



# The Bee Line



Creating good and healthy beekeeping throughout MICHIANA

PUBLISHED BY MICHIANA BEEKEEPERS ASSOCIATION

JANUARY 2012

**Next meeting of the MICHIANA Beekeepers Association is Saturday, January 28 at Newcomer Center, Goshen College, Goshen, IN. from 9 a.m. to 3 p.m.**

Registration is \$5.00 per family, lunch at the college cafeteria is \$7.75 per person, pay Dave Emerson at the door for a meal ticket or there are all of the usual restaurants within a couple miles of the college.

The meeting will start at 9 a.m., break for lunch at 11:45 and end about 3 p.m. with breaks morning and afternoon to talk.

Dr. Greg Hunt from Purdue University will tell us what is happening with the search for mite resistance and what Purdue is doing on the bee front. Dr. Andy Ammons from Goshen College will tell us what he is doing in setting up hives for study at Goshen College. MBA President Bob Baughman will have a slide show on bee work while others will discuss colony needs for the next couple of months including checking, feeding, build up, swarm prevention and the use of medications.



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## 2012 Meeting Schedule

- Wednesday, March 21 Nappanee Public Library
- Saturday, April 21, Back Forty Sporting Clays, St. Joe County
- Saturday, May 19, Auction, Norman Lehman's, Middlebury
- Saturday, June 16, Tim Ives, St. Joe County
- Saturday, July 21, Carol Shaw's, Granger
- Saturday, August 18, Open, maybe your place?
- Saturday, September 15, Warsaw
- Saturday, October 27, Nelson's Port-a-Pit, Wakarusa

Our featured speaker for the May 19 Auction meeting will be internationally known Randy Oliver, commercial beekeeper with B.S. and M.S. in Biological Sciences, author of many articles in the ABJ trying to help beekeepers understand the biology of our bees and how to be good beekeepers.



## 2012 MICHIANA Beekeepers Association Membership Renewal

Membership is \$15.00 per household and runs from January 1 thru December 31 each year. Renewing as early as possible relieves some of the last minute work and pressure on our volunteer treasurer for which we thank you. Send your renewal to David Emerson, 58303 C. R. 105 South, Elkhart, IN 46517. Make checks payable to: MICHIANA BEEKEEPERS ASSOCIATION.

Name \_\_\_\_\_  
 Street \_\_\_\_\_  
 City \_\_\_\_\_ State \_\_\_\_\_ Zip Code \_\_\_\_\_  
 Phone Number \_\_\_\_\_ Email \_\_\_\_\_

## Wandering with an Old-timer by Henry Harris

Winter weather lasts basically from December through February with some overlap both ways but the hard grip of winter extremes is usually over by March. March presents its own problems.

Don't forget to check your bees. One year when I had Italian bees I found 8 frames of capped brood in the top medium brood box, top to bottom and end to end on those 8 frames.

I had to move fast to get supplemental feeding on that colony. The adult population was large and eating and the brood required 94° +/- so the large population was also eating to make heat. They could have starved to death in another day or two if I had not looked in on them when I did.



The mild December weather we had may have led our bees to be more active than they should have been and to eat extra winter stores.

Feeding is a better proposition than trying to find replacement bees in the spring.

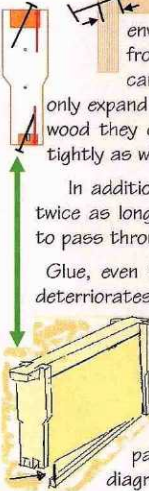
I talked about putting frames together and installing foundation in last month's newsletter.

When putting bee equipment together remember to angle nails rather than drive them straight in. After a couple of years in the high humidity environment of the bee hive and going from winter to summer and back wood can expand and contract and nails not only expand and contract at a different rate than wood they can also rust so they do not hold as tightly as when they were driven in.

In addition remember that the nail needs to be twice as long as the first piece of wood it is going to pass through.

Glue, even those advertised as water resistant, deteriorates in the moist hive over time.

