JULY 2017, ISSUE 7

Joco Beekeepers

A monthly newsletter brought to you by the
Johnston County Beekeepers Association

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Meeting Information & Agenda

Spread the word! As a reminder, we will NOT be having our regular '3rd Monday' meeting! But instead for the month of July we are having our annual cookout July 22nd.

Please spread the word for those that do not use email or social media and don't forget to RSVP! Stay tuned for additional communication regarding the cookout this weekend.

Businesses and Services

Businesses and Services offered by JCBA are listed on our website at (click here)

Native Plants for Bees!

Link for native plants good for bees (click here)

Honey bee pollinator stamps coming out in August

Thanks to member Sharon Noles for the tip! The U.S. Postal Service® pays tribute to the beauty and importance of pollinators with stamps depicting two of our continent's most iconic, the monarch butterfly (Danaus plexippus) and the western honeybee (Apis mellifera), each shown industriously pollinating a variety of plants native to North America. (click here)

In this Issue

Have a story? Would you like to be featured in the newsletter?

Please submit your request to Newsletter@jocobee.org

Like us on social media

This Month's Bee Tips!

From: Nancy Ruppert, Apiary Inspector, NCDA & CS

July

- ☑ May harvest some (or all) of honey; may continue late-season splits; continue beetle controls; keep water available for bees.
- ☑ Get supers on for cotton honey, if hives near cotton fields.
- ☑ Replace failing queens; consider replacing any queen that is two years old or older.
- ☑ Can begin annual varroa mite assessment, and treat if needed/practical.

No Offense, American Bees, But Your Sperm Isn't Cutting It

Seducing a honeybee drone – one of the males in a colony whose only job is to mate with the queen – is not too difficult. They don't have stingers, so you just pick one up. Apply a little pressure to the abdomen and the drone gets randy, blood rushing to his endophallus, bringing him to climax.

"They're really accommodating," says Susan Cobey, a honeybee breeder on Whidbey Island, Wash. "One ejaculate is about 1 microliter, and it takes 10 microliters to artificially inseminate a queen."

Since 2008, Cobey has done her share of bee abdomen rubbing as part of a research team from Washington State University traveling through Europe and Asia. They've collected sperm from native honeybees in Italy, Slovenia, Germany, Kazakhstan and the Republic of Georgia – countries where honeybees have favorable genetic traits, like resistance to the varroa mite. The deadly parasite has been cited as a major factor in bee deaths, along with genetics, poor nutrition and pesticide exposure, according to a major report from the USDA and EPA in 2013.

Varroa mites are an invasive parasite from Asia that sucks hemolymph (bee blood) from adult and larval honeybees, weakening their immune systems and transmitting deadly pathogens, like bent wing virus. If left untreated, a varroa infestation can kill a colony in one year. First detected on U.S. soil in 1987, varroa has spread quickly, infesting upwards of 50 percent of American hives. Last year, 33 percent of U.S. honeybee hives died. That's troubling for the plight of honeybees and U.S. agriculture, which relies on pollinators to produce one-third of the food we eat.

The buzz on American bees: too much inbreeding

According to the WSU research team, the root cause of the U.S. honeybees' vulnerability to varroa is a dwindling gene pool that has left them short on genetic traits that help honeybees resist varroa elsewhere in the world.

"Honeybees aren't native to America," Cobey says. "We brought them here. But the U.S. closed its borders to live honeybee imports in 1922, and our honeybee population has been interbreeding ever since."

WSU has monitored the genetic diversity of honeybee queens in Washington and California since 1994, showing a steady decline. Dr. Brandon Hopkins, the team's expert in freezing and thawing bee sperm, likens honeybee breeding to a poker game played with an incomplete deck of cards.

"There's no way to get a four-of-a-kind if there aren't four aces in the deck," Hopkins says.

The imported semen has restacked the deck. WSU's crossbred honeybees already test positive at a higher level of genetic diversity than the first queens tested in 1994. "This doesn't mean they are superior in performance to the other bees," Hopkins says. "It means we have a better chance of finding rare and unique traits."

It used to be that honeybee breeders selected for bees that produced more honey, grew more populous hives, and were gentler to handle. Now, they want honeybees that can resist varroa. Without it, beekeepers must rely on costly "miticide" treatments to control varroa.

