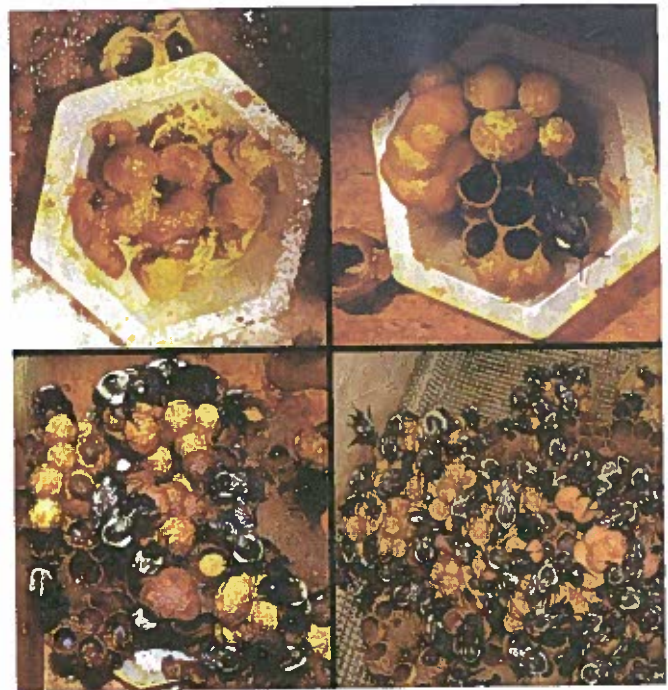




Queen and workers.



Colony development over time.



Nest box showing plexiglass top and tweezers for holding adults.

There is also a clear inner door (plexiglass) to facilitate observing the hive. The inside of the box is split into two sections; a food area and a nesting area, separated by a piece of wood with a hole for the queen to move between the two sections.

When the first clutch of workers has emerged, the brood is moved to a larger wooden box, dimensions 9 x 12 x 7 inches. The bees can be picked up by their hind legs with tweezers, but be gentle with the queen – without her – there is no hive. The bees enter and exit the box through a piece of plastic tubing large enough for two bees to pass, kind of like a two-lane highway.

Bumble bees seem to do well in a dark environment with 50% humidity and an average temperature of 70°F. Some light during the day doesn't seem to bother them, but try to mimic the natural conditions of the nest.

Feeding the bees will most likely require a visit to the friendly neighborhood beekeeper (unless, of course, you are the beekeeper). One half pound of pollen per colony should keep the bees happy until they are foraging on

their own. Mix fresh pollen with a sugar solution (nine cups water to six cups high fructose corn syrup or 1:1 sugar solution) to form a stiff dough. Then roll the dough into a cylinder shape about half an inch thick. The pollen balls should be about the size of a pea. A growing colony should need an amount of pollen equal to roughly one third of the size of the brood each day.

There are a few national commercial producers/sellers of bumble bees for pollination, but keeping and selling your own bumble bees locally decreases the chance of transporting diseases or parasites. It also ensures that the bees are adapted to the climate and vegetation.

The advantages to raising bumblebees are:

- Bumble bees are not aggressive. They only sting if threatened. And the males don't have stingers.
- Bumble bees are active in windy and cloudy conditions and at low temperatures (41°F).
- Bumble bees do well in greenhouses, so rent or sell them to your local nursery (added revenue).
- Bumble bee hives have a finite life ending at the first hard frost (no over wintering care or cost).

Until such time that the honey bee population rebounds, raising and selling bumble bees is a cost effective alternative. Bumble bees don't seem to be affected by *Varroa* mites, and as long as there are crops and wild flowers to sustain them, raising them should be an enjoyable and revenue producing endeavor. **BC**

For more information:

- *Befriending Bumble Bees: A practical guide to raising local bumble bees* is available through the University of MN Extension Store <http://shop.extension.umn.edu/PublicationDetail.aspx?ID=1902>
Phone: 1-800-876-8636
- *Befriending Bumble Bees* website www.befriendingbumblebees.com
- *Beekeeping forum* is available at <http://forums.gardenweb.com/forums/bees>
- *How to build a bumble bee box* at <http://tomclothier.hortnet/page38.html>