The Doctor's (Outdoor) Office in July

Welcome to a monthly newsletter for Northern Virginia & Piedmont area beekeepers. Here I will highlight what to anticipate for your hives, focus on monthly management of your apiary, and share tips & upcoming educational opportunities. Let's suit up, light the smoker & crack the cover!

MINDFUL EXAMINATION: July

It is hot and humid. In the evening you will likely observe a curtain of bees hanging off the exterior of your hive. The behavior, **bearding**, allows colonies to manage the internal hive conditions. Foragers, which work during the day, do not need to return inside the hive on hot, humid nights to stifle airflow, increase temperature, and thus disrupt brood rearing. This behavior is a sign that your colony is thriving in numbers. Strong colonies will peak this month, with populations of 50,000-60,000. By the end of the month, the queen will decrease her laying and the brood nest will decrease.

*RIGHT: The colony mouth wearing the classic **bearding** of a hot & humid July in Virginia. (Photo: J. Jakum, MD)*

Our July 2026 temperatures are forecasted as 40-50% likely above normal, with normal precipitation for the month.[1] The USDA unveiled disaster assistance to agricultural producers in Virginia, impacted by the ongoing **drought**. The Emergency Assistance for Livestock, Honeybees, and Farm-Raised Fish Program (ELAP) assists commercial apiarists experiencing loss of forage due to drought conditions, to purchase supplemental feedings for colonies until additional normal conditions return.

USDA United States Department of Agriculture
Farm Service Agency

Left: The U.S. Department of Agriculture (USDA) offers technical and financial assistance to beekeepers during our drought. (From www.fsa.usda.gov)

This month, basswood (*Tilia americana*), blackberries (*Rubus allegheniensis*), white/sweet clover, milkweeds and thistles offer important **nectar** forage.[2] Virginia is home to native thistle species (*Cirsium* genus) of excellent forage for honey and native bees. Field thistle (*Cirsium discolor*) is the most common native species, blooming mid-summer through fall. Native thistles are biennial and you can recognize them by

[1]https://www.cpc.ncep.noaa.gov/products/predictions/long_range/lead01/off01_temp.gif
[2]https://honeybeenet.gsfc.nasa.gov/Honeybees/ForageRegion.php?StReg=VA_11

the bright white and fuzzy underside of their leaves. Invasive and weedy thistles (bull thistle & Canada thistle) aggressively spread and their leaves are green top and bottom.

Right: Field thistle (Cirsium discolor) is native to meadows and forest edges and differentiated from weedy, European thistle by the white undersides of its leaves and spineless stems. (From: Master Gardeners of Northern Virginia)

In the garden, cucumbers, melons, and sunflowers provide pollen sources. Field crops of vetches, clover, alfalfa, soybean and buckwheat blooms are summer forage sources requiring pollination, some creating distinctive honey flavors. If new **pollination** opportunities or relocating your apiary intrigues you, consider utilizing Penn State University's beescape.org online tool to search for agricultural forage and landscape quality scoring, to inform your decision. The website allows you to specify a location for an apiary and create predictive models, such as likelihood of supplementary feeding needs or additional forage opportunities. Consider partnering with a local farmer or grower in need of pollination to improve their crops and increase your beekeeping success.

LEFT: Sunflowers provide important summer pollen for bees. (Photo: J. Jakum, MD)

Swarm season peak concludes this month. Continue your mindful examination for a failing queen or begin plans for queen replacement this fall.

MANAGEMENT: July

The heaviest nectar flow is finished and July is the time for your **honey harvest**. After your frames are extracted, it is best practice to return the supers to the hives for clean up. Place extracted supers on top of the inner cover and top the stack with the outer cover. The bees will clean residual honey, reducing robbing impulses induced by leaving honey stores open to foragers. In years with more rain, colonies may store nectar during July. However, a colony often consumes more than they collect, when the month is dry. With the establishment of spotted lanternfly (*Lycorma delicatula*) in our region, honeydew produced by nymphs will begin to enter your hives this month, collected by foragers during our summer nectar dearth.

The buildup of colony size results in greater **defense** of honey stores, during your summer inspections. Work slowly and wear protective clothing, to reduce stinging from the numerous guard bees. The lack of nectar flow also induces **robbing** impulses

within the apiary. Consider installing entrance reducers or robbing screens to enhance hive defense. To stop a robbing event, actively spray the colony with water or place a lawn sprinkler watering the front entrance. The falling water appears as rain and returns robbers to their own hives.

Below: Don't spawn a robbing scenario in your apiary by leaving the recently harvested supers out. Place these "wet" supers back onto their colonies. Workers will move the honey down into the brood frames for use. (Photo: J. Jakum, MD)

Water sources are needed during the heat. Bees prefer water sources close to the colony (within 200 feet) and locate them by scent, more than visualization. Be proactive and offer reliable water to your apiary using a bird feeder, water fountain, or poultry water station. This reduces water foraging of swimming pools and conflicts with your neighbors.

