



Varroa Destructor via electron microscope. IMAGE COURTESY INTERNATIONAL BEE RESEARCH ASSOCIATION

## Project Update, October 2013: Tallying Varroa Mites

### A Comparison of Strength and Survivability of Honey Bee Colonies with Conventional Versus Northern-Requeened Packages

by Erin MacGregor-Forbes, Master Beekeeper

#### SARE FNE 12-756

Fall is always a hard time for me as a beekeeper. On one hand, I'm happy for less inspection work to do; on the other hand, I also generally have a lot of honey to deal with.

I also hate treating my bees for varroa mites. I dislike putting foreign substances in the hives; I worry about my treatments causing queen problems, or robbing problems, or morale problems. And then I check my screened bottom board inserts after beginning treatment and see the dead mites (often in the hundreds, after only 24 hours) and I think “thank goodness I'm treating—this is the kind of mite load that kills strong colonies.” And I resign myself

to continuing my three-week treatment regimen.

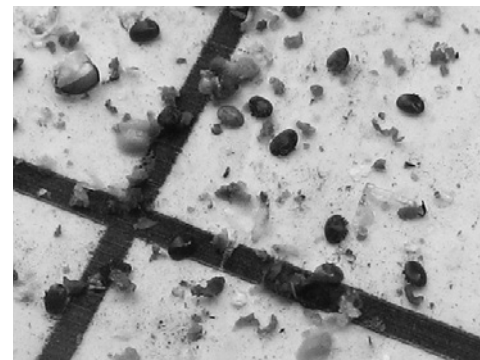
The SARE colonies are much the same as the rest of our apiary, except that there was no honey to extract from any of the colonies. They spent this year building comb and their own winter stores only. In the SARE colonies we counted the varroa on the screened bottom board inserts at four separate intervals (unlike in my home yard colonies, where I simply gauge the number of mites by a quick visual inspection of the screened bottom board inserts). To establish a baseline, the night prior to our first Api Life VAR treatment, we started by counting a 24-hour mite drop. Next, we counted mite drop 24 hours after our first treatment, counted mite drop 24 hours after our second treatment, and counted mite drop 72 hours after the third treatment. Counting varroa is time-consuming and not very fun.

We used clicker counters from Staples to keep track of our counts—a method Cindy Bee learned at the University of Georgia Bee Lab. It makes performing the actual count much easier.

From our October 7, 2013 mite counts, here are the data (72 hours after third treatment):

	Mite Counts, October 7, 2013		
	Average	Max.	Min.
Northern Requeened	204	535	36
Package	270	927	14

We generally understand that stronger colonies will have reared more brood than weaker colonies, and therefore the mite load in stronger colonies will be higher, as the varroa reproduce in the bees' brood. So we do not necessarily consider the very lowest mite counts to be the best colonies, as they may simply be the weakest colonies. I share the final fall mite counts only as a reference



ABOVE, TOP: Dropped varroa mites on a screened bottom board insert marked with grid lines for easier counting. ABOVE, BOTTOM: Varroa clinging to a drone pupa.



point to where we are in the cycle of the bees. The real test for all of the colonies will be winter survival.

In the last weekend of October, or thereabouts, depending on the weather, we will do one final inspection of the SARE colonies. At that time we will ensure that they do not have empty frames above them. If there are empty frames at the top of the colony, we will remove the box entirely, or move the empty frames down to the side walls of the hive or the bottom, replacing with honey at the top. We will also install homasote insulation boards between the inner and outer covers at that time.

After that time, we will be watching our SARE colonies from afar, ensuring that their winter rest is undisturbed by predators or winter storms, and generally maintaining a safe winter apiary. We will not know which survive and which don't until spring. Now in fall, spring feels very far away to us as beekeepers. We are keeping our fingers crossed for a kind winter, with plenty of days of cleansing flights for our bees. 🍄



ABOVE: Looking across a portion of the SARE yard in Jefferson; BELOW: Cindy Bee removes the two disqualified colonies (see SARE Update, Aug/Sep 2013 issue) from the bee yard by way of our "farm truck," a 1947 Willys Jeep.

