

Chapter 1

To Bee or Not to Bee?

In This Chapter

- ▶ Finding out about the many benefits of beekeeping
 - ▶ Admiring the honey bee's vital role in nature
 - ▶ Deciding whether beekeeping is for you
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I've been keeping bees in my backyard since 1983, and I have a confession to make — I really love my bees. That may sound weird to you if you aren't a beekeeper (yet!), but virtually everyone who keeps bees will tell you the same thing and speak with deep warmth about "their girls." They impatiently await their next opportunity to visit their hives. They experience a true emotional loss when their bees don't make it through a bad winter. Beekeepers, without a doubt, develop a special bond with their bees.

Since becoming a backyard beekeeper, I've grown to deeply admire the remarkable qualities of these endearing creatures. As a gardener, I've witnessed firsthand the dramatic contribution they provide to flowering plants of all kinds. With honey bees in my garden, its bounty has increased by leaps and bounds. And then there's that wonderful bonus that they generously give me: a yearly harvest of sweet liquid gold.

Once you get to know more about bees' value and remarkable social skills, you'll fall in love with them too. They're simply wonderful little creatures. Interacting with them is an honor and a privilege. People who love nature in its purest form will love bees and beekeeping.

That being said, in this chapter, I help you better understand the remarkable and bountiful little honey bee by looking at its history and the value that it brings to our lives. I also discuss the benefits of beekeeping and why you should consider it as a hobby — or even a small business venture. This chapter gives you an idea of what equipment you'll need to get started, the time you should expect to spend maintaining a healthy hive, and how deep your pockets need to be. It also discusses the optimal environmental conditions for raising bees and ends with a checklist that you can fill out to see if beekeeping is for you.

The prehistoric bee

Bees have been around for a long, long time, gathering nectar and pollinating flowers. They haven't changed much since the time of the dinosaurs. The insect shown in the following

figure is definitely recognizable as a bee. It was caught in a flow of pine sap 30 to 40 million years ago and is forever preserved in amber.



Courtesy of Mario Espinola, www.espd.com

Discovering the Benefits of Beekeeping

Why has mankind been so interested in beekeeping over the centuries? I'm sure that the first motivator was *honey*. After all, for many years and long before cane sugar, honey was the primary sweetener in use. I'm also sure that honey remains the principal draw for many backyard beekeepers. Chapters 14 and 15 deal with how to produce, harvest, and market your honey.

Honeybee or honey bee?

This is a “tomato/*tomahto*” issue. The British adhere to their use of the one word: “honeybee.” The Entomological Society of America, however, prefers to use two words “honey bee.” Here’s the society’s rationale: The honey

bee is a true bee, like a house fly is a true fly, and thus should be two words. A dragonfly, on the other hand, is not a fly; hence it is one word. **Note:** Spell it both ways when Web surfing. That way, you’ll cover all bases and hit all the sites!

But the sweet reward is by no means the only reason folks are attracted to beekeeping. For a long time, agriculture has recognized the value of pollination by bees. Without the bees’ help, many commercial crops would suffer serious consequences. More on that later. Even backyard beekeepers witness dramatic improvements in their gardens’ yields: more and larger fruits, flowers, and vegetables. A hive or two in the garden makes a big difference in your success as a gardener.

The rewards of beekeeping extend beyond honey and pollination. Bees produce other products that can be harvested and put to good use, including beeswax, propolis, and royal jelly. Even the pollen they bring back to the hive can be harvested (it’s rich in protein and makes a healthy food supplement in our own diets).

Harvesting liquid gold: Honey

The prospect of harvesting honey is certainly a strong attraction for new beekeepers. There’s something magical about bottling your own honey. And I can assure you that no other honey tastes as good as the honey made by your own bees. Delicious! Be sure to have a look at Chapter 18, where I list some delicious recipes for cooking with honey.

How much honey can you expect? The answer to that question varies depending on the weather, rainfall, and location and strength of your colony. But producing 60 to 80 pounds or more of surplus honey isn’t unusual for a single colony. Chapters 14 and 15 provide plenty of useful information on the kinds of honey you can harvest from your bees and how to go about it. Also included are some suggestions on how you can go about selling your honey — how many hobbies can boast a profitable return on investment!

