

## BEGINNING BEEKEEPING

CLASS 6: STINGS, WHAT'S UNDER YOUR HIVES,  
MORE ON NUCS & PACKAGES, & BEE COMMUNITY

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### STINGS

- ✘ Bees sting to protect their hive or if you are being too intrusive
- ✘ They leave a scent to let other bees know to "sting here!" (Koschevnikov Gland)
- ✘ Scent has similar smell to bananas
- ✘ Worker bee stinger is barbed, so if it goes in, the whole stinging apparatus will be pulled out and venom sack will continue to pump venom into location.

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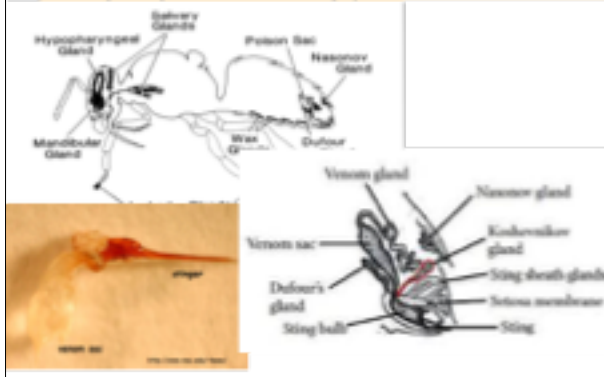
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### STINGING APPARATUS



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### STINGING



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## BE PREPARED!

- ✦ Assume you will get stung somewhere along the way, so be prepared.
- ✦ Pack your bee bag with things that will help you deal with stings.
  - ✦ Bee sting topical medication
  - ✦ Benedryl - liqui-gel or caplets
  - ✦ EpiPen
- ✦ Make sure you have a phone with you

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## WHAT TO DO WHEN YOU GET STUNG

- ✦ Get stinger out as fast as you can. Use a dull edge device to scrape it out. (Hive tool, finger nail, or credit card)
- ✦ Smoke the area to help prevent further stings (mask the pheromone).

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## WHAT TO DO WHEN YOU GET STUNG

- ✦ Get something on the sting area to deal with swelling and pain. Some examples out in the field are plantain leaves, chewing tobacco, mustard, or commercial sting medication.



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## WHAT'S YOUR REACTION

- ✦ There are 3 types of reactions to honey bee stings
  - ✦ Mild local
  - ✦ Large local
  - ✦ Systemic

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## MILD LOCAL REACTION

- ✦ Relatively small area around sting is affected
- ✦ Some areas may react more than others — hands for example
- ✦ Swelling improves in a few hours



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## TREATING SMALL LOCAL REACTION

- ✦ Treat at site
- ✦ Ice as soon as you can
- ✦ Baking soda
- ✦ Vinegar
- ✦ Sea Salt Soap
- ✦ Meat tenderizer

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## LARGE LOCAL REACTION

- ✦ Severe redness and swelling after a sting
- ✦ Reaction area may get larger over next 24 hours and may take a few days to resolve



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## TREATING LARGE LOCAL REACTION

- ✦ Ice packs
- ✦ Ointment like hydrocortisone or calamine
- ✦ Over the counter antihistamine
- ✦ Pain reliever like ibuprofen

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## SYSTEMIC REACTION

- ✦ Hives
- ✦ Itchiness and swelling in areas away from the sting site
- ✦ Flushed skin
- ✦ Swelling of the tongue or difficulty swallowing
- ✦ Stomach cramping, vomiting, nausea or diarrhea
- ✦ Difficulty breathing
- ✦ Dizziness or a drop in blood pressure
- ✦ Unconsciousness
- ✦ Anaphylaxis, which is a severe life-threatening reaction. This can occur within minutes of a sting.

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## WHAT TO DO IF SYSTEMIC REACTION

- ✦ Call 911
- ✦ If you have EpiPen, let them know
- ✦ If you don't have EpiPen, the Benadryl may help

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## A NOTE ON EPIPENS

- ✦ EpiPens come with a "training" pen.
- ✦ Practice with it so you are prepared
- ✦ Common issues even by medical professionals:
  - ✦ Not enough force
  - ✦ Upside down and now it's in your thumb

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## WHO GETS SYSTEMIC REACTIONS THE MOST?

- ✦ Beekeepers are the highest population of people getting systemic reactions (2 - 3 times more likely)
- ✦ Beekeepers who have never had even a large local reaction may get a systemic reaction

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## ONE MORE COMMENT

- ✦ Remember that honey bees are still wild animals even though we have sort of domesticated them
- ✦ If you get stung in the eye, you could go blind

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## NEXT TOPIC: WHAT'S UNDER YOUR HIVE?



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## WHY WE CARE

- ✦ Grass and weeds can harbor critters you may not want under your hives
- ✦ Grasses can grow up through screened bottom boards
- ✦ Weeds and grasses can block the entrance
- ✦ You may want something to help reduce the amount of maintenance you do.

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## SOME IDEAS

- ✦ Old carpet
- ✦ Plastic garden cloth
- ✦ Cardboard
- ✦ Mulch or wood chips
- ✦ Pavers
- ✦ Gravel

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## ONE OTHER THING WILL BE THERE

- ✦ There's a pretty good chance you will also have small hive beetle larvae under and around your hives since they pupate in the dirt.