For the strongest of colonies, July is the last time to perform a **split** if you want to increase the size of your apiary with an overwintered nucleus colony. Plan to feed any split during the summer dearth beginning soon, with feedings into the fall.

MITES & other MONSTERS: July

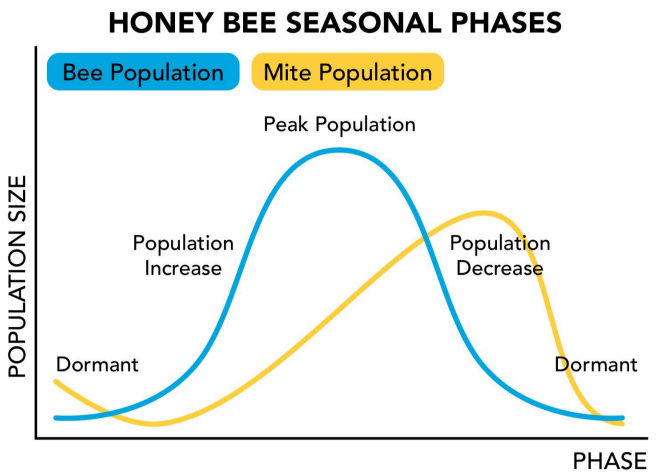
After honey extraction and supers are cleaned of residual honey, remove and stack the supers. **Wax moth**-repellent PDB (paradichlorobenzene) crystals keep wax moths from destroying stored comb. NEVER use naphthalene (moth balls) which are toxic to humans and contaminate the wax within your supers. Spraying frames with a biological control (*Bacillus thuringiensis*/Certan) is another option and is approved for organic farming operations. Store frames using queen excluders or other wire mouse protection, if leaving outdoors or in outbuildings until spring.

Ensure your Integrated Pest Management (IPM) plan is in place to control *Varroa*. Monitor your colonies for mites, whose population increases rapidly during summer as bee populations increase. The recommended **treatment threshold** is 3% (3 mites per 100 bees). Your summer mite management will determine fall mite numbers and subsequent winter survival of your colonies. Many videos are available online to help you correctly perform a mite check, such as the *Varroa* easyCheck.

Treatment of *Varroa* mites should include EPA-approved **miticides**. Review the product label to determine safe temperature ranges during the heat of summer. Monitor mites before *and* after treatments, to ensure efficacy.

RIGHT: Graph of honey bee and mite populations from Tools for Varroa Management
(From Honey Bee Health Coalition)

Figure 1: Varroa Mite Life Cycle
For details on the Varroa Life Cycle consult:
www.extension.org/pages/65450/varroa-mite-reproductive-biology



MORE: July
With our discussion of pollination opportunities, here is an article studying commercial pollination as precision agriculture, found in the journal insects: "Effect of Honey Bee Colony Strength on Foraging Productivity and Its Application to Precision Pollination"

Another timely article reviews the main modes of action of synthetic and natural chemicals treating *Varroa* mites and non-lethal effects on honey bee health at the molecular, individual and colony levels, also in the journal insects: "Sublethal Effects and Associated Risks of Acaricides Used Against Varroa destructor in Honey Bee (*Apis mellifera*) Colonies"

Also, a fascinating article about the interception of a swarm of giant honey bees (*Apis dorsata*) detected onboard a cargo vessel prior to arrival in a port of New Jersey last year. The article highlights the tremendous risk of invasive species upon our honey bee health, in the journal Frontiers in Insect Science: "Interception of an *Apis dorsata* swarm with *Tropilaelaps mercedesae* and *Kuzinia morsei* mites on a cargo vessel inbound to the United States"

For in-person learning opportunities, Penn State University is hosting a Bee Extravaganza picnic with activities and workshops for multiple experience levels, July 18th-19th. It will include hive inspection skills and producing value-added hive products.

The Eastern Apiculture Society holds their 2026 conference in Shepherdsville, KY, July 26th-31st. Workshops, lectures and educational tracks for beginners & intermediate beekeepers exist. Check out the comprehensive schedule.

Plan for the **Virginia State Beekeepers Association** Fall Meeting, October 16th-17th in Culpeper. Speakers, workshops, beekeeping equipment vendors, native plants, artisan jewelry, books, wellness, sustainable agriculture, conservation, master beekeeping testing *and* a honey show are all local. Early-priced ticket sales are here.

Stay hydrated working in your apiary and I wish you a bountiful honey harvest!

From my outdoor office to your apiary,
Joshua Jakum, MD
EAS Certified Master Beekeeper