However, studies suggest the mites are developing resistance to pesticides and the chemicals may be harming honeybees, compounding the problem of widespread bee deaths known as Colony Collapse Disorder. (read full article)

Get Friendly with Helpful, Not Hurtful, Ground Bees.

Although their tendency to hover over their nests might seem aggressive on first glance, experts say rather than reaching for insecticide, growers should be grateful. Those little native bees coming up from the soil aren't likely to sting, and they're excellent pollinators, especially for fruiting shrubs and trees.

First, an important clarification: Ground bees are not the same as yellow jackets, which are wasps that often make nests in the ground and impart a painful sting when disturbed. They're also not honeybees, which were imported to the US from Europe several centuries ago. Honeybees make honey and are social insects who raise young together in a big hive. They can also sting.

Ground bees—a term that covers more than 70 percent of

the 4,000-plus bee species native to North America—look a lot like European honeybees when seen in flight or on a flower, since they too have hairy, colorful, or black-striped bodies. But they don't make honey. The males can't sting, and the females are often very docile and don't sting. And unlike both wasps and honeybees, native bees are solitary. One mom lays her own eggs and tends to her own nest in a tiny hole in the ground.

Yellow jacket nests and ground bee nests also look very different from each other. Whereas wasp nests have one central entrance hole an inch or more wide from which individual wasps frequently come and go, many ground bees come and go from tiny quarter-inch openings that look more like ant hills or teeny chimneys.

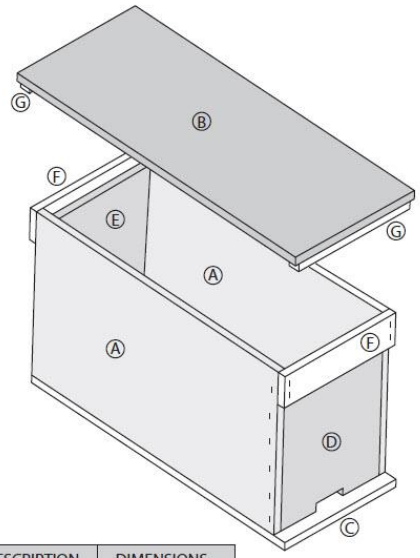
Ground bees of the genus Colletes, for example, find places where there is loose, open, poor soil, then dig holes and lay their eggs within inches of one another. But despite the dramatic numbers and the swirl of humming activity over the nests, there is nothing to fear. These bees have no queen or shared resource like honey to defend or protect. (read full article)

Funny pages/Have you seen this?

5 frame NUC plans for single sheet of plywood (download plans here)

5-FRAME NUC BEEHIVE - D. COATES

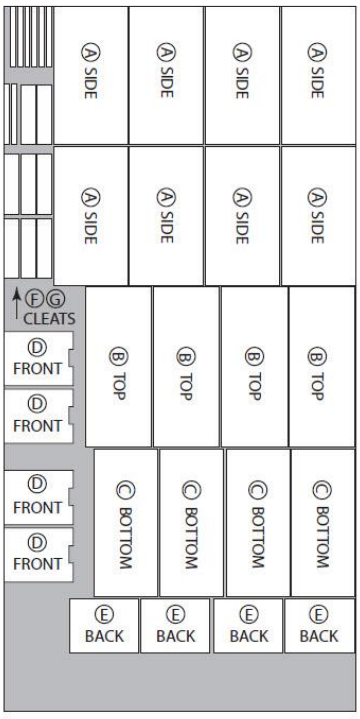
CONSTRUCTION DETAILS FOR 4 NUCS MADE FROM ONE SHEET OF 1/2" (12.7mm) THICK PLYWOOD



ITEM	QTY.	DESCRIPTION	DIMENSIONS
Ⓐ	8	Side	10-1/4" x 19-1/8"
Ⓑ	4	Top	9" x 22"
Ⓒ	4	Bottom	8-1/2" x 20"
Ⓓ	4	Front	7-1/2" x 9-1/2"
Ⓔ	4	Back	7-1/2" x 9-1/2"
Ⓕ	8	Hive Cleat	8-1/2" x 2"
Ⓖ	8	Top Cleat	3/4" x 8-1/2"

5-FRAME NUC BEEHIVE

LAYOUT DIAGRAM FOR 4' x 8' - 1/2" PLYWOOD



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