"So work the honey bees. Creatures that, by a rule in Nature, teach the art of order to a peopled kingdom."
Shakespeare

SOURCE

"BEEKEEPING IN WESTERN CANADA"

John Gruszka

Base text for MSU Journeyman Level

Master Beekeepers Course


JUST A BEE?


60% of all flora
33% of everything we eat
Without them we would not have apples, oranges, peaches, blueberries, cranberries, pears, beans, onions, celery, melons, nuts, many trees, alfalfa, clover, and almost all wild and domestic flowers and more; in fact of all the plant foods, we would have only wheat, rice, and corn to eat without them. We could not sustain ourselves as we do now without bees. Just a bee?

Just a bee?

- **Average hive 60,000 bees**
- **2,000,000 blossoms; 50,000 miles; one pint (1 lb) of honey**
- **Average hive in Kansas 65 pounds (2012) for harvest.**
- **Pollinate millions of plants.**

The way bees communicate and cooperate is fascinating. They are a model of community effort...and a barometer of our environmental stewardship.

A Single Queen.

The hive has only one queen and her primary function is to lay eggs, and lots of them, 2000 or more a day at peak. Her pheromones keep the hive a colony. All the bees in a hive are completely loyal to her. Many beekeepers replace her annually. The bees may do so also. 16 days to hatch, 4-5 years.

Worker Bees

99.99% of the bees are female workers

Live five weeks (except winter)

Arrives 21 days after an egg is laid

Begins work immediately

16 or 17 different jobs

3 weeks, forager

Seeks out pollen and nectar

Processed by hive bees into honey, royal jelly and bee bread

About 1/12 TSP of honey

Fly as far as 3 miles out, recruits others

Flies to death in this quest

The Drone

- Male
- Unfertilized egg 21 days
- Single purpose
- Accepted in all hives
- Flies to a DCA
- Mates and dies
- Forced out during late summer

Swarming

- Half departs with the queen
- Half remains in the hive
- New queen is born
- Caused by overcrowding, usually
- Beekeepers can reduce the tendency
- Not always preventable.
- Swarm remains outside
- Waits for scout bees to find a home
- Important to quickly catch the swarm
- See a swarm? Please call

Honey Bees are disappearing at an alarming rate!

Since 2007, over half of the honey bees in the world have disappeared. The loss is significant because of their critical importance to our agriculture, because of what we eat, and because of what we enjoy.

Why ?

A perplexing equation

Forage + Chemicals + Diseases and Vectors + Management = Colony Collapse Disorder

1944..USA...5.5 million hives; today 2.1 million.

Let's build a hive!

- *Locating your hive*
- *Moving a Hive*
  - 1 foot or 3 miles
  - During the night
- *Feeding Them*
  Spring, Fall, Winter
- *Winter*
  - Cluster
  - Cleansing flights
  - Eggs in Jan, Feb
- *Population Cycle*

Honey! and Wax, Pollen and Propolis

Maxant Plane.AVI

- Super concentrated nectar
- Harvested during the months of July, August, September
- Decapped
- Extracted by spinning the frames in a centrifugal extractor
- filtered
- Packed or bottled
- Antiseptic, never spoils
- Wax
- Pollen
- Propolis

Local honey is very good for us!

A beautiful frame of Tuttle Creek Lake honey!

- Assists with allergies to local pollens
- Very high in antioxidants
- Antiseptic, used as a healing agent

Processed honey

- Combined
- Ultra strained
- Heated
- May not be honey

- USA consumes 540 million pounds/year
- Produces 125 million pounds.

The old adage "know your beekeeper and honey maker" is a wise one.

Pollination

Of great importance is the service bees provide in pollinating our plants; 60% of them and 33% of all we eat. Bees are used to pollinate alfalfa, soy beans, clover, mustard, canola, sorghum, almost all flowers wild and domestic, most of our trees, most vegetables, most fruits, nuts and many other agricultural crops. Almonds…the largest cash crop in California. Largest source of revenue for commercial beekeeping businesses.

The sting

- Bees sting to protect the hive
- Quite docile, but…
- Beekeepers are not stung often
  - Wear protective equipment
  - Work slowly and calmly
  - Smoke is used to calm the bees
- More agitated with bad weather, bothered by animals or harvesting honey
  - *Watch a hive from a distance*
  - Observe orientation flights
  - Bees dancing on the landing board
  - Observe them bringing in different colored pollen
  - Carry 50% of their body weight for miles.

Honeybees, Farming and Soldiers…

- Since WWI managing honey bees has been found to have significant therapeutic value among soldiers with visible and invisible wounds.
- Relatively solitary.
- Highly focused.
- Commercial businesses needs beekeepers.
- Beekeeping combined provides therapy, learning, occupational opportunities.
- Objective: Open a Training Farm in this area for soldiers and veterans. KSU designing.

So, they are not "JUST a bee!"

- Critical part of our agricultural system
- Bring us beauty in our environment
- Provide great tasting, beneficial honey

Without bees our diet would be bland and our environment dull.

What can you do to help us save our bees?

1. Be very careful with pesticides and herbicides even on the flowers in your garden or on your lawn. If you must use them, apply them late in the evening when the bees are back in the hive.
2. Plant bee friendly flowers, shrubs and trees.
3. Regularly use local honey. It's best for you.
4. Place a hive on your property; or allow a beekeeper to do so.
5. Simply understand their importance to us and take every action to care for the environment in which they, and we, must live.

Thank you!

I would be happy to show you first hand how the hive works or answer any questions you might have. I am also available free of charge to give a presentation to any sized group.

Gary LaGrange, Golden Prairie Honey Farms, 785-537-7493

Bee friendly plants in our area

Trees and Shrubs

American Elm, Lacebark Elm, Redbud, Golden Rain, Black Locust, Honey Locust, Hackberry, Maple, Mulberry, Walnut, Persimmon, All fruit and nut trees including ornamental, Blackberry, Burning Bush, Buckeye, Chokeberry, Catalpa, Button Bush, Hawthorn, Honeysuckle, Holly, Tulip Tree, Wild Plum, Buckthorn, Sumac, Raspberry, Willow, Bee Bee Tree, Basswood, Blueberry, Black Haw

Flowers, Herbs, and Grasses

All Wild Flowers, Clover of all types, Dandelion, Russian Sage, Catmint, Lavender, Sunflower, Rose, Geranium, Sedum, Hyssop, Bugle, Chives, Garlic, Leadwort, Milkweed, Butterfly Weed, Asparagus, Milk Vetch, Aster, Borage, Mustard, Oilseed Rape, Marigold, Thistle, Clematis, Cucumber, Melons, Pumpkin, Wild Carrot, Leopardsbane, Candytuff, Fireweed, Heather, Joe-Pye Weed, Buckwheat, Blue Vine, Sunflower, Basil, Henbit, Lavender, Trefoil, Lemon Balm, Peppermint, Catnip, Oregano, Poppy, Tansy, Smartweed, Lungwort, Azalea, Sedum, Goldenrod, Chickweed, Thyme, Vervain, Iron Weed, Common Vetch, Calliopsis, Zinnias, Buttercups, Cosmos, Crocus, Dahlia, Echinacea (Cone Flower), English Ivy, Foxglove, Hollyhock, Hyacinth, Onion, Watermelon, Squash, Strawberry, Bee Balm, Sage

Crops

Alfalfa, Soybean, Sunflower, Clover, Buckwheat, Sweet Corn, Milo, Sorghum, Hay grasses and flowers, fruits, nuts and vegetables.

Pleasant words are a honeycomb, sweet to the soul and healing to the bones. Prov. 16:24

Golden Prairie Honey Farms

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