



Preface



The popularity of honey bees has skyrocketed over the past decade, so now is a perfect time to provide a book on a second way—besides beekeeping—for people to have fun with these wonderful little creatures. Our subject is an open-air sport called bee hunting. Whereas the *beekeeper* manages colonies of honey bees that are living in hives he has provided, the *bee hunter* searches for colonies of honey bees that are living in tree cavities and other homesites they have selected. The bee hunter starts his search for a wild colony by catching bees on flowers and then baiting them to forage at a small bonanza of sugar syrup that he has bewitchingly scented with anise. Next he determines the direction to the bees' secret residence from the paths of their homeward flights. Then he gradually moves his sugar-syrup feeder, together with the bees, down their flight line home—their beeline. Finally, he zeroes in on their mysterious dwelling place: some hollow tree, old building, or abandoned hive.

This all sounds rather tricky, so you might be wondering, is bee hunting something that I can do? The answer is yes. Success in bee hunting, as in all the other truly fascinating games in the world, does not require complex equipment, but it does require some special skills. This book is a guide to acquiring the simple tools and learning the ingenious methods that compose the craft of the bee hunter. While bee hunting is not a trivially easy

sport, it is one that any person who enjoys spending time in nature, has patience and determination, and thrills to a treasure hunt can master and enjoy.

Bee hunting, also known as bee lining, used to be practiced widely in Europe, North America, the Middle East, and Africa. Indeed, it may be a pursuit as old as humankind, for it is likely that early humans, living in hunter-gatherer groups, searched for nests of honey bees and robbed them of brood and honey for food, as do some of the hunter-gatherer peoples who have survived to the present time. Probably the earliest written description of the methods for finding the nest of a wild honey bee colony by lining bees is that of Columella, a Roman farm owner and writer on agriculture who lived in the first century A.D. In his book on the cultivation of bees, he gives delightfully detailed instructions for capturing bees at a spring, feeding them honey, and then releasing them one-by-one to trail them back to "the lurking place of the swarm."

Within Europe, bee hunting was especially common in heavily forested regions, such as western Russia and Hungary, where it was a critical part of the craft of hollow-tree beekeeping. Forest beekeepers used various kinds of bee traps—for example, a cow-horn with a movable door in a slot and a small aperture closed with a plug—to catch one or more bees, have them load up on honey smeared inside the trap, and then release them one at a time and follow them back to their nest, usually in a hollow tree. The discoverer would carve his ownership mark in the tree's bark, cut a door in the tree's trunk to access the bees' nest cavity, and periodically climb the tree and collect some honeycombs. Bee hunting was also popular in North America following the introduction of the honey bee from Europe in the early 1600s. North American bee hunters used the same methods for finding wild colonies as had been practiced in Europe for centuries, but they rarely made repeated harvests of the honey from the colonies they found. Instead, they usually felled the trees occupied by the bees ("bee

trees") and stole all their honeycombs, often killing the colony in the process.

In both Europe and North America, the importance of bee hunting gradually diminished from the 1500s to the 1900s as beekeeping with hives grouped in apiaries became increasingly common. At first, these hives were simply the hollow tree sections occupied by the bees; they were moved to the beekeeper's living place, where they functioned as log hives. The swarms from these log hives might be housed in skeps (domed hives made of twisted straw) or simple box hives. In the late 1800s, beekeepers began keeping their bees in purpose-built hives with movable wooden frames that neatly hold the bees' combs and make it possible for beekeepers to closely manage their colonies.

The invention of the movable-frame hive, along with the bee smoker, honey extractor, and other tools of modern beekeeping, has made it vastly easier for humans to get honey by keeping managed colonies in hives aggregated in apiaries rather than by hunting wild colonies in trees scattered over the landscape. So, these days, the successful bee hunter doesn't need to end his hunt by "taking up" the bee tree—cutting it down, opening it up with a sledge and wedges to expose the bees' nest, and cutting out the combs filled with honey. Instead of lugging home pails filled with white-yellow honeycombs, he can bring back a sweet haul of a different sort: delightful memories of sitting in sunny fields, watching honey bees fly off from his feeding station as they begin their flights home, and following the bees down their aerial trails to discover their mysterious abode.

The bee hunter who leaves the bees unharmed will still have an intensely pleasurable outing. After all, hunting is one of the oldest human activities, and the passion to hunt wild animals must have been, until quite recently, an immensely valuable part of human nature. I certainly feel the thrill of pursuing prey when I go bee hunting. Indeed, after making numerous moves down a beeline, closing in on a colony of forest-dwelling bees,

and finally spying the glitter of the bees' wings as they dive inside their tree-cavity home, I always experience soaring feelings of success . . . even triumph! Eventually, I will head back to my own home, no richer in honey than when I started the day, for I will leave behind an undamaged bee tree and an unmolested bee colony. The dizzying jubilation of the "gotcha" moment will have passed, but alongside the delicious lingering feeling of success there will hum a quieter but equally pleasurable feeling: the satisfaction of having done no harm to the bees.

