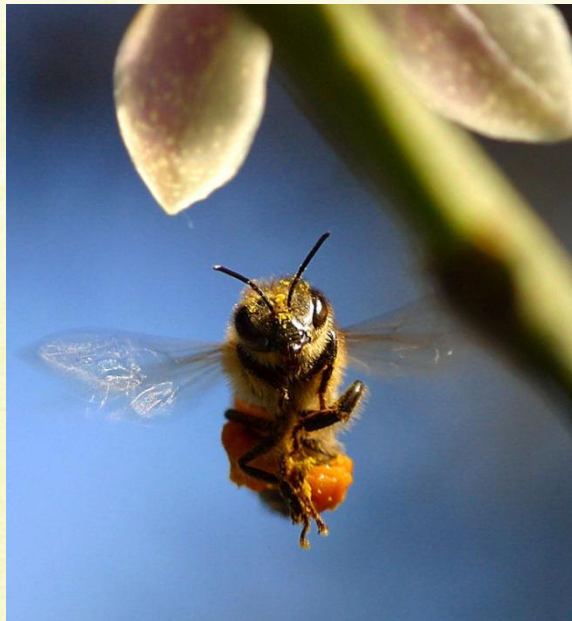


# All That Buzz

The Newsletter of the Nanaimo Beekeepers Club

January 2012



The Nanaimo Bee Club meets the 4th Wednesday of every month, excluding the months of December, July and August. The Club meets at Fairview Community School at 205 Howard Avenue, Nanaimo, BC

**The next Club meeting is  
January 25th, 2012 at 7pm.**

Coffee and tea will be served. Please bring your own mug.

#### Upcoming Events

February – Annual Dinner

February 8<sup>th</sup> – Executive Meeting

#### **Wintering Bees** by Kim Flottum

*The internal working of the hive during the winter*

First, bees don't heat the inside of their hive. The air, well, most of the air inside that stack of boxes is just about exactly the same temperature as the outside air... so it's cold inside in the winter. Rather, when the temperature begins to drop the bees' first order of business is to keep the brood warm... and the brood needs to stay at right about 93 degrees or so... warm by any standard. To do that the bees begin to gather together and cover the brood, using their bodies to warm the brood in the beeswax cells they are covering. But wait... bees are cold blooded... not like you and me. How's that work?

Some bees stand directly on the surface of the comb that contains capped honey and stored pollen plus they are hovering over and covering all the brood, both sealed and open. Some bees go head first into cells next to brood on both sides of the comb and generally fill all the empty space beside, over and under any brood in the comb so the brood is completely, totally surrounded. When the brood is covered and safe the remaining bees do the same, head first in cells, standing on the comb surface, rubbing and touching and filling in all the empty spaces.

*Honey bees, also known as *Apis mellifera*,  
are environmentally friendly and are vital as pollinators.*

**Wintering Bees** by Kim Flottum (*continued*)

What you end up with is a bunch of bees forming a football shaped cluster basically in the lower center of the hive, encompassing all of the brood and some of the honey they previously stored. They protect the brood, and they eat the honey. But remember, they're still cold blooded. What they do next is amazing.

The individual bees on the outside of this mass of bees turn to face the center of the cluster, exposing the tips their abdomens to the outside... where the business part of the bee is - the sting. Once positioned, these bees, and many of the bees inside the mass of bees close to the surface, but usually not those closest to the center, begin to vibrate their wing muscles... and, just as you and I begin to warm up when we exercise, these vibrating bees begin to warm up and that heat is transferred to the rest of the bees in the cluster.

Meanwhile, the bees in the center consume the honey, feed the young brood if any are present, and tend to the needs of the queen - who may, or may not still be producing brood. Remember that these bees are crammed in together taking up less than a quarter of the space they were when it was summer time. Consider putting 20 people in a typical elevator...and having them run in place...the effect is the same in the bee hive. One other factor is that bees are covered with hairs...lots of hairs. Pushed close together, these hairs add insulation to each bee, and slow the loss of body heat and warm air from the mass to the cold world outside the cluster. Meanwhile, the bees on the outside of the

