Introduction to Beekeeping
Session #2: Getting Started, the Basics of Apiculture

Friends of Brooker Creek Beekeepers
Agenda

- Introduction
- Florida Rules and Regulations
- Quick Summary of Session 1
- The Hive
- Equipment You Need to Get Started in Beekeeping
- Protective Clothing
- Where to Place Your Apiary
Florida Rules and Regulations

- Handouts and Discussion
The Honey Bee Colony:
*Apis mellifera*

- One Queen
- 20,000 – 70,000 Workers
- 0 – 2,000 Drones
Hive - A beehive is an enclosed structure in which honey bees live and raise their young. Natural beehives are naturally-occurring structures occupied by honey bee colonies, while domesticated honey bees live in man-made beehives, often in an apiary.

Modern Hive: The Langstroth Hive - Patented in 1852, is the standard beehive used in many parts of the world for beekeeping. Bees build honeycomb into frames which can be moved with ease. The frames are designed to prevent bees from attaching honey combs where they would either connect adjacent frames, or connect frames to the walls of the hive.

Apiary (bee yard) – Place where bees and beehives are kept.

Apiculture (beekeeping) - The cultivation and management of honey bees for agriculture purposes.
The Beehive

A Single Functional Unit Made Up of Many Parts

• The Bees
  - A Queen
  - 20,000 to 70,000 Workers (her daughters)
  - Up to a Few Thousand Drones (her sons)
  - Brood: Eggs and Larvae (her growing babies)

• The Structure
  - The Wooden Parts (or Plastic, or Styrofoam)
  - Beeswax
  - Propolis

• The Food
  - Nectar
  - Pollen
  - Honey
Getting Started – The Langstroth Hive

Components of the Hive

- Outer Cover
- Inner Cover
- (10) Frames with Foundation for Each Super
- Supers
- Queen Excluder
- Hive Body
- Bottom Board
- Hive Stand
Hive Stand

- Is Simply a Stand so that the Bee Hive Does not Rest Directly on the Ground
- You can purchase hive stands from Beekeeping Supply Companies or Make Your Own
  - Usually Made of Cypress
  - Many Hive Stands are Designed with an Inclined Landing Board that Slopes up to the Hive Entrance
  - Are Designed to Fit the Bottom Board
- Commercial Stands Look Nice and Work Great….. But, Anything that Prevents the Hive from Resting Directly on the Ground will Work
  - Cinder Blocks, Bricks, Flagstones, and Wooden Beams Work Great

An Unstable Beehive is a Very Bad Thing!
Bottom Board

- Provides the foundation for the hive
- The Bottom Board is Designed to Provide an Entrance into the Hive on One End When the Hive Body is Placed on Top
- There are Two Basic Types of Bottom Boards
  - Solid Bottom Board
  - Screened Bottom Board
Hive Body

- The Hive Body Rests On the Bottom Board and Forms the First Story of the Hive, and is Sometimes Called the Brood Nest or the Brood Chamber
- The Hive Body is Traditionally a Deep Super, but Does Not Have To Be
  - Bee Boxes (or Chambers) Come in 3 Sizes: Deep, Medium Depth, and Shallow Depth
  - Boxes are called Supers: Their Dimensions are Identical, Except for Depth
- Each Super Contains 10 Frames with Wax Foundations Upon Which the Bees Build their Comb
- The Standard Bee Hive has 10 Frames. However, 8 Frame Supers are Becoming More Popular, Since they are Lighter and Easier to Carry
Frames and Foundation

- **Frames**
  - Have Traditionally Been Four Pieces of Wood that Fit Together and Hold a Sheet of Honeycomb within the Beehive
  - Newer Frame Designs are One-Piece, Molded Frames with Foundation

- **Foundation**
  - Foundation Encourages (Forces) Bees to Build Straight Honeycomb in a Wooded Frame by Giving Them a Piece of Wax, called Foundation, which is Embossed With the Shape and Size of Worker Bee Cells.
  - When a hive of bees is given a frame of foundation, they are forced to build the comb where the beekeeper wants it and not where they might otherwise be inclined to build it
  - Different Types of Foundation: Wired Wax, Duragilt, and Plastic
Queen Excluder

- The Queen Excluder is an Optional Piece of Equipment
- A Queen Excluder is Designed to Restrict the Movements of the Queen Bee
- It is Placed Between the Supers: Workers Can Fit Through, but the Queen is Too Big
- Its Purpose is to Keep the Queen in the Brood Nest so that There will be No Brood in the Honey Supers