Why bees make great pollinators

About 90 crops in the United States depend on bees for pollination. Why is the honey bee such an effective pollinator? Because she's uniquely adapted to the task. Here are several examples:

- ✔ The honey bee's anatomy is well suited for carrying pollen. Her body and legs are covered with branched hairs that catch and hold pollen grains. The bee's hind legs contain *pollen baskets* that the bee uses for transporting pollen, a major source of food, back to the hive. If the bee brushes against the stigma (female part) of the next flower she visits and brushes off some of the pollen grains, the act of cross-pollination is accomplished.
- ✔ Most other insects lie dormant all winter and in spring emerge only in small numbers, until increasing generations have rebuilt the population of the species. Not the honey bee. Its hive is perennial. The honey bee overwinters, with large numbers of bees feeding on stored honey. Early in the spring, the queen begins laying eggs, and the already large population explodes. When flowers begin to bloom, each hive has tens of thousands of bees to carry out

pollination activities. By mid-summer, an individual hive contains upward of 60,000 bees.

- ✔ The honey bee has a unique habit that's of great value as a pollinator. It tends to forage on blooms of the same kind, as long as they're flowering. In other words, rather than hopping from one flower type to another, honey bees are flower-consistent. This focus makes for particularly effective pollination. It also means that the honey they produce from the nectar of a specific flower takes on the unique flavor characteristics of that flower — that's how we get specific honey flavors, such as orange blossom honey, buckwheat honey, blueberry honey, lavender honey, and so on (see Chapter 3).
- ✔ The honey bee is one of the only pollinating insects that can be introduced to a garden at the gardener's will. You can garden on a hit-or-miss basis and hope that enough wild bees are out there to achieve adequate pollination — or you can take positive steps and nestle a colony of honey bees in a corner of your garden.

Bees as pollinators: Their vital role to our food supply

Any gardener recognizes the value of pollinating insects. Various insects perform an essential service in the production of seed and fruit. The survival of plants depends on pollination. You might not have thought much about the role honey bees play in our every day food supply. The fact is that 60 percent of the fruits and vegetables we rely on to feed our families need honey bee pollination. The value of honey bee pollination to U.S. agriculture is more than \$14 billion annually, according to a Cornell University study. These are more than interesting facts. These are realities with devastating consequences.

The dwindling population of honey bees in recent years (see the later section “Being part of the bigger picture: Save the bees!”) underscores the value of bee pollination. Indeed a spring without bees could endanger our food supply and impact our economy. It is a story that has become headline news in the media.



I’ve witnessed the miracle in my own garden: more and larger flowers, fruits, and vegetables — all the result of more efficient pollination by bees. After seeing my results, a neighbor who tends an imposing vegetable garden begged me to place a couple of hives on her property. I did, and she too is thrilled. She rewards me with a never-ending bounty of fruits and vegetables. And I pay my land-rent by providing her with 20 pounds of honey every year. Not a bad barter all around.

Being part of the bigger picture: Save the bees!

The facts that keeping a hive in the backyard dramatically improves pollination and rewards you with a delicious honey harvest are by themselves good enough reasons to keep bees. But today, the value of keeping bees goes beyond the obvious. In many areas, millions of colonies of wild (or *feral*) honey bees have been wiped out by urbanization, pesticides, parasitic mites, and a recent phenomenon called “Colony Collapse Disorder” (see Chapter 10 for more information on “CCD”). Collectively, these challenges are devastating the honey bee population. Many gardeners have asked me why they now see fewer and fewer honey bees in their gardens. It’s because of the dramatic decrease in our honey bee population. Backyard beekeeping has become vital in our efforts to reestablish lost colonies of bees and offset the natural decrease in pollination by wild bees. I know of many folks who have started beekeeping to help re-build the honey bee population.

Getting an education: And passing it on!

As a beekeeper you continually discover new things about nature, bees, and their remarkable social behavior. Just about any school, nature center, garden club, or youth organization loves for you (as a beekeeper) to share your knowledge. Each year I make the rounds with my slide show and props, sharing the miracle of honey bees with my community. On many occasions my daughter’s teacher and classmates visited the house for an on-site workshop. I opened the hive and gave each wide-eyed student a close-up look at bees at work. Spreading the word to others about the value these little creatures bring to all of us is great fun. You’re planting a seed for our next generation of beekeepers. After all, a grade-school presentation on beekeeping is what aroused my interest in honey bees.

Bee hunters, gatherers, and cultivators

An early cave painting in eastern Spain, circa 6000 B.C., shows early Spaniards hunting for and harvesting wild honey (see the figure below). In centuries past, honey was a treasured and sacred commodity. It was used as money and praised as the nectar of the gods. Methods

of beekeeping remained relatively unchanged until 1852 with the introduction of today's "modern" interchangeable-frame hive, also known as the Langstroth hive. (See Chapter 4 for more information about Langstroth and other kinds of bee hives.)



