

Bees in School.



Peter Cowin

Aka The Bee Whisperer

And

Anne Cowin

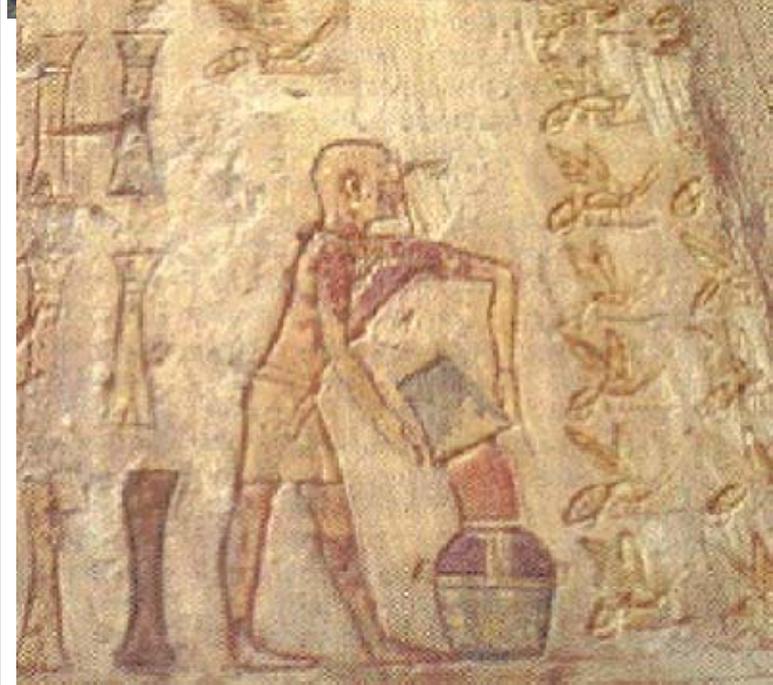
JMG Specialist

Bee  *Whisperer*

The Honey Bee, *Apis mellifera*, one of the most important insects to mankind.



Important to man
throughout history.







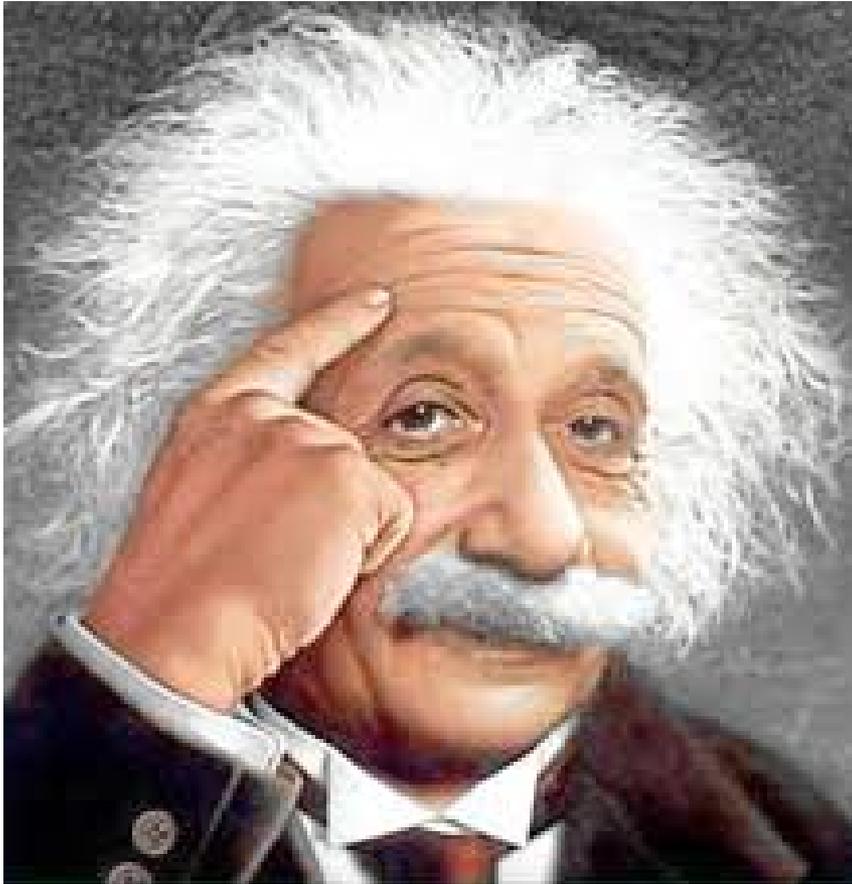
1/3 of everything we eat depends upon Pollinators (mainly honeybees).

