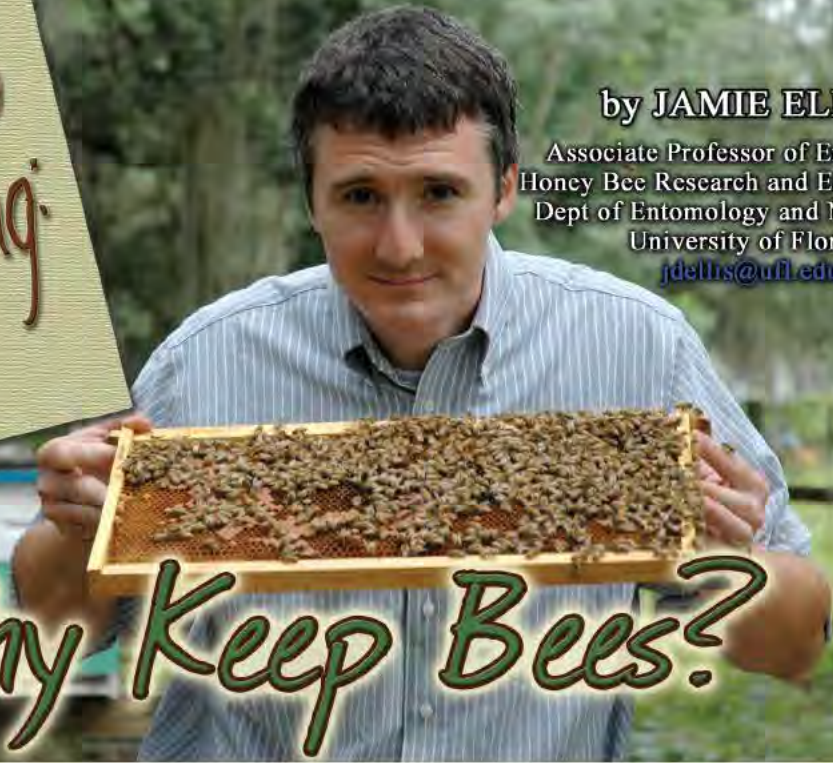




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*Humans have had a long-standing association with honey bees. As a species, we have interacted with honey bees for thousands of years. Honey bees have been written about in the Holy Bible, represented in Egyptian hieroglyphics, and discussed by Greek philosophers. Their likeness is found in cave and cliff paintings, their products valued by noblemen and “commoners” alike.*

**M**an has always been fascinated with honey bees. This fascination likely was originally born out of our longing for the sweet honey that bees produce. However, our appreciation of bees for other reasons has grown tremendously since our earliest years climbing cliffs/trees to harvest the “sweet nectar of the gods”. Herein, I will discuss some of the many reasons people keep bees. Though this list is not inclusive, I hope it will give you a greater appreciation for the insect that has long-captivated our own species.

1) Honey – Man’s longest association with bees likely stems from our love of honey (Figure 1). Honey is nature’s sweetener. Bees produce it by gathering nectar (sugar water) from flowers, mixing the nectar with enzymes, and dehydrating it by circulating air through the nest. Honey comes in all aromas, colors and flavors, those being determined by the original floral nectar source. Diversity is honey’s crowing attribute and humans find it irresistible. Consequently, many people keep bees to produce honey, either for themselves or to share with others.

2) Crop pollination – Honey is an important product of bee hives, but bees’ value as



**Figure 1: A jar of award-winning honey. Producing honey is a great reason to keep bees. (photo – Jamie Ellis, University of Florida)**

crop pollinators is what ultimately makes them indispensable to man (Figure 2). A large number of beekeepers (especially hobbyists) begin to keep bees originally because they grow fruits and vegetables in their yards and they need bees to pollinate their crops. The value of bees in general, and honey bees specifically, to man’s food supply is difficult to calculate. However, experts agree that honey bees are an important component of agriculture. This message is becoming common knowledge, thus driving gardeners managing gardens of all sizes to indulge in the art of beekeeping.