cluster, shivering and vibrating like mad also reduce the flow of warm air away from the inside of the cluster. So for a time all is well with the world. But after a bit of this - depending on the temperature - the bees on the outside begin to tire, they use up their food reserves and can no longer continue. Hunger, cold and exhaustion set in; they must be warmed, fed and rested or they will perish, and with them, all the bees inside the cluster. When these bees are on the edge, close to collapsing, they slowly move toward the heat, the warmth, the food...life. But this heat-holding layer must be maintained or all is lost. And it is replaced... well, usually it is. Warm, well fed, rested bees from the inside of the cluster migrate toward the outside of the cluster to replace those moving in. Recall that not only bees on the very outside of the cluster were holding heat in, vibrating muscles and keeping everything warm, but many just below of the surface were also...and it is these that move to the surface, while the warmest bees begin to move up and outward.

You can see there is a continuous circulation going on inside that stack of boxes. But things can go wrong. Some you can help with. Some you cannot. All the bees in the cluster need to eat. The first assumption here is that there was enough food in the hive, in the right place in the hive. First the bees eat the food they were covering but after a time all that is gone. And since heat rises, the bees follow the warm air upwards in the hive and move up to where more honey is stored... providing they, or the beekeeper, provided more to be stored. This works, all winter long. As long as the air just outside the cluster stays warm enough for the

*A honey bee visits 50 to 100 flowers during a collection trip.*

### **Bee Club Executive**

President: Kathleen Silvey

250-716-0695

Vice President: Roblyn Hunter

250-753-0554

Secretary: Valerie Massy

250-758-8321

Treasurer: Grant Keefer

250-245-2583

Directors:

Jen Cody

Lance Goldy: 250-722-3849

Bill Shemming: 250-245-2073

Terry Hanna: 250-722-7066

Gail Gallant: 250-323-2660

Lurene Haines: 250-616-1678



### **Wintering Bees** by Kim Flottum (*continued*)

bees to move. If it doesn't, if the outside air is so cold the bees can't warm it enough, they can't move the cluster, they can't move to more honey, and they will starve... inches from more food.

Beekeepers need to make sure, when they put their colonies to bed for the winter that they have both provided enough honey for the whole of the winter and early spring, and made certain it is in the absolute most convenient location in the hive. How much? They'll need 50-60 pounds of honey, more if way up north. Where? Place it just to the sides and above the cluster, which should be very near the bottom of the hive in the fall, so the cluster can rise, en masse, to the top, consuming all that honey as it goes.

And one more thing: ventilation. All that warm air contains respiratory moisture. The moisture condenses when it comes in contact with the cold sides and inside top of the hive (like warm breath on a cold window). Condenses, collects, and then drips down on the bees. Cold, wet bees are unhappy bees. And pretty soon, dead bees. You have two choices: provide lots of ventilation so that warm air rises and exits the hive immediately, creating almost a gale inside the hive, but keeping the drips away, or, sealing it up so the warm air rises, but is trapped and isolated above the bees and beneath the cover - some beekeepers simply use batten insulation, or homosote board, or a super filled with straw or leaves - whatever it takes to hold the moisture so it doesn't drip back on the bees.

And that should mostly do it: food, ventilation and protection from the wind and elements. Knowing what your bees need, and why makes the planning easy.

***Why do bees have sticky hair?  
Bee-cause of the honey combs!***

## Information About Neonicotinoid Pesticides for Beekeepers

Here is some information regarding Neonicotinoid pesticides that we as beekeepers should be aware of. It is also important information for gardeners and pet owners. Most of us have heard about this class of insecticide as being suspected to be one of the causes of CCD in our bees. In several countries in Europe they have banned the use of this pesticide, but both Canada and the US allow its use. As per usual the forward thinking is that unless something is proved to be unsafe it will be allowed. (Rather than being proved safe) This is problematic as it is companies that have the money to do testing and they have no financial incentive to prove their product to be unsafe and so they are not tested for safety.