Half of all produce in supermarkets depends upon pollinators.

Bees are now in trouble with losses
29-50% EACH year!

Rusty patch bumble bee, the first bee in North America to be added to the endangered species list. Just one of MANY species in trouble.





Albert Einstein is reputed to have said, “If bees should disappear from the face of the earth, mankind would follow within four years.”

Honeybees have some big problems:

The spread of the varroa mite nationwide in the 1980's wiped out almost all "wild" honeybee colonies and made keeping bees healthy much harder.





29-50% losses each year for 8 years.

Colony collapse disorder.

Parasitic mites.

Pesticides.

Bacteria and viruses.

Lack of food diversity.

Loss of habitat.



Losses particularly acute
amongst commercial
beekeepers



Much better to have thousands of backyard beekeepers with one or two hives than to have one or two beekeepers with thousands of hives!

Bee Whisperer's objective is to get as many new beekeepers started as possible.



I have had more than 1200 students take my Adult Ed beekeeping classes in 5 years!





The Queen bee

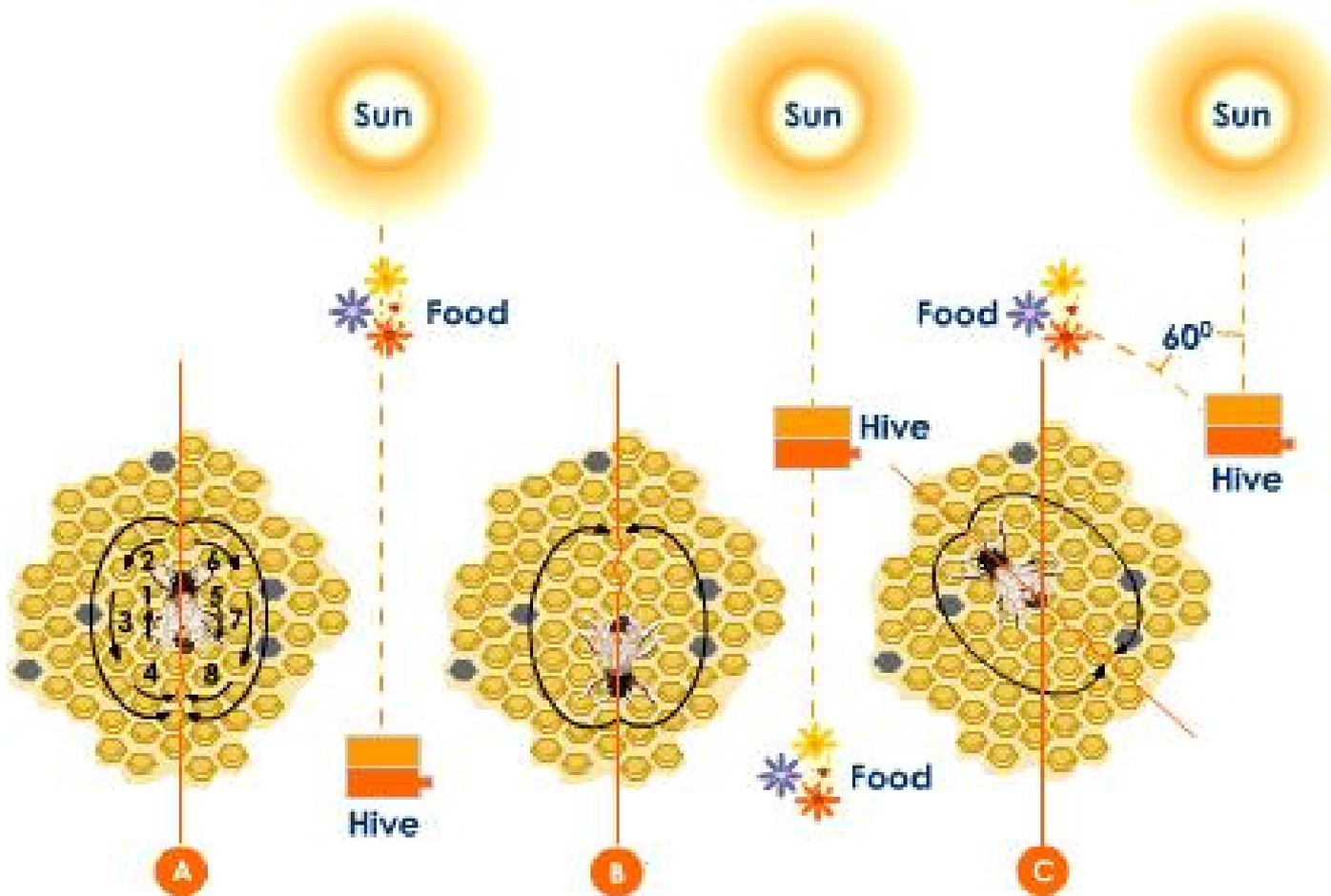


- Lives for 1-4 years
- 16 days from egg to hatching
- Kills her siblings
- Mates with 10-40 drones in flight
- Lays up to 3000eggs per day
- Binds the colony together with pheromones