Frames held to each other by propolis on the shoulders or burr comb on the bottom bars, being pried up by a beekeeper using strong leverage, can part at the joints if nails parallel the direction of the pull. In the diagram the left bottom bar cannot be pulled sidewise while the right one sticks and pulls the nail



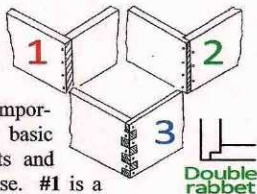
out of the end bar. Two pieces of wood nailed together at an angle cannot be pulled apart in a straight line.

Nail all points on a frame at an angle including the wedge bar to hold the foundation in.



Supers are also something that a beekeeper should get ready ahead of time. A hobby should not make a beekeeper miss time with the family or make him stay up till midnight to get something ready at the last minute.

You can make your own supers/brood boxes with basic woodworking skills. The corner joints are the important part. There are three basic ways to make corner joints and then many variations of those. #1 is a simple butt joint. It is the easiest but weakest joint. #2 is a basic rabbet. It can be strengthened by making it a double rabbet. #3 is a finger or box joint. A dovetail joint, where the fingers have sloping sides would be stronger.



Nail the joints alternately with 7d nails and glue on all surfaces that touch. Use a smaller nail on the thinner fingers at the top of each end.

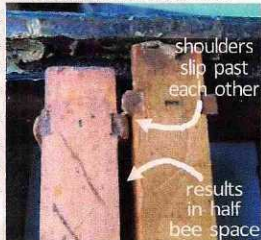


Make sure the box is square by checking the



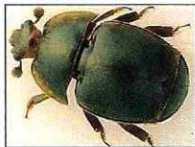
corners with a framing square or you can use one of the many gadgets for making square corners like the one at left.

There is a temptation to make the boxes an even 20 inches long instead of the prescribed 19-7/8". If you do this without also shrinking the width of the frame rest rabbet on each end you will have too much end to end play for the frames and find that when one frame is against one end of the box and the next is against the other end of the box the shoulders will slip past each other destroying bee space for those two frames and making removal difficult.



## Thinking ahead about Small Hive Beetle (SHB)

We all have SHB. You may not have seen them in your hives but they are there. There may only be a few or there may be a lot of them.



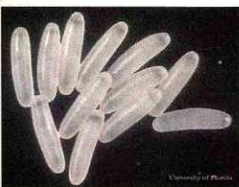
The beetle at left is the adult stage and does no direct damage in the hive. It most

likely eats some honey and annoys workers which try to keep them confined some place in the hive but the adult SHB does not tear things up or pollute honey.



Bees keeping SHB "jailed" around frame ends

1,000 and 2,000 eggs in her 4 to 6 month life span. These eggs are about 2/3 the size of a bee egg, a little bigger than a period (.) while bee eggs are about the size of a comma (,).

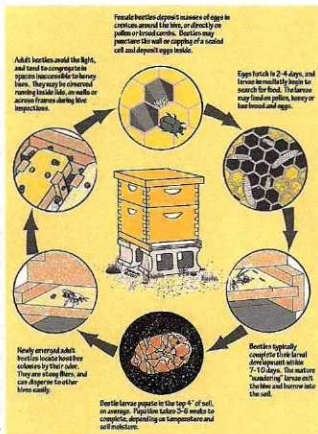


SHB eggs hatch in 2 to 4 days so the "masses" of eggs can turn into masses of larvae in a very short time overpowering a colony without a large enough population to defend itself.

SHB larvae begin to chew their way through brood combs eating bee larvae, eggs, and pollen leaving slime and feces in their wake. The larvae are tough and not easily



squashed, punctured or cut in pieces. As they chew their way through the hive they destroy combs and their slime and feces turn honey into a fermented,



mud like mess.

After 10 to 16 days the larvae crawl out of the hive and burrow into the ground around the hive where they pupate and emerge as beetles after 3 to 4 weeks. The whole cycle from egg to laying adult female can be as short as 4 to 6 weeks. (Temperature and humidity of air and soil cause the wide range of variation in all of these times.)



A strong colony with no more empty space than it can control can pick off the larvae and drag them outside.

Those beekeepers who have had disastrous experiences with SHB say the beetles seem to congregate on one colony and overwhelm it.

So far there does not seem to be any explanation why some colonies can have huge numbers of SHB but not be destroyed by them while others are suddenly overwhelmed and collapse.

