



"A Day in the CAMBP"

Pest and Disease ID Outreach Guide

The purpose of this outreach is for CAMBPrs to educate small scale and hobbyist beekeepers at their local club level to help minimize potentially disastrous consequences, such as increased pest and pathogen transfer or spread of Africanized bees which are considered a public-health risk, due to lack of understanding of proper honey bee husbandry.

There are 8 stations requiring 2 – 3 volunteers each. Individuals can take 60 minutes to cycle through each station depending on questions. This outline is based on an outreach event for over 100 attendees, and can be adapted to suit the size of your event.

Station 1

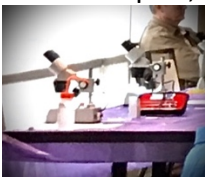
Dissection Looking for Tracheal Mites: 2 Volunteers

- 4 dissecting microscopes:
- Samples of: Honey bees - remove collar; manipulate with the tools and remove trachea
- Petri dish, Dissection tool kit (Forceps, pins, probe, tweezers, scalpel) 4 kits
- Research guide: [Diana Sammataro](#)
- [Sample video: OSU](#)

Station 2

Pest ID Under the Scopes: 2 Volunteers

- 4 dissecting microscopes
- Samples of: SHB Larva, SHB, Sap Beetle & larva, Wax moth & larva, Varroa, inside of a cell infested with Varroa
- Insect pins, wax-bottom petri dishes, alcohol to keep samples moist



Station 3

Nosema Testing with Hemocytometer: 3 Volunteers

- 2 compound microscopes
 1. Zip lock bags, Rolling pin/soda can OR mortar and pestle
 2. Alcohol (90% preferred)
 3. Hemocytometers and slide covers
 4. Honey Bees

5. Pipette
6. [Instruction sheet](#)
7. Article: [Grozinger & Holt](#) Approaches and Challenges to Managing Nosema



Station 4

AFB and EFB ID: 2 Volunteers

- [AFB and EFB](#) Sample Test Kits
- Full frames of open brood-hand sized pieces of comb (frozen)
- Toothpicks - rope test
- [Holst Milk Test instructions](#)
- Mix the powdered milk – 4” plastic falcon tubes with caps (pre-make milk solution and pre-pour into tubes)
- [AFB Handbook](#) U of M reference materials



Station 5

Small Hive Beetle Trapping/ Mitigating for Varroa: 3 Volunteers

- Traps - beetle blasters, shop towels, Swiffer towel
- How to make your own story board
 - Vaseline, paint roller, poster board -dollar store
- Hive body for practice installation
- ‘Ant Can’t’- and other options to mitigate for ants - bring sample for display
- Sample sugar shake and alcohol wash and sticky board
- [Economic threshold and IPM pyramid](#)
- Samples of Varroa control products and how to test for Varroa ([videos](#)) (screen bottom boards, ApiVar, Apiguard, Formic Pro, HopGuard, etc)



Station 6

Pollinator Education Program: 2 Volunteers

- Specialized pollinator designing craft
- Coloring activity book
- Seed cookies
- Observation hive
- Music - portable speaker



Station 7

CAMBP Question Station: 2 Volunteers

Program oriented - answer questions about CAMBP exams and courses

- Tri folds and postcards
- List of classes
- Table cloths
- Banners
- [Bee Where](#)
- [Bee Safe](#)
- [Sign-in Sheets, and sign-up sheets depending on your event needs](#)

Station 8

Your Club Question Station: 2 Volunteers

- How to get a background check/how to volunteer
- Local rules and regs – County Apiary Inspector
- Requeening in your county
- Africanization: determining to requeen or abate
- Sample of your club outreach bin/upcoming opportunities to serve
- Club banner, swag

Sample Agenda:

8:30am: Room setup –10-12 tables required, seating for all volunteers and some guests

9:45am: Prep seats - as the introductory presentation about the CAMBP and the overview of the experience will be approx. 20 minutes; make seating available

10:00am: Club welcome and mission. Describe the purpose behind a “Day at the CAMBP” and introduce the [CAMBP partners](#) and your club or association partners. Play the [CAMBP video](#) and invite guests to visit the CAMBP station for more information [about courses](#) and how to [give to the CAMBP](#).

10:25am: Stations operational – Depending on your audience, choose to create groups and cycle them through each station, or invite individuals to visit stations of their choice. Encourage volunteers to wipe down, refresh and organize stations after each use.

12:00pm: Breaks for the volunteers are important – do lunch in shifts and have snacks and water available.

1:00-3:45pm: Stations continue

3:45pm: General announcements, raffles and a big “Thank You” to volunteers and participants - clean up, pack up and close.

Email invitations to your guest list. *Sample invite:*

Our ‘Beekeeper Association’ invites you experience a day in “[The CAMBP](#)” on Saturday June 20th from 10am to 4pm at the Ag Club center.

Join our Apprentice and Journey Level California Master Beekeepers for some fun, interactive science-based activities. In this ‘hands on’ workshop you’ll identify AFB, test and count Nosema spores with a hemocytometer, dissect a honey bee and look for tracheal mites, and identify and learn various IPM strategies to mitigate for Small Hive Beetles and Varroa mites.

Enjoy a short introductory presentation on how the California Master Beekeeper Program (CAMBP) is inspiring science-based beekeeping and honey bee ambassadorship across the state. The ‘Day in the CAMBP’ experience is kid-friendly thanks to the E. L. Niño Bee Lab’s [Pollinator Education Program](#) when children are accompanied by an adult.

Packing list:

- Microscopes (2 compound for hemocytometer)
- Hemocytometer (4) and cover slips
- Nitrile Gloves (at least two per station with honey bees)
- Mortar/pestle, zip lock bags/pop can
- Rubbing alcohol
- Dissection Kits
- Wax Petri Dishes
- Powdered milk (dry or jug premade)
- Toothpicks

- AFB and EFB Vita Tests
- Falcon tubes
- Hive bodies, screen bottom boards
- 'Ant Can't' and ant prevention display items
- Swiffer sheets, shop towels
- Samples of Varroa control products
- Children's program materials
- CAMBP outreach material (postcards and brochures, banner)
- Business cards
- Tape
- Scissors
- Plastic table cloths
- Sanitary wipes/hand sanitizer/trash bags
- Laptop/Charger
- Portable projector (cables to connect laptop and speakers if needed)
- Pens and note paper
- Guest book/collect metrics on attendees for BEEs outreach
- Batteries
- Magnets/Pens/give away items
- Basket to collect business cards for raffle
- Honey Bee themed gift basket for raffle

Possible print materials:

[Nosema spore counter](#)

[Tracheal Mites](#)

[Holst Milk test Guide](#)

[AFB & EFB Guide](#)

Children's Activity pages

- [Honey comb maze](#)
- [Honey bee word search](#)
- [Insect Activity Packet](#)
- [What's the Buzz – English](#)
- [What's the Buzz – Spanish](#)