3) Other hive products – Honey bees produce a number of products that mankind finds valuable. These include wax, propolis, pollen, royal jelly, and venom. Beeswax is used in all types of products from candles and lip balm to cosmetics and furniture. Propolis, a product bees derive from plant saps and resins, is used in many cultures for medicinal purposes. Like propolis, royal jelly and bee venom are harvested from hives and used for all sorts of purported health reasons. Mead, honey alcohol, is not a hive product *per se* because



**Figure 2: A honey bee colony used in crop pollination. Honey bees are used to pollinate crops such as watermelons (in front of the colony) and may benefit other crops such as sunflowers (behind the colony). They also greatly benefit backyard gardens. (photo – Amanda Ellis)**

it is not produced in the hive. However, it is derived from honey and may even be the earliest fermented beverage.

4) **Business** – Commercial, sideline, and some hobbyist beekeepers keep bees as a business. Honey bees are the foundation of all sorts of businesses. Beekeepers use bees to produce honey for sale, to produce the “other hive products” mentioned above, and as pollinators of our nation’s crops. It is fair to say that most of the honey bee colonies kept in the United States are kept by commercial beekeepers who use the bees for purposes of crop pollination. Honey bees support other industries as well. These include the commercial queen and package bee industries and the beekeeping equipment/supply industry.

5) **Wood working** – Beekeepers work with wood. Colonies and their components are, usually, made of wood. Consequently, those who like to work with wood can find joy as a beekeeper (Figure 3). Granted, the colonies we use are very basic in design (they are rectangular boxes); so they do not present a creative challenge to master craftsmen. However, I have seen woodworkers, cabinet makers, etc. find joy in designing the perfect hives out of the perfect wood.

6) **Art** – Some people keep bees because of the artistic nature of the creature. Undoubtedly, art is everywhere. You do not have to work with bees to appreciate natural art. However, there is a certain art associated with our craft. This manifests in our management techniques, but it is also expressed by the bees themselves, how their colonies are developed, how their nests are built. You do not have to look hard to know that honey bees are used in art everywhere.

They show up in the stained-glass windows of cathedrals and can be found painted on soap dishes or stitched into dish towels. Arguably, life is art and bee colonies are full of life. Beekeeping, consequently, can satisfy even the most artistic among us.

7) **Science** – Honey bees, their natural histories, their colony structure, etc. are a bountiful well of natural discovery. The honey bee has been the subject of thousands of research projects and the principal research tool used by a similar number of investigators. These include Nobel Prize



**Figure 3: A shop full of beekeeping equipment. Many people start keeping bees because of the craft’s link to wood-working. (photo – Jamie Ellis, University of Florida)**

scientists and middle school science fair students. Honey bees have been used to make advances in genetics, microbiology, behavior, chemical ecology and in other research fields. I know that I speak for many others when I say that honey bees are a subject of intense, scientific fascination.

8) **Nature** – Man has always been intimately linked to nature. Today, we derive from it medicines, recreation, fuel, pleasure, lodging, solitude, etc. “Back-to-nature” movements are popular, especially as we try to protect the earth’s natural habitats from destruction. Beekeeping represents that larger movement. Honey bees have not been domesticated (despite the fact that we “keep” them); so, we essentially keep wild animals in white boxes and attempt to manage them in a way that is mutually beneficial. Consequently, they provide a clear link between us and the environment that surrounds us, between us and the natural world of which we are a part.

9) **Hobby** – Beekeeping is a great hobby. Like all hobbies, beekeeping can be quite expensive and it takes time to master, if one ever really does master it. However, it is a great way to spend time. I often hear people say that they lose themselves in a colony, that they forget time exists. I have experienced this myself. Unlike for other hobbies, beekeeping is a hobby that can, in theory, pay for itself. I do not know any pro golfers or pro fishermen/women, but I do know a lot of beekeepers who at least break even. What other hobby can make a similar claim?