Improving your health: Bee therapies and stress relief

Although I can't point to any scientific studies to confirm it, I honestly believe that tending honey bees reduces stress. Working with my bees is so calming and almost magical. I am at one with nature, and whatever problems may have been on my mind tend to evaporate. There's something about being out there on a lovely warm day, the intense focus of exploring the wonders of the hive, and hearing that gentle hum of contented bees — it instantly puts me at ease, melting away whatever day-to-day stresses that I might find creeping into my life.

Any health food store proprietor can tell you the benefits of the bees' products. Honey, pollen, royal jelly, and propolis have been a part of healthful remedies for centuries. Honey and propolis have significant antibacterial qualities. Royal jelly is loaded with B vitamins and is widely used overseas as a dietary and fertility stimulant. Pollen is high in protein and can be used as a homeopathic remedy for seasonal pollen allergies (see the sidebar "Bee pollen, honey, and allergy relief" earlier in this chapter).

Apitherapy is the use of bee products for treating health disorders. Even the bees' venom plays an important role here — in bee-sting therapy. Venom is administered with success to patients who suffer from arthritis and other inflammatory/medical conditions. This entire area has become a science in itself and has been practiced for thousands of years in Asia, Africa, and Europe. An interesting book on apitherapy is *Bee Products — Properties, Applications and Apitherapy: Proceedings of an International Conference Held in Tel Aviv, Israel, May 26–30, 1996*, published by Kluwer Academic Publishers (ISBN: 0306455021).

More information on apitherapy is available from the American Apicultural Society (www.apitherapy.org).

Determining Your Beekeeping Potential

How do you know whether you'd make a good beekeeper? Is beekeeping the right hobby for you? Here are a few things worth considering as you ponder these issues.

Environmental considerations

Unless you live on a glacier or on the frozen tundra of Siberia, you probably can keep bees. Bees are remarkable creatures that do just fine in a wide range of climates. Beekeepers can be found in areas with long cold winters, in tropical rain forests, and in nearly every geographic region in-between. If flowers bloom in your part of the world, you can keep bees.

How about space requirements? You don't need much. I know many beekeepers in the heart of Manhattan. They have a hive or two on their rooftops or terraces. Keep in mind that bees travel miles from the hive to gather pollen and nectar. They'll forage an area as large as 6,000 acres, doing their thing. So the only space that you need is enough to accommodate the hive itself.

See Chapter 3 for more specific information on where to locate your bees.

Bee pollen, honey, and allergy relief

Pollen is one of the richest and purest of natural foods, consisting of up to 35 percent protein and 10 percent sugars, carbohydrates, enzymes, minerals, and vitamins A (carotenes), B1 (thiamin), B2 (riboflavin), B3 (nicotinic acid), B5 (panothenic acid), C (ascorbic acid), H (biotin), and R (rutine).

Here's the really neat part: Ingesting small amounts of pollen every day can actually help reduce the symptoms of pollen-related allergies — sort of a homeopathic way of inoculating yourself.

Of course you can harvest pollen from your bees, and sprinkle a small amount on your

breakfast cereal or in yogurt (as you might do with wheat germ). But you don't really need to harvest the pollen itself. That's because raw, natural honey contains pollen. Pollen's benefits are realized every time you take a tablespoon of honey. Eating local honey every day can relieve the symptoms of pollen-related allergies, if the honey is harvested from within a 50-mile radius of where you live or from an area where the vegetation is similar to what grows in your community. Now that you have your own bees, that isn't a problem. Allergy relief is only a sweet tablespoon away!

Zoning and legal restrictions

Most communities are quite tolerant of beekeepers, but some have local ordinances that prohibit beekeeping or restrict the number of hives that you can have. Some communities let you keep bees but ask that you register your hives with the local government. Check with your town hall, local zoning board, or state agricultural experiment station to find out about what's okay in your neighborhood.

Obviously you want to practice a good-neighbor policy, so that folks in your community don't feel threatened by your unique new hobby. See Chapter 3 for more information on the kinds of things you can do to prevent neighbors from getting nervous.

Costs and equipment

What does it cost to become a beekeeper? All in all, beekeeping isn't a very expensive hobby. You can figure on investing about \$200 to \$400 for the hive, equipment, tools, and medication. In addition, you'll spend \$60 to \$80 for a package of bees and queen. For the most part, these are one-time expenses. Keep in mind, however, the potential for a return on this investment. Your hive can give you 60 TO 90 pounds of honey every year. At \$5 to \$7 a pound (a fair going price for all-natural, raw honey), that should give you an income of \$300 to \$600 per hive! Not bad, huh?

