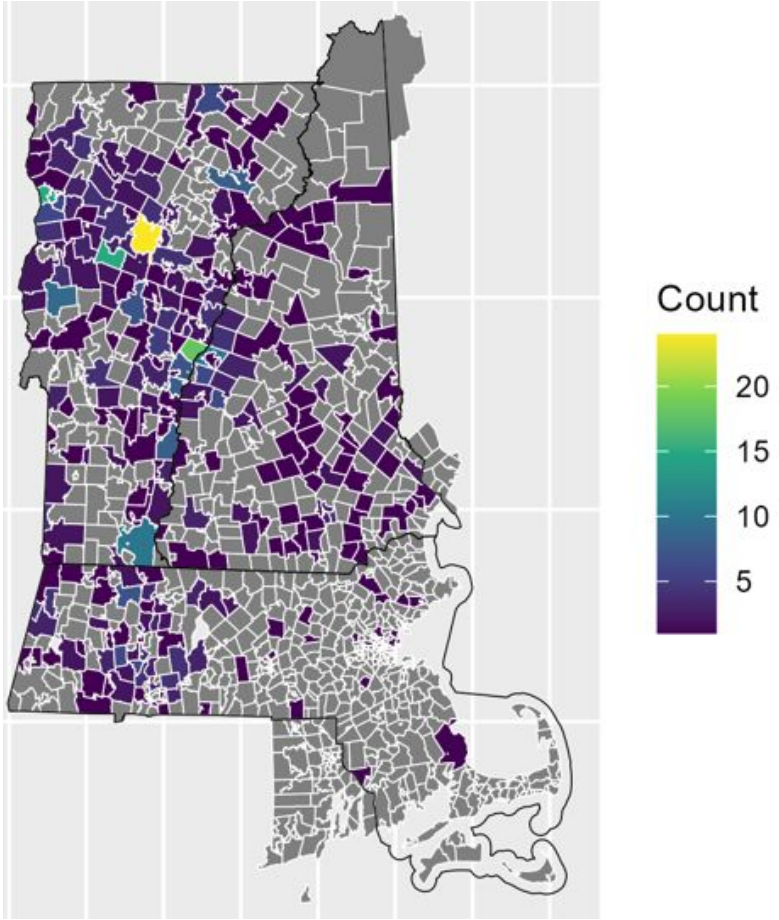
1. Frame research question to align with community priorities
2. Create opportunities for community leadership and bi-directional learning
3. Recruit through 3rd party partners

Source: Pandya, R.E. (2012), Frontiers in Ecology and the Environment.

Recruitment: What We Did



Recruitment: Outcomes



- 700 participants reached
  - **MA**: 130
  - **NH**: 160
  - **VT**: 410
- Representation from **all counties** in our target area
- 85% of participants are new to VCE

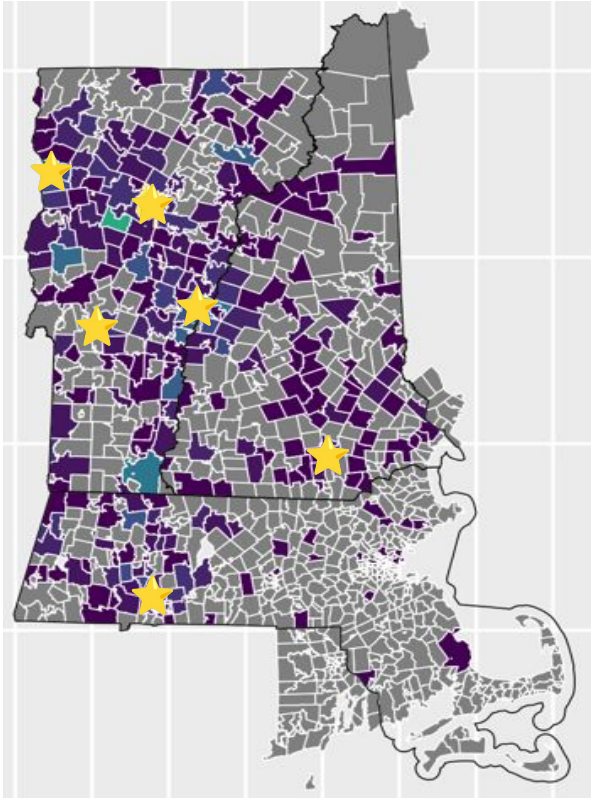
Secondary Research: Including Diverse Participants

Bombus ternarius (Tricolored bumblebee)

1. Frame research question to align with community priorities
2. Create opportunities for community leadership and bi-directional learning
3. Recruit through 3rd party partners
4. Reduce barriers to entry
5. Disseminate results of the work widely beyond scientific publications

Source: Pandya, R.E. (2012), Frontiers in Ecology and the Environment.

Next Steps



Map showing location of plant pickup events

1. **7 plant pick-up events** happening across the region this spring
2. Mid season survey to gauge participant experience
3. Mid and post season summary of data collected

Key Takeaways

Planting day with ECO AmeriCorps volunteers at one of our common gardens in Hartford, VT

1. Meet your audience where they are
2. Collect data to understand your audience
3. Frequently request feedback
4. Reaching new audiences takes effort, time and care

Thank you!

bit.ly/vce-adopt-a-plant-project

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