

## Beginning Beekeeping

### Class 1: Overview

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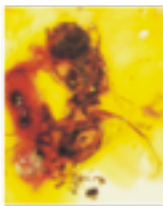
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## There's a lot to learn

- ◊ There is evidence that bees have been around at least 100 million years.



Honey seeker depicted in an 8000-year-old cave painting in Spain

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## What we know for sure

- ◊ For the most part, no two beekeepers have the same opinion, so you may (probably will) get different information or advice from someone else.
- ◊ There's a lot of research going on and we are finding out that things we thought were true are not necessary the case.
- ◊ What works in one area of the state or country will not necessary work in another part.
- ◊ Trust your instincts. Trust your bees.

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## How this class will work

- ◊ Keep an open mind. Honey bees adapt to their environment and you'll get more out of this class if you try to do that as well.
- ◊ In addition to having been learning about and keeping bees for about 13 years, I was also a project manager for many years, so the classes are set up for what I see is the critical path for new beekeepers.

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- ◊ It's time to order bees, but to do that you need to know a little bit about where you are going to keep them and what equipment you'll be using.

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- ◊ Today: We're going to cover some basic questions about beekeeping, why keep bees, why keeping bees is different now than it was even 10 years ago, and we're going to spend time talking about how you order bees.
- ◊ We'll also talk about what's to come. And being adaptive will come in to play as we go along because we'll adapt to how things go in this class.

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- ◊ Next week: We'll focus on equipment — both hive components and other equipment you will need.
- ◊ I've invited other beekeepers to join us so we can get some different view points on things along the way.

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## Honeybee or Honey Bee?

- ◊ You'll see it spelled both ways, but I'll be using the convention of the Entomological Society of America.
- ◊ If the insect is what the name implies, write the two words separately; otherwise run them together.

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## Honey bees in the U.S.

- ↪ There's relatively recent evidence that a kind of honey bee existed in the Americas about 14 million years ago.
- ↪ The honey bees we have today (European or western honey bee) are not native to the U.S. The first bees probably came from England to Virginia in 1622.
- ↪ Up until the late 1980s, keeping bees was fairly easy. You didn't have to go to bee school and learn so much back then

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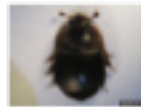
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## Honey bees in the U.S.

- ↪ Varroa destructor introduced into US around 1987.



- ↪ Small hive beetle first detected in Florida in 1998.



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## 2019-2020 U.S. Bee Losses Report

- ↪ According to the Bee Informed Partnership, in 2019-2020, total winter losses nationally were 22.2%
- ↪ Total summer losses were the highest recorded at 32%
- ↪ Total annual losses were 43.7%

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## 2019-2020 N.C. Bee Losses Report

- ↪ According to the Bee Informed Partnership, in 2019-2020, winter losses in NC were 24.41%
- ↪ Total summer losses were 22.13%
- ↪ Total annual losses were 38.54%

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## Caring for your bees

- ◊ Varroa mites account for most of the bee deaths in the U.S. You will need to monitor mite counts and treat if necessary. (Or not only will you lose your bees, but your neighbor will probably be affected as well.)
- ◊ Nutrition is becoming more and more critical. It's not uncommon for bees in NC to starve to death in February.

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## Start up costs

- ◊ It's not unusual to spend \$500 getting started.
- ◊ According to recent research, 80% of new beekeepers quit within 2 years.

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## Getting started

- ◊ These days keeping honey bees is no different than raising other farm animals and there are state regulations and guidelines associated with bees
  - ◊ You need to be trained
  - ◊ You need to have equipment
  - ◊ You need to have space available
  - ◊ You need to feed them
  - ◊ You need to detect and treat for pests & viruses
  - ◊ You need to decide how they will be used
  - ◊ You need to be able to commit to the time needed

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## Training

- ◊ Things you need to know:
  - ◊ The colony, it's organization, and bee biology
  - ◊ What equipment you will need and proper use of that equipment
  - ◊ What to do each month of the year
  - ◊ How to keep your bees healthy and safe
  - ◊ You need to learn to read the frames

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What does that mean?