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## CONTROLS

- ✦ Diatomaceous Earth - the fossilized remains of tiny, aquatic organisms called diatoms. Natural compound called silica.
- ✦ Beneficial Nematodes - microscopic, non-segmented roundworms. I've used Southeastern Insectaries with great luck <http://www.southeasterninsectaries.com/>

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## NEXT TOPIC: NUCS & PACKAGES

- ✦ Watch my videos on BumblingBeekeeper
- ✦ Are you ready?
  - ✦ Hive and frames are ready. If you are getting a nuc, you may still need frames to fill in the hive. Don't leave them space because they will build comb.
  - ✦ Light sugar syrup ready for feeding. 2 parts water to 1 part sugar. Heat water to boiling, turn off stove, add sugar and stir until dissolved. Don't let sugar caramelize.

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## INSTALLING THE NUC

- ✦ Put the frames from the nuc box into the hive in the same order and together. Put some empty frames on either side (filling space). You can add drawn comb or frames with foundation.



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## INSTALLING A NUC

- ✦ Feed your bees!
- ✦ Entrance reducer to smallest size.
- ✦ After a week to 10 days, check on them and be prepared to add equipment!
- ✦ You may need to move some of the extra frames you added in between the original 5 frames. This is what we call checkerboarding.

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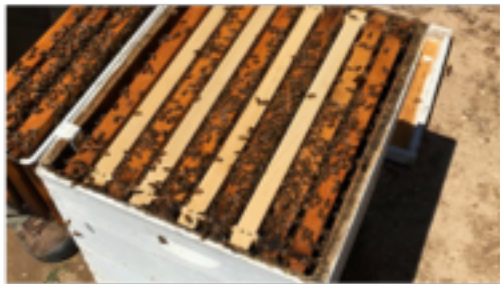
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## CHECKERBOARDING



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## INSTALLING A PACKAGE

- ✦ Are you ready?
  - ✦ Hive and frames are ready. If you have drawn comb to add, make sure it's ready.
  - ✦ If you don't have drawn comb to add, consider adding 2 or 3 drops lemongrass essential oil to a paper towel and add that (or some Honey-B-Healthy)
  - ✦ Be ready to feed your bees

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## INSTALLING A PACKAGE

- ✦ Think about spraying them with light sugar syrup a few hours before installation and then light sugar syrup with oxalic acid (follow directions — 38 g/1 liter syrup) before installation. Or if you don't have oxalic acid, spraying them first may make them calmer.
- ✦ Feed them with light sugar syrup.
- ✦ Install smallest entrance reducer.

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## INSTALLING A PACKAGE

- ✦ Once the bees are in the hive and everything is closed up, you can put the empty container in front of the hive with a stick inside the opening that goes to the landing board so there's a way for bees that may still be inside to climb up and go inside.
- ✦ If installing more than 1 package, consider giving the bees an extra "home" indicator like a branch in front of the hive (but not in the landing path).

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## INSTALLING A PACKAGE

- ✦ You may need to bring them more food in less than a week.
- ✦ After a week or 10 days, inspect and consider checkerboarding like we did with the nucs.
- ✦ Be prepared to add equipment.

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## BEEES LEFT TO THEIR OWN DEVICES



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## NEXT TOPIC: BEE COMMUNITY

- ✦ Bee school mates - shared understanding
- ✦ Bee clubs - [NCBeekeepers.org](http://NCBeekeepers.org) plus 82 chartered chapters in NC serving 100 counties
  - ✦ Meet other beekeepers near you
  - ✦ Bee schools
  - ✦ Speakers on latest topics
  - ✦ Use of honey extractor possible
  - ✦ Conferences - in person and online
  - ✦ Vendor access

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### SOME THINGS I'VE LEARNED

- ✦ Dr. Jennifer Tsuruda - University of Tenn. formerly at Clemson
- ✦ Bee nutrition - 3 plants with nearly perfect amino acids are:
  - ✦ Mustard
  - ✦ Rape seed (Canola)
  - ✦ Sweet Clover



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### SOME THINGS I'VE LEARNED

- ✦ Sam Comfort, Anarchy Apiaries
- ✦ Warre Hives made simple & fun!



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### SOME THINGS I'VE LEARNED

- ✦ Dr. Larry Connor, owner WicWas Press
- ✦ Notes in the hive — well, on the hive — writing on outer cover with sharpie.
  - ✦ SQ/NSQ - saw queen/no see queen
  - ✦ EOQ - evidence of queen



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### SOME THINGS I'VE LEARNED

- ✦ Dr. James Tew, Auburn & Ohio State <https://www.onetew.com/>
- ✦ Arranging bee yard to reduce robbing behavior.
  - ✦ Horseshoe formation
  - ✦ On an angle
  - ✦ Distance apart



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## SOME THINGS I'VE LEARNED

- ✦ Dr. Dewey Caron, University of Delaware and Oregon State
- ✦ Post mortem procedure after a die out.
- ✦ The joy of bee vests.



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## SOME THINGS I'VE LEARNED

- ✦ Dr. Doug Vinson, President NCSBA
- ✦ Overwintering in Nucs in NC
- ✦ The MDA Splitter approach to making queens



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## AND SOME PEOPLE I'LL MISS



Jeanne Price



Dr. Vaughn Bryant

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## NEXT TIME - APRIL 11TH

Working in the Hives and  
Spring Management

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