10) **The plight of the honey bee** – Without question, most of the new beekeepers



**Figure 4: A well-managed apiary. (photo – Jamie Ellis, University of Florida)**

I know today get into the business because they became aware of the global decline in managed honey bee populations. Colony Collapse Disorder (CCD) and general colony losses have put honey bees in people's living rooms. People all over the United States are aware of the problems faced by honey bees. Many citizens, wanting to do their part to help the bee, become beekeepers. Interestingly, human benevolence may actually help the honey bee. Colony and beekeeper numbers are going up in many areas of the U.S. Equipment suppliers and bee producers cannot keep up with the demand for bees.

11) Family link to beekeeping – This reason for keeping bees usually is intimately linked to the other reasons mentioned thus far (i.e. family members kept bees for the reasons listed above). Consequently, a lot of people keep bees simply because their father, grandfather, aunt, or cousin kept/keeps bees. What a great way to be introduced to this life-changing enterprise.

There are, no doubt, countless other reasons people keep bees. Any time one makes a list of reasons for anything, one risks omitting a given reader's own reason. So, I apologize if I failed to mention the reason you keep bees, but I do hope that I opened your eyes to the wealth of reasons other people state for keeping bees. Undoubtedly, most of us keep bees for a combination of the reasons listed above. Personally, I believe there is joy in keeping bees. I hope you find yours. There is, after all, something primordial about working with bees, given that our ancestors have done it almost as long as they have been here. Happy beekeeping.

#### **Honey Bees 101: Honey bee taxonomy**

Taxonomy is the branch of science in which we classify living organisms according to their relatedness to other species or groups of organisms. The higher taxonomic categories include: Kingdom, Phylum, Class, Order, Family, Genus, and Species. There are a number of honey bee species. All except one naturally occur in Asia. The one honey bee whose natural distribution is outside of Asia calls Europe and Africa home. This species, commonly called the "Western honey bee", is the most used of all the honey bee species. It is this species that we manage in North America. The taxonomic classification of the West-

ern honey bee follows:

- **Kingdom: *Animalia*** – This Kingdom includes all animals.
- **Phylum: *Arthropoda*** (jointed-foot) – This phylum includes all arthropods. Arthropods have segmented bodies with 2-3 regions, an exoskeleton, an open circulatory system and body cavity, segmented/paired appendages on the body sections, and they lack a backbone. This group includes organisms such as millipedes, shrimp, mites, spiders, etc.
- **Class: *Insecta*** – Insects have 3 body regions (head, thorax, abdomen), one pair of antennae (even if reduced), one or two pairs of wings (not always present), and three pairs of legs. There are exceptions to the latter, for example in the immature stages of some insects which can lack legs.
- **Order: *Hymenoptera*** (membranous wing) – This order includes sawflies, ants, wasps, and bees. The latter three groups belong to the suborder Apocrita. Members of this suborder have constricted abdomens (wasp waists) and membranous wings (when present).
- **Family: *Apidae*** (long-tongued bees) – This bee family includes bumble bees, honey bees, stingless bees, carpenter bees, and some similar groups.
- **Genus: *Apis*** (bee) – The genus *Apis* contains 7-11 species (the actual number is debated) and likely originated in Southeast Asia.
- **Species: *mellifera*** (honey-bearing) – The Western honey bee. There are over 40 subspecies (or races) of Western honey bee and all naturally occur in Europe or Africa. These include the following notable races: *ligustica* (Italian bee), *carnica* (the Carniolan bee), *caucasica* (the Caucasian bee), *mellifera* (the German or "black" bee), *scutellata* (the African or "killer" bee), and *capensis* (the Cape bee).



**Figure 5: A honey bee with deformed wing virus. The health of honey bees has brought bees to national attention. This attention has given the industry "free advertising", thus producing a huge increase in the number of beekeepers. (photo – University of Florida)**