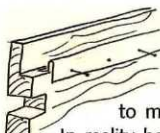
Keeping SHB populations low in all of your hives may help prevent them being able to gang up on any one hive and would seem to be a worthwhile project but it must be remembered that SHB can fly considerable distances so your neighbor's SHB can become a problem for you.

Keeping colonies strong or reducing the size of the hive to match the size of the colony should help.

### Lets look at making our hives less welcome for SHB.

Honey bees naturally try to eliminate cracks and crevices where pests and diseases can breed by filling those larger than bee space (more than 3/8") with comb and those smaller than bee space (less than 1/4") with propolis.

Beekeepers being from the higher order, meaning we can think and reason but have little pure instinct, create problems for the honey bee, which have considerable instinctual responses, with the equipment we make them live in.



Until recently I have used metal frame rests in all of my supers and brood boxes. These metal strips raise the frame ears up supposedly to make it easier to remove the frame.

In reality bees fill the space under and around



SHB hiding around and under frame ends

the ears with propolis because it is too small for them to get into so it is really no easier to remove frames and harder to remove the propolis.

Now that we have SHB and they

find the space around and under the top bar ears a very good place to hide it seems prudent to minimize such hiding places as much as possible.

The frame rest can be left bare wood but a flat, smooth metal or plastic frame rest, such as at right, makes frame and propolis removal easier without providing SHB with hiding places.



Frame #2 is unmodified. #1 has the end cut off at an angle and makes the most sense to me. #3 is like #1 but with the sides also cut down at an angle. This extra cutting looks nice but is unnecessary since the frame shoulders provide proper spacing on the sides allowing bees full access between frames ends.

All stages of SHB are killed by cold weather. Only SHB adults go through our MICHIANA winter and they do this right among the honey bees inside the winter cluster to keep warm and fed. If too many SHB try to go through the winter in a cluster the colony will collapse and everybody dies.

SHB are more of a problem in Southern states because the ground temperature allows SHB larvae to burrow into the ground and pupate nearly all year.

In our colder climate SHB reproduction must stop when the ground temperature gets too cold to allow pupation and cannot resume until the ground warms.

Because of this limiting factor it takes time for SHB to build up to the point of threatening a colony in the MICHIANA area.

It seems to me, if you are going to trap SHB, you should start as early in the spring as you can get into

your hives.

SHB must depend on the honey bee cluster to keep warm so they must stay in or near the brood nest. SHB traps should be put right up next to the bee cluster or actually in it so the beetles will find this warm, dark place to hide and die. A trap lying on the bottom board or on the inner cover in summer can catch SHB but not in spring or fall when the nights are cold.

There are several traps on the market, disposable, reusable, large, small; you will have to decide which one suits you but have it ready by March when you check your bees on a nice sunny, warm day.

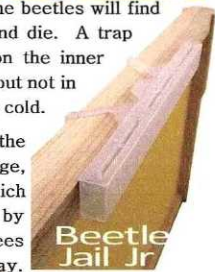


Cutts Beetle Blaster

The Hood Trap is set into a frame. It can be an empty frame as at right or a rectangle of comb can be cut from a brood or honey frame so the trap can be inserted in it.



AJ's



Beetle Jail Jr

AJ's, the Beetle Jail and the Beetle Blaster all hang between frames.

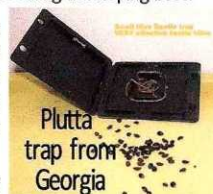


Hood Trap

All of these traps must be emptied and cleaned, not only of dead SHB but propolis because bees will try to seal the small openings shut.

As with almost all pest of the honey bee poisons can be used to control the SHB. I do not recommend the use of poisons in the bee hive because of the danger of contaminating honey and also because bees wax absorbs poison residues and stores them thus becoming a source of poison itself eventually crippling and killing developing bees.

The Plutta trap from Georgia is loaded with poison, snapped shut and laid on the top bars over the bee cluster. It can be removed, opened, cleaned, recharged with poison and put back in the hive.



Plutta trap from Georgia

Other chemicals in the form of strips or packets can also be put into the hive to kill SHB. All poisons and medications must be out of the hive 60 days before honey supers of any kind are put on. If there is an application period specified start it early enough to get it out before the 60 days or delay putting supers on.