The Queen Excluder is a Hotly Debated Subject: Some Beekeepers Swear by Excluders, Others Swear at Them!
Honey Super

- The Honey Supers are Where the Majority of the Honey Crop is Stored
- Three Sizes of Honey Supers
  - Deep: Uses 9 1/8 Inch Frames
  - Medium: Uses 6 ¼ Inch Frames
  - Shallow: Uses 5 3/8 Inch Frames
- Any Size Super Can be Used, But Shallow Supers are Traditionally Used Due to the Weight. Deep Supers Are Very Heavy When Filled with Honey.
- Some People Use Medium Depth Supers for Everything Due to Their Lighter Weight
## Honey Supers

<table>
<thead>
<tr>
<th>Size or Type</th>
<th>Height in Inches</th>
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<tbody>
<tr>
<td>Comb Honey Super</td>
<td>4 3/4</td>
</tr>
<tr>
<td>Shallow Super</td>
<td>5 3/4</td>
</tr>
<tr>
<td>Medium depth Illinois Super</td>
<td>6 5/8</td>
</tr>
<tr>
<td>Deep</td>
<td>9 5/8</td>
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</tbody>
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Inner Cover

- The Inner Cover Provides an Insulating Dead Air Space Between the Top of the Hive and the Outer Cover
- Inner Covers are Used with Telescoping Outer Covers, but Not with Migratory Covers
Outer Cover

- The Outer Cover is the Roof of the Hive
- There are Two Types of Outer Covers
  - Telescoping Cover: Fits Down Over the Top of the Uppermost Super
  - Migratory Cover: Sets Flat Upon the Top Super
- One Caveat: You Must Use an Inner Cover When You Use a Telescoping Outer Cove
Some Thoughts

• Hives are Traditionally Painted White, but any Color Works

• You Should use a Good Latex Paint and Primer On All the Exposed Wooden Parts

• Plastic and Styrofoam Hives are Becoming More Popular, But Many Beekeepers Like Wood

• Try To Keep Super Sizes As Standard as Possible, So That You Can Easily Interchange Equipment Between Hives
## Clothing and Equipment

<table>
<thead>
<tr>
<th>Protective Clothing</th>
<th>Bee Suit / Coveralls</th>
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<tbody>
<tr>
<td></td>
<td>Gloves</td>
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<tr>
<td></td>
<td>Hat &amp; Veil</td>
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<tr>
<td>Miscellaneous Equipment</td>
<td>Hive Tool</td>
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<td></td>
<td>Smoker &amp; Fuel</td>
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<td>Bee Brush</td>
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Other Cool Stuff

- There seems to be no end to the number of gadgets and cool beekeeping tools you can get.
- Take a look through any of the beekeeping supply catalogs. Some Examples are:
  - Different Types of Hive Tools
  - Frame Lifters
  - Hive Carriers
  - Pollen Traps
  - Covers
  - Frame Spacers
  - Moving Screens
Your Apiary (Bee Yard) Location

Beekeepers Should Select Each Apiary Site Carefully!

- Nectar and Pollen Sources Should Be Within a Short Distance, Best If Within a Mile or So...
- Bees Need a Source of Fresh Water, Preferably Within ¼ Mile
- Apiaries Needs Plenty of Sunshine
- Apiaries Need Dry Ground and Good Air Drainage
Your Apiary (Bee Yard) Location -2

- **Accessibility To the Apiary is Important**
  - Getting Your Vehicle Nearby
  - Carrying Equipment In and Out
  - Inspection and Management
  - Honey Extraction

- **Safety from pesticides**
  - Acquaint yourself with the pesticides commonly used in the area
  - When Practical, Place Colonies Away from Fields that are Routinely Treated with Pesticides
Great Sources of Information:

Websites

- Tampa Beekeepers Association: http://tampabaybeekeepers.com
- Florida Beekeepers Association: http://floridabeekeepers.org
- Florida Department of Agriculture:
- The University of Florida’s website: http://entnemdept.ifas.ufl.edu/afbee
- UF BEE COLLEGE LINK:
  http://entnemdept.ifas.ufl.edu/honeybee/extension/bee_college.shtml
Great Sources of Information

Videos
- emdept.ufl.edu/honeybee/extension/Video.shtml

Periodicals
- American Bee Journal, Dadant and Sons
- Bee Culture Magazine, A I Root Co

Books
- The Beekeeper's Handbook by Diana Summataro
- The Backyard Beekeeper: An Absolute Beginner's Guide to Keeping Bees in Your Yard and Garden by Kim Flottum
- The Hive and the Honey Bee / Edition 22 by Joe M. Graham
Questions