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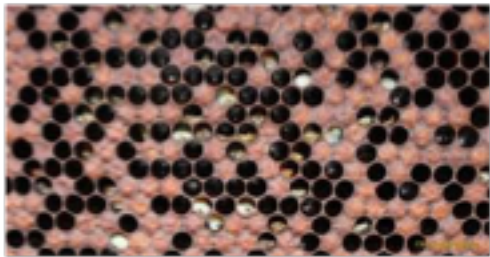
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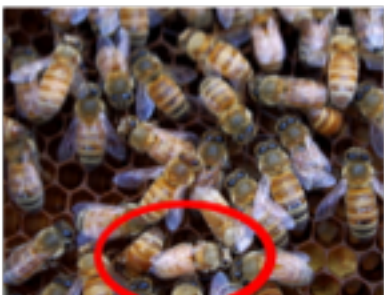
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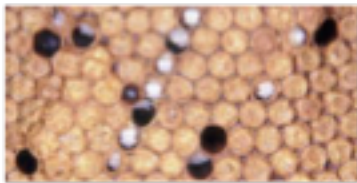
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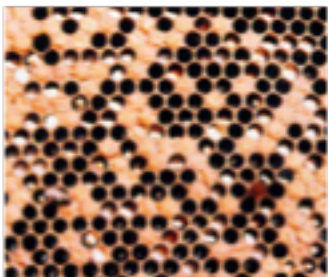
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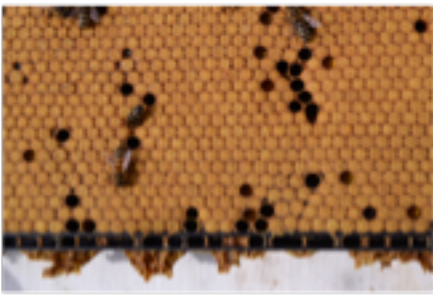
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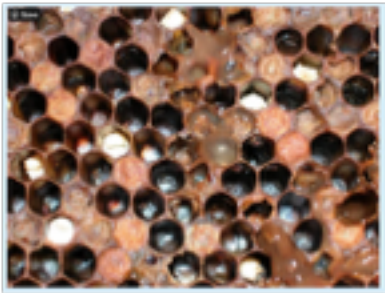
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"Keeping bees is relatively simple, like raising children is relatively simple."

—John F. Adams, *Beekkeeping: The Gentle Craft*

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Moving forward. Getting ready to order bees.

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## Chapter 4 Obtaining and Preparing for Bees

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### You need to have space for bees

- ✦ A strong colony of bees needs 1 acre of foraging space – or you will need to supplement food
- ✦ You need to make sure you can have bees on your property
- ✦ You need to make sure your neighbors are okay with it

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- ✦ If you are putting bees on someone else's property, you need to know about their property maintenance practices
- ✦ If it's a farm, you need to know what they are growing and what their farming practices are

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### Bee yard placement

- ✦ Water nearby but not under the hives!
- ✦ Protection from north winds
- ✦ Open sunshine for most of the day
- ✦ Accessibility
- ✦ Enough space to spread out if you need to (see page 57 in chapter 4)

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## My Beeyard Configuration



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## Queens

- ✦ Most common are Italian
- ✦ Others in this area are Carniolan, Russian, Buckfast
- ✦ Most packages and nucs will come with a hygienic Italian. Those are easiest to work with for new beekeepers because "they read the bee books!"

