Apis m. Esoteria 3

Blooming Cycle

How do you know if the seasons are early or late?

First bees don't use the Gregorian calendar. They use circadian rhythm. This is a lot like jazz and rhythm and blues. Hard to understand but easy to follow.

Bee spring starts when the first little weeds start to bloom. You may not even notice these. When pollen and nectar start to come into the hive in adequate quantities the queen will start laying eggs. This is relative to the number of flowers, temperature, and length of the day and night, length of rainy periods and the bee population. Pretty "iffy" if you ask me?

Bee summer starts with the main nectar flow. Most places only have one large nectar flow. A few places like the North Georgia Mountains have a secondary flow with the sourwood tree being the main honey producer. The brood chambers are full of bees, extra honey is stored and the hive is crowded. Now the queen is ready to divide the colony and swarm.

Fall comes after swarming. It is the time of goldenrod and asters. There is a light nectar flow with these fall flowers. The bees will finish collecting food for the winter. The dryness and shorter days will cause the queen to slow down egg laying. If the days are warm enough the queen may not totally stop laying eggs, but she will reduce production to limit the number of bees eating the stores in the hive. The last hard working foraging bees will die off and the young bees will be the ones that winter over.

Winter is when the queen stops laying eggs (usually) and there are virtually no flowers blooming. Some places don't really have a bee winter. They just have very long autumns.

You can see how difficult it is to figure out which season the bees are in. Our crazy weather comes early one year and late the next. What is normal?

You must ask the 80-year-old gardener or farmer. The past five years (it is 1990) of weather has been extremely erratic. No normal cyclical pattern. The past 10 years have been different. The past 20 years have started to approach a pattern, but they don't match the weather of the 1970's for here in the mountains.

I don't believe in global warming, but I cut my hay a month earlier than we used to. Early May has moved to early or mid-April, usually. 2d and 3d cuttings of hay are also timed differently. And, then there is the 4th cutting which we never used to get. Not only is the temperature different but the rain patterns have changed. The weather is forecastable. By reading the scientific current daily weather we can predict the short-term conditions fairly accurately.

This fits into bee keeping by alerting the beekeeper that the old schedule that we tried to follow may not work today. However, the work to do is still appropriate in the order that it was done. The cycle of life in the hive has not changed. Only the start times and the influences caused by extreme weather anomalies. These anomalies are severe cold snaps after long periods of early warming. Frosted flowers that impact the nectar flow. Droughts that cause nectar and pollen dearth.

As good beekeepers we need to read the natural condition and adapt husbandry techniques to mitigate their impact. What worked last year may not be the same for this year.

Our best tool for predictability is learning the order in which each flower blooms and the conditions that affect that particular plant. Early warming starts the cycle, but prolonged rain or drought can change the order or intensity of the blooming. Some plants are more weather resistant than others. Some need just the right conditions to bloom. If those conditions are not present the plant will wait until it rains or there is more sunshine (less cloudy rainy days). If the late summer drought is long enough some plants will interpret the fall rain as the start of spring. Other flowers will require a certain number of hours of sub- freezing weather before they recognize spring.

Since the flowers are more specific to their requirements, we can come closer to second guessing what our bees will do if we use the flowers as our lode star.

By learning to understand the 7-day weather forecast we can be prepared to react to the needs of the bee colony. The jet stream and the high- and low-pressure zones always interact in the same manner. We have a hard time getting this information. The Caribbean semi-permanent low-pressure zone controls our weather. It moves north-south and east-west in a seasonal pattern. The intensity of this low stops or allows hurricanes to enter the Caribbean. It also deflects the jet stream as it comes screaming north to south into Texas. The high- and low-pressure areas that move across the continental area are weak and have local influences when the jet stream isn't pushing them around.

Our best clearest weather comes from a high-pressure area moving in from the west or northwest. In the summer it is hot and clear. There is breeze when it moves in and moves out. Usually, the high-pressure zone will hang around 5-10 days. High pressure in the winter brings in our cold weather. Coldest if it moves in from more northerly (darned Yankees). If a High moves up the Ohio River Valley, we will be on the south side of it bringing an easterly wind sucking in warm moist air from the Atlantic Ocean making rain.

Normally our weather comes from Birmingham, Alabama. This is the east side of a low-pressure ridge that forms up the Mississippi River valley moving northeast, trying to get up the Ohio River Valley. This brings clouds and light rain accompanied by warm weather. The rain falls in east Texas, Louisiana, Mississippi, and Alabama.

If we get wind from straight south we are on the southeast side of a strong low, sucking moisture up from the Gulf of Mexico. This is the shortest distance to water which is very warm. Hence, higher winds and heavy rain. This condition usually does not last long. This is also the track of hurricanes.

It is odd to have the same weather for 10 days.

I like to think of the bee calendar as a 90-day month. What should happen this month, might have happened last month, or will happen next month. You just must be ready.

See, there is a method to all this madness. We just don't see it.