The Drone and Worker bee



The waggle dance



Tail Wagging Dance of Honeybee Worker. The Straight Line Indicates the Direction of the Food Source



Where
honey
comes from!







Honey

An average colony in Maine makes about 40-60lbs of surplus honey in a year. (Some make over 200lbs!)

Bees need to fly 55,000 miles to make 1 pound of honey visiting 2 million flowers.





Honeybee
Democracy at
work.















Most important role: Pollination





Maine ranks 2nd in the USA for the number of honeybee colonies brought in for pollination.
About 40-80,000 colonies per year.



That's 4,000,000,000 bees!



Blueberry growers pay \$90 - \$130 per hive to have them there for 3-4 weeks!

Why? Because the blueberry crop is increased by 1000lbs per hive per acre!



Honey bees are trucked all over the country from one monoculture to the next.



Commercial pollination is essential
for our food supply but is VERY
hard on the bees.



Mites permanently weaken the bee and infect it with bacteria and viruses.



Neonicotinoid pesticides

These are systemic pesticides which make the whole plant toxic to insect pests but also toxic to honeybees and other pollinators. Honeybees collect the pollen from treated plants and feed it to their larvae.
Stay in the soil for 5 years.

A green grassy lawn is a desert for bees.



Dandelions are a vital food source in spring providing an abundance of pollen and nectar when they need it most after a long winter.



Clover is an important food for bees in summer providing the bulk of honeybee food supply!



Please Don't
Use “Weed and Feed”-like products or
Pesticides on lawns and gardens.



Good environmental practice Plant “Bee Friendly Zones!”



Encourage businesses,
schools and towns to do the
same!





What better way
to promote a
better
understanding by
our kids of the
importance of
pollinators, than
to start a school
beehive?



© Carl Uhlman

Honeybees can be a wonderful teaching aid.



Bees at Hampden Academy



The idea: To maintain a number of honey bee hives at Hampden Academy run by students and staff and overseen by an experienced beekeeper.



- Learn about bees/pollinators and their role in environment
- Construct hives
- Honey bee husbandry
- Harvest, create and sell products –small business model
- Present bee based projects to a general audience.

Why a Honey Bee Apiary?

- Honey Bees and other pollinators have had a dramatic decline in numbers in recent years.
- Multiple opportunities for curriculum enrichment
- Influence community perspective on honey bees with a focus on conservation



Step One

Establish a core group of staff members and get Principal on-board.

Dealing with the obvious question: What would the insurance company say?



“This would be an acceptable exposure as long as the proper protocols and best practice procedures are followed.” *Liberty Mutual Insurance*

Preparing a plan including:

Costs and funding

location

safety

addressing parental concerns

potential links with curriculum

Presented to School Board

took c. 4 months to get to this stage
short Powerpoint presentation

HA Beekeeping Club

- The Beekeeping Club was organized and permission slips were distributed
- The club ran for the last 2 weeks of school in 2015
 - students built and painted the hives
 - installed bees
 - maintained the bees over the summer with the help of the Bee Whisperer







Bee Day!



Some of the first students and staff involved in the establishment of Hampden Academy Apiary.













14lbs of honey in 56 four oz bottles.



5 ounces of bees wax made 138 lip balms



In their first year HA students sold
out of all their product in one day
raising more than \$800!

Funds used to add another hive and more bee suits



Each year more students sign up.



Last year we harvested about 60lbs of honey, even in a drought.



Growth beyond Hampden Academy:

Two former students have already
started beekeeping clubs at
Colleges in RI and Canada.

This is what we want:
An observation hive in
the environmental
science room.
A great teaching tool.



Where are we going?

More links with curriculum

Links with U>Maine research

Sponsorship of beehives in developing nations.

College scholarships.

Contact Information

- Anne Cowin Hampden Academy
acowin@rsu22.us

- Peter Cowin
petercowin@tds.net
 - 207-299-6948
 - The Bee Whisperer on FB
 - www.beewhisperer.us

