



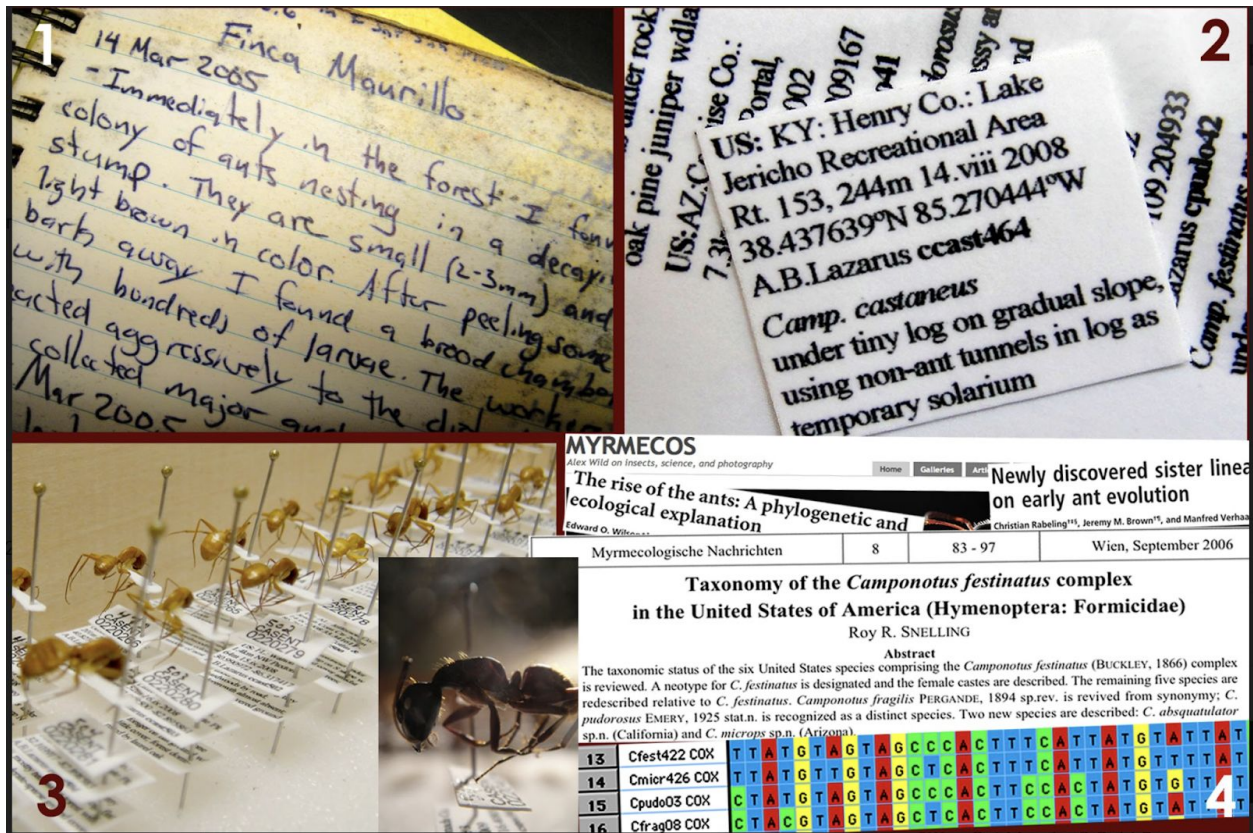
Episode 1 - Welcome Harv!

Thank you for joining us on *The Buzz*, a next generation science show, where YOU are part of the cast. Season One of *The Buzz* is an odyssey through ecosystems science, from the minuscule building blocks that form our environment to the global effect of switching those blocks around.

Synopsis

In our opening episode Harv, a [Lord Howe Island stick insect](#), flies in from Australia to surprise his old friend Adam, a science teacher in Los Angeles. But a mold problem renders Harv's Air Bee n Bee unlivable, and the two are forced to quarantine under one roof. Thankfully, stick insects are immune to coronavirus, and always cough into their elbows. But Harv doesn't know a soul in this strange, new land. To help familiarize Harv with the local [flora](#) and [fauna](#), we make field guides and conduct a [BioBlitz](#) of the life we find around the house.

Project: Field Guide & BioBlitz



Observation is a cornerstone of science, but the [scientific method](#) has rules we must follow. Using field guides that we make, we will record various data about the plants and animals in our surroundings, and try to identify our specimens by their [scientific \(Latin\) names](#).

Suggested Materials:

- Thick card stock, such as a cereal box or manila folder, to serve as the cover for our field guides
- Five equally sized pieces of paper, to serve as the pages of our field guides
- Stapler or hole punch + string, to bind our card stock & papers together into a field notebook
- Scissors, or other means to cut paper
- Pencil
- OPTIONAL markers or colored pencils for scientific illustration

Project Previews & Supplemental Materials

Adam & Harv will make a field guide using a method similar to this:

[How to Make Simple Scrap Paper Notepads in Less Than Five Minutes](#)

An even simpler field guide made with staples can be made like this:

[How to bind a book with staples \(saddle stitch binding\)](#)

GPS tool for identifying an exact location:

[GPS Coordinates](#)

Tools for identifying species:

[iNaturalist](#)

[BugGuide](#)

Some of the Next Generation Science Standards Addressed:

MS-LS2-2. Construct an explanation that predicts patterns of interactions among organisms across multiple ecosystems. [Clarification Statement: Emphasis is on predicting consistent patterns of interactions in different ecosystems in terms of the relationships among and between organisms and abiotic components of ecosystems. Examples of types of interactions could include competitive, predatory, and mutually beneficial.]

MS-LS2-4. Construct an argument supported by empirical evidence that changes to physical or biological components of an ecosystem affect populations. [Clarification Statement: Emphasis is on recognizing patterns in data and making warranted inferences about changes in populations, and on evaluating empirical evidence supporting arguments about changes to ecosystems.]

LS2.A: Interdependent Relationships in Ecosystems

Organisms, and populations of organisms, are dependent on their environmental interactions both with other living things and with nonliving factors. (MS-LS2-1)

In any ecosystem, organisms and populations with similar requirements for food, water, oxygen, or other resources may compete with each other for limited resources, access to which consequently constrains their growth and reproduction. (MS-LS2-1)

Growth of organisms and population increases are limited by access to resources. (MS-LS2-1)

Similarly, predatory interactions may reduce the number of organisms or eliminate whole populations of organisms. Mutually beneficial interactions, in contrast, may become so interdependent that each organism requires the other for survival. Although the species involved in these competitive, predatory, and mutually beneficial interactions vary across ecosystems, the patterns of interactions of organisms with their environments, both living and nonliving, are shared. (MS-LS2-2)

LS4.D: Biodiversity and Humans

Changes in biodiversity can influence humans' resources, such as food, energy, and medicines, as well as ecosystem services that humans rely on—for example, water purification and recycling. (secondary to MS-LS2-5)