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## Equipment

- ✦ The equipment you choose may affect how you get your bees
- ✦ Four types of hives that can be used in NC
- ✦ All have removable frames

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## Equipment

- ✦ Langstroth Hive (10, 8, & 5 frame sizes)



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## Equipment Configuration: Langstroth

- ⇨ 5, 8, and 10 frame sizes available
- ⇨ Comes in 3 depths – deep, medium, and shallow

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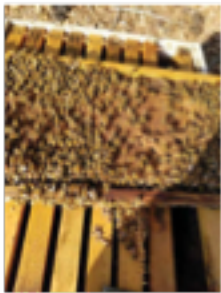
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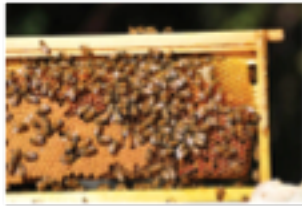
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## Brood Frames for Langstroth



Deep is 9 1/8" deep



Medium is 6 1/4" deep

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## Equipment

- ⇨ Top Bar Hive (Kenyan & Tanzania)



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## Equipment

- ⇨ Warre Hive (a cross between Langstroth & Top Bar)



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## Equipment

↳ Horizontal or Long Hives



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## Bees for the hive



Swarm



Nuc



Package

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## Swarm

- ↳ Similar to a package except you don't have any guarantees what you are getting
- ↳ Not something you can plan around very well

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## Packages

- ↳ 3 pounds of bees and a laying queen. 3 pounds are about 10,000-12,000 bees.
- ↳ Bees are shaken from existing hives and may not be from same hive (probably not). Adult bees
- ↳ Queen is not the queen the bees already know
- ↳ You will need to feed them even if there's already nectar flow
- ↳ May abscond or drift

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- ◊ Packages are available sooner than nucs
- ◊ Best for equipment where nucs not readily available (top bar, warre)
- ◊ Most readily available and least expensive
- ◊ See page 49 & 50 for more advantages and disadvantages or read post on [BumblingBeekeeper.com](http://BumblingBeekeeper.com)

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## Nucs

- ◊ Typically 3 frames of brood plus 1 to 2 frames of honey and pollen with laying queen
- ◊ Can come in deep or medium sized frames
- ◊ Already have drawn comb and food so you may not need to feed
- ◊ Bees in all stages of life cycle
- ◊ More advantages and disadvantages on pages 50 & 51 or read post on [BumblingBeekeeper.com](http://BumblingBeekeeper.com)

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## Bees for the hive

- ◊ **Swarms – free unless they are sick**
- ◊ **Packaged bees (3 pounds of bees plus a queen) \$118 - \$150**
- ◊ **Nucs (4 or 5 frames of bees, food, and a queen) \$170 - \$200**

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## Where do I order?

- ◊ <https://bumblingbeekeeper.com/order-your-bees-for-2021/>




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## Also

- ✦ NC Department of Agriculture Apiary services provides a list of apiaries authorized to sell bees in NC:
- ✦ [https://www.ncagr.gov/plantindustry/Plant/apiary/documents/PermitToSell2021\\_Feb.pdf](https://www.ncagr.gov/plantindustry/Plant/apiary/documents/PermitToSell2021_Feb.pdf)

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## Coming Attractions: Plans for the coming weeks

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## Week 2: February 28th

- ✦ Questions
- ✦ Equipment: Woodenware
- ✦ Protective Clothing
- ✦ Tools
- ✦ Installing Packages & Nucs

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## Week 3: March 7th

- ✦ Questions
- ✦ Races of honey bees
- ✦ Honey bee basic biology
- ✦ Life cycle of the honey bee

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## Week 4: March 14th

- ◊ Questions
- ◊ Bee biology
- ◊ Pheromones

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## Week 5: March 21st

- ◊ Questions
- ◊ Pest, diseases, and pesticides

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## Week 6: March 28th

*This is Palm Sunday but also during spring break*

- ◊ Questions
- ◊ Catch up day

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No class on April 4th

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## Week 7: April 11th

- ◊ Questions
- ◊ Working in the hives
- ◊ Seasonal management: Spring

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## Week 8: April 18th

- ◊ Questions
- ◊ Seasonal Management: Summer, Fall, and Winter

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## Week 9: April 25th

- ◊ Questions
- ◊ Products of the hive: honey, wax, propolis, pollen, bee venom, wax moth larvae

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