

# The Value of Collecting Bees

Frequently asked questions about bee surveys

Wildlife surveys provide scientists with information regarding the health of an ecosystem. Surveys allow us to determine the species diversity of a habitat, identify rare species of conservation concern, and monitor populations over time. Our main goal is to conserve and protect our native, wild pollinators and enhance pollinator habitat. In order to conserve bees, we must first know more about them and their population levels.



## Why do biologists collect bees during surveys?

Some wildlife, such as birds, mammals, reptiles, and amphibians, can be identified by biologists in the field. Bees, however, are incredibly diverse (~4,000 species in North America) and many of our native bees are small and cryptic. To identify bees to species, multiple features must be examined and measured with a microscope by a taxonomist. This is crucial for assessing the bee species richness, abundance, and diversity in your pollinator habitat.



## Can photographs be used to identify bees?

For some types of bees, yes. Larger bees, such as bumble bees, can be identified to species in the field or with photographs. In these cases, we will temporarily catch the bee in a clear vial before releasing her. However, smaller bees do need to be collected in order to be identified with a microscope back at the lab.



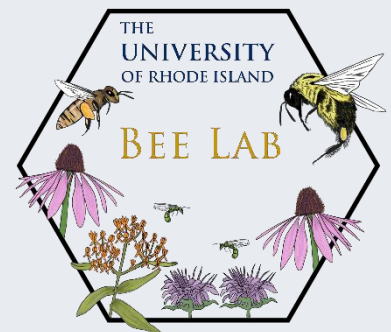
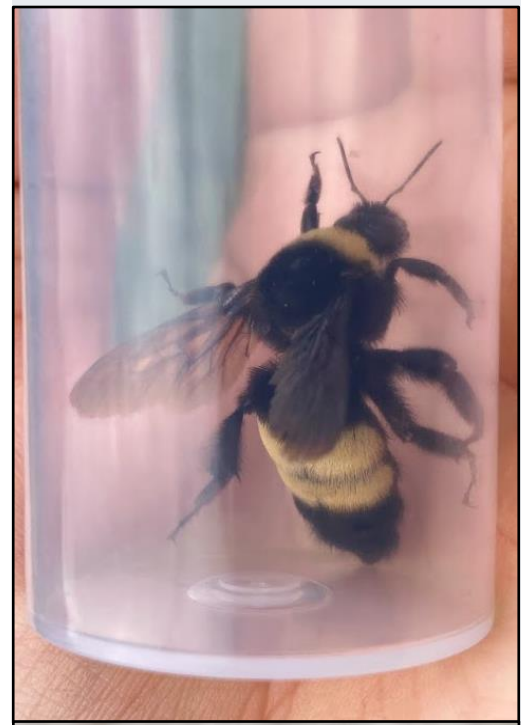
## What happens after the bees are identified?

Each bee is carefully pinned and labeled with the collection date and location. Once identified, each bee will be labeled with its species as well. Our data from these surveys will be shared with the Natural Resources Conservation Service and the public through various publications and online databases. Each specimen will be properly curated and permanently housed in the insect museum collections at the University of Rhode Island and the Connecticut Agricultural Experiment Station for future study.



## Will collecting bees impact the local bee population?

There has been extensive experimental work done by researchers investigating the impact of trapping and collecting bees. There is no indication that even the most intensive trapping decreases local bee populations. For our surveys, we will only collect specimens by hand/net while performing transect surveys once monthly. This collection rate is expected to be much lower than other lethal bee survey methods. In many cases, the bees that we will collect are solitary nesting. Solitary bees provision a cell for their young and do not tend to them after the egg is laid. So, even when a female is collected, her young will continue to develop without any further attention from her and emerge the following year.



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