Knowing where honey bees come from

Honey bees are native to Europe, Asia, and Africa, but they're not native to other parts of the world (Australia, New Zealand, and the Americas). Colonies of honey bees were first shipped to Virginia in 1621, and their honey was used by the early pioneers as their chief sweetener. These

bees prospered and gradually colonized all of North America. Today, they've become a vital part of our agricultural economy. Honey bees didn't reach Australia and New Zealand until the early to mid-1800s.

See Chapter 4 for a detailed listing of the equipment you'll need.

How many hives do you need?

Most beekeepers start out with one hive. And that's probably a good way to start your first season. But most beekeepers wind up getting a second hive in short order. Why? For one, it's twice as much fun! Another more practical reason for having a second hive is that recognizing normal and abnormal situations is easier when you have two colonies to compare. In addition, a second hive enables you to borrow frames from a stronger, larger colony to supplement one that needs a little help. My advice? Start with one hive until you get the hang of things, and then consider expanding in your second season.

What kind of honey bees should you raise?

The honey bee most frequently raised by beekeepers in the United States today is European in origin and has the scientific name *Apis mellifera*.

Of this species, the most popular bee is the so-called "Italian" honey bee. These bees are docile, hearty, and good honey producers. They are a good choice for the new beekeeper. See Chapter 5 for more information about different varieties of honey bees.

Time and commitment

Beekeeping isn't labor intensive. Sure you'll spend part of a weekend putting together your new equipment. And I'm anticipating that you'll be spending some time reading up on your new hobby. (I sure hope you read my book from cover to cover!) But the actual time that you absolutely *must* spend with your bees is surprisingly modest. Other than your first year (when I urge you to inspect the hive frequently to find out more about your bees) you need to make only five to eight visits to your hives every year. Add to that the time that you spend harvesting honey, repairing equipment, and putting things away for the season, and you'll probably devote 35 to 40 hours a year to your hobby (more if you make a business out of it).

For a more detailed listing of seasonal activities, be sure to read Chapter 8.

Beekeeper personality traits

If you howl like a banshee every time you see an insect, I suspect that beekeeping will be an uphill challenge for you. But if you love animals, nature, and the outdoors, and if you're curious about how creatures communicate and contribute to our environment, you'll be captivated by honey bees. If you like the idea of "farming" on a small scale, or you're intrigued by the prospect of harvesting your own all-natural honey, you'll enjoy becoming a beekeeper. Sure, as far as hobbies go, it's a little unusual, but all that's part of its allure. Express your uniqueness and join the ranks of some of the most delightful and interesting people I've ever met . . . backyard beekeepers!

Allergies

If you're going to become a beekeeper, you can expect to get stung once in a while. It's a fact of life. But when you adopt good habits as a beekeeper, you can minimize or even eliminate the chances that you'll be stung.

Honey trivia

There are all kinds of interesting facts about honey. Here's a hodgepodge of trivia that might improve your chances of winning a quiz show.

- ✔ Honey has antibacterial properties and is used in some cultures to prevent infection of cuts and burns. A medico friend of mine recently visited a burn clinic in China where honey is used in the patients' dressings.
- ✔ In olden days, a common practice was for newlyweds to drink mead (honey wine) for one month (one phase of the moon) to assure the birth of a son. Thus the term "honeymoon."
- ✔ The honey bee's image became a symbol for kings and religious leaders and was honored on ancient coins and in mythology.
- ✔ One gallon of honey (3.79 liters) weighs 11 lbs., 13.2 ounces (5.36 kg.).
- ✔ The Romans used honey to pay their taxes (I don't think the IRS would approve).
- ✔ Honey found in the tombs of the Egyptian Pharaohs was still edible. That's an impressive shelf life!
- ✔ To produce 1 pound of honey, the bees must visit 2 million flowers!

All bee stings can hurt a little, but not for long. It's natural to experience some swelling, itching, and redness. These are *normal* (not allergic) reactions. Some folks are mildly allergic to bee stings, and the swelling and discomfort may be more severe. And yet, the most severe and life-threatening reactions to bee stings occur in less than 1 percent of the population. So the chances that you're dangerously allergic to honey bee venom are remote. If you're uncertain, check with an allergist, who can determine whether you're among the relatively few who should steer clear of beekeeping.

You'll find more information on bee stings in Chapter 3.

