

The Doctor's (Outdoor) Office in October

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: October

The bees are now settling in for the colder weather. [Asters](#), [thistles](#) (*Cirsium spp.*) and [goldenrod](#) (*Solidago spp.*) are limited sources of nectar but the pollen is important for winter brood.¹ Fall flowers provide pollen with higher **protein** levels than spring flowers, enabling fat body development for **overwintering** bees.² [Frost](#) is anticipated in the next two weeks. For October 2026, our temperatures are forecasted as a 40-50% likelihood above normal with normal precipitation.³



*RIGHT: There are 38 species of Goldenrod native to Virginia.⁴
(Photo: B. Harris, PhD)*

Workers are actively reducing drafts with **propolis**, closing areas of heat loss. Capped honey in the outer frames is consolidated towards the center of the colony. The brood nest is further contracting to ~8 inches across with egg laying slowing, now at 200-300 per day. Bees begin to **cluster** around the queen and the developing brood when nighttime temperatures drop to 57°F (14°C). The cluster will fluctuate in size depending upon daytime & nighttime temperatures. With the colder weather, drones are no longer fed and evicted from the colony. You may find them walking outside the hive or their bodies littered around the entrance.

¹https://honeybeenet.gsfc.nasa.gov/Honeybees/ForageRegion.php?StReg=VA_11

²<https://www.sciencedirect.com/science/article/pii/S0022191018301124>

³<https://www.cpc.ncep.noaa.gov/products/predictions/30day/>

⁴<https://www.vaworkinglandscapes.org/native-plant-watch/native-plant-highlights/whats-in-bloom-goldenrod/>

MANAGEMENT: October

The fall nectar flow is now complete. Evaluate the **weight** of your hives. Each colony requires a minimum of 40 pounds of honey to survive the winter. Remove any queen excluders on your hives to ensure the colony cluster will access all available stores.

For those hives with insufficient stores, consider combining colonies. One strong colony is more likely to survive wintertime than two weak colonies. If feeding, a 2:1 **sugar syrup** is the correct concentration, until the colony no longer consumes the syrup. There are many on-line calculators to help with your measurements. [Here](#) is a simple one.



ABOVE: Know your types of sugars!

Bees completely digest sucrose (table sugar). Products that have other components (starches or sugars other than sucrose) are problematic. Never feed bees sugar with additives. Brown sugar contains molasses. Powdered sugar often contains cornstarch. Commercial fondants may contain flavoring and/or coloring. Additives can cause **dysentery** & death, within your colony.⁵

In addition to feeding, October is a busy time for a beekeeper as you assist the colony in closing up drafts & unguarded entrances. If you use screened **bottom boards**, install the corrugated plastic insert below the screened bottom. If you lost your insert, next month is the mid-term elections and the ubiquitous political signs are excellent replacements when trimmed.⁶ If you use solid bottom boards, it is time to reverse the boards to utilize the small entrance on the "winter" side.



⁵<https://blogs.ifas.ufl.edu/gulfco/2013/11/01/autumn-and-winter-feeding-of-honey-bees/>

⁶<https://www.elections.virginia.gov/>

Begin to think about the strong **winter winds** that will lash the hive. Propolis is not enough to reliably keep telescoping tops in place. Plan heavy rocks, concrete blocks, or straps for your hives in the coming weeks. If your apiary is particularly exposed, consider installing a temporary wind break with straw bales, large election signs, or plantings for now and the future.

*RIGHT: Keep your hives safe from strong winter winds
(Photo: J. Jakum, MD)*



Winter thermoregulation by the colony is a growing area of research.⁷ The colony survives by forming a tight cluster. Bees within the cluster vibrate their flight muscles to generate heat. Bees on the outside of the cluster use their bodies as an insulating layer. These bees slowly rotate responsibilities, ensuring that insulating layer bees warm themselves to survive the cold. Within the cluster, a temperature range of 91-97°F (33-36°C) is maintained for the queen and brood.

With sufficient stores (honey) and size (enough bees to rotate responsibilities), the colony will survive frigid temperatures with their metabolic activity. The byproduct of this effort is exhaled **moisture**, which can condense above (due to the cold) and drip back upon the cluster. The adage “You can survive the cold, or the wet, but not when cold *and* wet” is causative for colony loss, if the hive is not prepared. Open upper entrances allow air flow and the dissipation of excess moisture.



Quilt boxes containing newspaper, straw, or old fabric, are a mechanism to collect moisture and protect the cluster. [Moisture boards](#) are also available. Placing smaller colonies or nucleus hives above a strong hive using a double screen board is another option for winter survival. Plan to experiment with different configurations that work for your style and needs in beekeeping.

