

Nomenclature

Taxonomy of the Honey Bee

Carl Linnaeus (1707-1778)

- “The Father of Taxonomy”
- Linnaeus desired to name all insects
- Trained as MD
- Developed the early stages of ranking and classifying organisms as used today.



Linnaeus's Scientific Thought

- He first classed on reproductive organs
- Soon concluded that the range was too large
- Developed the “binomial nomenclature”
- Binomial = two names (*Apis mellifera*)
- Nomen (name) clature (what is its name)

Nomenclature

- As you will find the honey bee is defined using Linnaeus' method of nomenclature.
- *Apis* (Genus) *Mellifera* (Species) *Ligustica* (race) (the western bee that we find in the US.)
- We will take a look at the scientific adventure distinguishing the species, subspecies and hybrids of today.

Classification

This is how Linnaeus' method has evolved.

- Kingdom = Animalia (animals)
- Phylum = Arthropoda (Arthropods)
- Class = Insecta (insects)
- Order = Hymenoptera
- Family = Apidae
- Genus = *Apis**
- Species * (this brings us to where we need to be.)
- Source: "Wepidia"

Where and What

- When we scientifically begin to develop a method of distinguishing one species from another; we must be specific.
- There are four species (lots more available) of honey bees that whet a beekeeper's interest. {note Apis with caps, mellifera small letter.}
- Apis (Genus) mellifera (Species); (western honey bee)
- Apis florea; the small bee
- Apis cerana, the eastern bee
- Apis dorsata, the giant honey bee.
- Hive and the honeybee

Apis Mellifera Mellifera (Genus) (Species) (Race)

- Originates in Britain, Ireland, Northern and Central Europe. German bee
- Came across to the Americas in the 1800's
- Jet Black to Dark brown.
- This race of bees is known to be very aggressive and therefore the mid to late 1800's began to be phased out.

Apis mellifera ligustica

- Homeland: Italy and the Mediterranean
- This is the Western Honeybee that has replaced German bee in the Americas
- This race is known to be gentle, with yellow markings
- Prolific layers and colony build up quickly, good producers
- BUT: Maintain large populations year round, Rob, Drift between hives, eat up stores rapidly in winter months.

Apis mellifera carnica (the Carneolan bee)

- A subspecies {race} originating in the Balkan peninsular (Austria, Hungary, Bulgaria to Bosnia and Serbia)
- Smaller in size, lots of hair'
- Overwinters with smaller numbers
- Uses less store
- Builds up rapidly in spring, very gentle
- Quick to swarm (because of quick build up)
- Swarming makes them more difficult to manage.

Apis mellifera caucasian

- Originates in the Caucasus region; the mountain range diving south eastern Europe from Asia.
- Very gentle, grey in color because of the copious hair,
- Good producer
- BUT slow to build up in the spring and do not fair well in cool damp climates.

What does all this mean to a local beekeeper?

- There is a word that we do not seem to use often; but is found in many of the writings.
- That word is “stock”
- Up in the Mts. of South and North Carolina You find sourwood honey.
- In the lower parts of both states you find Tupelo honey.
- Different locales and temperatures produce different plants which usher in different needs for pollination.
- Differing disease issues brings a desire for a better bee

Different types of bees

- If you ask Dwight Porter; a queen rearer in this area; he will say; “I have developed a good bee.” meaning it has traits that he likes.
- So! Here list some of the issues.
- The German bee is aggressive.
- The Italian bee has large nest or populations.
- The Carniolan bee swarms easily
- The Caucasian uses a LOT of propolis.
- The search for the “good bee” begins

The search for the perfect bee

- Rapid transportation has reeked havoc on the bee's ability to survive; imported mites beetles and diseases.
- Our desire for the perfect bee rages.
- So there are now many hybrids to add to our list

Some of the Hybrids

- 1920 ushered in the Buckfast bee
- Probably the tracheal mite's devastation in England began our continuing journey.
- Brother Adams at Buckfast Abbey in Devon England traveled far and wide to find hives of bees that had survived the onslaught to use as breeding stock.
- The BuckFast bee was developed.

Here comes the Russians

- The Varroa mite came to the Americas in the 80's and devastated the new world's bees
- We needed a bee that could survive the new threat.
- This Russian strain lessens the kill from the Varroa.
- BUT when in the presence of other strains this trait diminishes.

The Minnesota Hygienic stock

- This bee tends to be a good house keeper.
- This will significantly reduce the effects of disease in the hive.

SMR's Stock

- Suppressive Mite Reproduction stock.
- This hybrid has the ability to reduce the number of viable Varroa Mites in the hive.
- Keep in mind, there is no bee that is 100% immune to the Varroa Mite.

Cordovan hybrid

- Italian bee that possesses a very desirable color.
- I doubt that color has any influence on the hive, but it does beekeeper's.

Its Midnight

- The cross of a Caucasian and Carneolan stock has produced the Midnight hybrid.
- The hope is to maintain the assets of these two bees while reducing the propolis of the caucasian bee.
- And reducing the swarming tendency of the Carneolan bee.
- The Midnight was ushered into beekeeping.

It is Starline Time

- Favored by commercial companies because of its ability to produce large crops of honey.
- Developed by Gladstone Cale for Dadant Bee Company.
- It is now in decline.

The double hybrid

- Cross between a midnight and a Starline.

The Smart strain

- Cross between the SMR strains and other stocks such as Russians, Italians and Carneolan.
- This is a bee that has the cleaning gene as well as a bee in the same hive that has the gene of removal of diseased and dead bees.

Finally! The conclusion!

- You must determine what you desire in beekeeping.
- You must do your homework.
- You must determine what works best for you.
- There is only one thing that does not change!
- And that is change itself! Change will come and you must keep yourself current and change with it; WHILE not falling into every sales pitch you hear!

THE END!

- Thank you for coming! Its good to see this many people with bee fever. This disease is terminal if you catch it. You will keep bees until you die
- Good luck on your quiz.
- Remember you are on a journey.
- The journey is to be a better beekeeper.
- Not to pass a quiz.
- The quiz is only a measuring point on a life time adventure!