Here is a link showing that Canada has allowed for the use of Neonicotinoid pesticides  
<http://news.agropages.com/News/NewsDetail---4068.htm>

How it affects our bees is through the pollen that the bees collect. Because these are systemic pesticides they are found in all parts of the plants, including the pollen. 'Neonicotinoids are neurotoxins that act on information processing (and hence ability to function or perform tasks), by affecting a specific neural pathway common in invertebrates. In other words, the nervous system is attacked. Treated insects may exhibit leg tremors, rapid wing motion, disoriented movement, paralysis and ultimately death.' ( Info taken from:  
<http://www.buzzaboutbees.net/honey-bee-deaths-and-pesticides.html> )

Neonicotinoid pesticides are used as a systemic control on many crops. Today clothianidin, a neonicotinoid, pesticide is widely used on corn seeds and other crops such as wheat, soy and sunflowers. Tests conducted by the Pesticide Action Network have found clothianidin in watermelon, peaches, cherries, strawberries, spinach, summer squash, tomatoes and potatoes. This pesticide can remain in the soil for years, and continue to be taken up by the plant (and the bees).

When you use Advantage for killing fleas on your cat or dog you are using a neonicotinoid pesticide. You are using Thiamethoxam a neonicotinoid pesticide, when you are sowing corn seed that has been treated with Cruiser. When you are buying corn, local or otherwise that has been treated with Cruiser, because it is a systemic pesticide it is in the corn pollen and the corn that you eat.

You can glean much more information by searching the web for 'Neonicotinoid'.

If we all read labels we can assist in not supporting the use of a chemical that is harmful to our bees. You can talk to people you know and explain how they can also support our bees. I have included a list of the Neonicotinoid pesticides and their brand names.

*2012 Club Membership Fees are now due  
and will be collected at the January 2012 meeting.*

## Reduce Bee Poisoning

Avoid Using The Following. Neonicotinoid Pesticides Synthetic nicotine-based pesticides are very toxic to honeybees and native pollinators.

Bonide Systemic: Insect Spray, Insect Granules, Houseplant Insect Control

Bayer Season Long Grub Control

Bayer Advanced: 3 in 1 Insect Disease & Mite Control; 2 in 1 Systemic

Rose & Flower Care; 12 Month Tree & Shrub Protect & Feed; Tree

& Shrub Insect Control 12 month; Dual Action Rose & Flower

Insect Killer; Lawn Season Long Grub Control; Lawn Complete

Insect Killer for Soil & Turf; Fruit, Citrus & Vegetable Insect Control

Bayer Termite Control

Bayer All in One Rose and Flower Care

Ortho Max: Tree & Shrub Insect Control; Flower, Fruit, & Vegetable Insect Killer

Ortho Rose Pride Insect Killer

Green Light: Tree & Shrub Systemic Insect Killer; Systemic Rose & Flower Care

Ingredient	Product Name
Acetamiprid	Adjust, Assail, Chipco, Intruder, Pristine
Clothianidin	Arena, Belay, Clutch, Poncho, Titan
Dinotofuran	Venom
Imidacloprid	Admire, Advantage, Confidor, Gaucho, Hachiusan, Kohinor, Leverage, Merit, Premise, Prothos, Provado
Thiacloprid	Calypso
Thiamethoxam	Actara, Adage, Centric, Cruiser, Flagship, Helix

### DUES

Nanaimo Bee Club dues are \$10 per year, due at the January meeting. However, members will be kept in good standing until the March meeting, ie will continue to receive notification of Club meetings/events/newsletters.

BCHPA dues are also due in January, at \$40 per year, which includes subscriptions to the BCHPA newsletter, Bee sCene, and the Canadian Honey Council newsletter, Hive Lights. Note the new procedure whereby individuals must submit their membership fees directly to the BCHPA. This change is so persons can submit applicable insurance fees for the new season. More details will be available at the January meeting.



*Buy, Sell and Trade - Do you have something you'd like to buy, sell or trade?  
Contact Roblyn at 250-753-0554 or email [info@nanaimobeekeepers.com](mailto:info@nanaimobeekeepers.com)  
to place it in the newsletter!*

*JANUARY 2012*

*Happy New Year, Nanaimo Beekeepers!*

**Annual Bee Club Dinner - Saturday, Feb 11 at 6:00 pm  
Northgate Inn's restaurant (Metral Dr.)**

Please watch for an email detailing the dinner information.  
Note: It is important to pay or commit to paying no later than January 31,  
or at the Bee Club meeting, as the dinner requires at least 30 people.

**Nanaimo  
Beekeepers  
Club**

*[www.nanaimobeekeepers.com](http://www.nanaimobeekeepers.com)*