*LEFT: This double screen board sits two nucleus colonies upon a strong 10-frame colony.
(Photo: J. Jakum, MD)*

⁷chrome-extension://efaidnbmnnnibpcajpcgclefindmkaj/https://zwartebij.com/doc/derek_morville_mitchell_2023_honeybee_cluster_not_insulation_but_stressful_heat_sink.pdf

MITES & other MONSTERS: October

Wax moths (*Galleria mellonella* & *Achroia grisella*) continue to enter the hives at night, laying eggs which pupate and then destroy comb & honey. Strong colonies will defend against this damage, until a hard frost kills the adult moths. Protect any comb you store, inside or outside, against wax moth invasion.

RIGHT: Wax moths wait in corners, searching for weak colonies. (Photo: J. Jakum, MD)



The cold weather also invites the entrance of a new pest: field mice (*Peromyscus leucopus* or *Peromyscus maniculatus*) and other small mammals. By the end of the month, install **entrance reducers** or metal guards to protect your hives from unwanted vermin looking for cold weather habitation. Make certain that no mouse, shrew, or vole is *already inside*, before you install the guard. Metal guards are preferred because mice will chew wooden entrance reducers to enlarge a hole. Wire mesh is an alternative, but ensure that you purchase the correct size openings for your seasonal needs. **Hardware cloth** size #4 keeps mice out. Size #5 allows the passage of workers but prevents drones & queens from exiting.

There are many different types of entrance reducers, for different seasons and hive types. Familiarize yourself with the different materials and consider what is your goal for the reduction in size? [Here](#) is a comprehensive blog about entrance reducers.

Lastly, **black bear** (*Ursus americanus americanus*) [predation](#) of hives increases in October and November.⁸ Plan how to safeguard your hives with electrical fencing.⁹

After closing your hives for the winter, look back upon your season of mite treatments. What **miticides** did you choose? Did they match your goals in beekeeping? If you experienced higher mite counts than expected or loss of colonies, what will you change next season? Remember the Honey Bee Health Coalition offers details in their [Tools for Varroa Management](#) guide to help you match your management style with EPA-approved miticides. Record your outcomes from this year in the Virginia **Mite-a-thon 2026**, which is still open. [Enter your results](#) in the survey to help monitor mite-loads in the Commonwealth.

⁸<https://dwr.virginia.gov/wildlife/bear/living-with-black-bears/>

⁹<https://www.pubs.ext.vt.edu/420/420-200/420-200.html>

MORE: October

With our discussion of the warmer weather anticipated in October, here is an experiment examining the disruption between bees and plants for pollination, found in [Global Change Biology](#): “Climate Warming Drives the Breakdown of Plant–Pollinator Mutualisms Despite Phenological Synchrony”.



Two additional studies of interest, relating to pollination, competition, and disease are also published. The first examined honey bees from managed colonies and the potential impact upon wild pollinators when these bees overlap during plant-pollinator interactions, found in [Communications Biology](#):

“Honeybee dominance alters foraging of wild pollinators across Europe”.

The second study investigates disease transmission between bee species while foraging on shared plant-pollinator interactions, also found in [Communications Biology](#): “Bee pathogen sharing and prevalence are linked with flower sharing and taxonomic distance within the bee community”.



The **Virginia State Beekeepers Association** Fall Conference (October 16th & 17th) is just two weeks away! Here is the preliminary [schedule](#). Conference attendance is already the largest in more than two decades with a slate of national speakers, two dozen vendors, numerous door prizes, a robust raffle, a full [honey show](#) and the opportunity to meet beekeepers from across the Commonwealth *and* Mid-Atlantic! Download the Hive Conference app with this QR code to plan your schedule, meet the speakers, and check out vendor deals. If you haven't registered, you can purchase your [ticket](#) also from the app.

VSBA Conference 2026

Fri, Oct 16 – Sat, Oct 17 · Germanna Community College Daniel Technology Center · Culpeper, VA

Scan for the schedule, venue map, and talk reminders



<https://hiveconf.com/va-vsbaconference26-2026>
Questions? Notification setup and FAQ:
<https://hiveconf.com/va-vsbaconference26-2026/help>

I look forward to seeing you at the Fall conference, or at the social which is scheduled for Friday evening at [Mountain Run Winery](#). If you read the newsletter regularly, feel free to buy a glass of mead with me and share your thoughts on how it could improve!



From my outdoor office to your apiary,
Joshua Jakum, MD
Eastern Apicultural Society
Certified Master Beekeeper