The bee hunter enjoys other rewards besides the sense of climactic exultation upon discovering the secluded home of a wild colony of honey bees. One is the fun of combining woodcraft, map and compass skills, and physical exercise to locate a bee tree, a feat that few people attempt these days. Another reward is the calming, peaceful feeling that comes from watching creatures that have evolved to serve the common good and so work together in harmony. Every beekeeper enjoys this feeling upon opening a teeming hive and beholding the thousands of residents—a queen, her daughters (workers), and her sons (drones)—living together peacefully. The bee hunter also senses the harmonious integration of the bees, and so likewise feels a quiet contentment, when he observes his wild bees standing motionless, side-by-side on his feeder comb, each one unperturbedly drinking in the sugar syrup he has provided. There is no shoving or fighting for the rich forage. The bee hunter again witnesses the bees' amazing communal functioning when they recruit their nest mates to his feeder. He introduces only a handful of foragers to his sugar-syrup extravaganza, but these few often become tens or hundreds in an hour or so, as the first bees recruit a task force of colony mates to help harvest the bounty the bee hunter is providing. How are these little insects, each one possessing a brain smaller than a grass seed, able to communicate so effectively? And how do they not get lost when commuting often a mile or more across hill and dale between their home and the bee hunter's feeder?

Anyone who gives bee hunting a try will quickly observe, firsthand and close-up, that there is much about honey bees that is mysterious, especially their astonishing gifts of communication and navigation. So for some who go bee hunting, the greatest reward will be that it puts a bee in your bonnet to stop, watch, and ponder the marvelous six-legged beauties that help keep our planet flowering and fruitful. For others, the greatest pleasure from hunting for a wild colony of honey bees will be that it is a wonderful way to get away from things, both physically and mentally. When you are outdoors on a weekend morning, in a sunny meadow filled with wildflowers, with your eyes tracking bees as they fly away from your feeder and with your brain figuring which individuals will return there soon, it is easy to avoid thinking about your work and other personal threads—things good and bad, important and trivial. Bee hunting is a great way to escape your own head, because the bees, which are among the most astonishing creatures on the planet, can grab your full attention.

One thing about honey bees that seems to be in everyone's head is the fact that although these fascinating insects are small and cute, they do pack a punch. So you might be wondering about the danger of being stung while bee hunting. It is certainly true that bees will be buzzing around the bee hunter while he is tending his sugar-syrup feeder and making observations. This may be terrifying to a newcomer to the sport, but I can emphatically state that there is no danger of being stung while bee hunting; the bees are entirely friendly to the human, who is providing them a free lunch. They will fight off a yellow jacket wasp if she finds the feeder. But the bees have no reason to sting the bee hunter, and I've never been stung in my nearly 40 years of bee hunting. One can get stung only if there is a careless accident, such as putting a bare arm down on a bee resting on the armrest of your folding lawn chair, or if there is a thoughtless act, such as slapping at a bee flying near your face. It may seem incredible to the novice, but barring such an

accident, there is virtually no danger of being stung while bee hunting.

There is one more general point about bee hunting that needs to be stressed at the outset: it is a sport that is equally enjoyable and suitable for both men and women. The bee hunter is referred to as "he" throughout this book, but this is done merely for ease of reading. Therefore, every "he," "him," and "his" in this book also encompasses a "she," "her," and "hers."

Besides being a guide to the sport of bee hunting, this book is an expression of my gratitude to a gentleman whom I never met, but who taught me how to find wild colonies of honey bees, a skill that has helped me greatly in my scientific studies of how honey bees live in nature. I am referring to George H. Edgell (1887–1954). He was a professor at Harvard University, a director of the Museum of Fine Arts, Boston, and the author of three landmark books on the history of architecture. These are all breathtaking accomplishments. My gratitude toward him, though, derives from something he did that was rather modest: he wrote a small book on bee hunting titled *The Bee Hunter*. Dr. Edgell published this work in 1949, late in his life, by which time he had some 50 summers of experience as a bee hunter. His death in 1954 followed my birth by only two years. So, inevitably, he and I have worked apart, but I like to think that if our lives had overlapped more, then we'd have worked together from the heart.

We have both hunted and found dozens of bee trees in the wooded hills of New England and New York. We have also both shared what we have learned about the craft of bee hunting by writing a little book on the subject. There is also the curious fact that we have both pored over the typewritten manuscript for his book, *The Bee Hunter*, he to make final corrections with his fountain pen, me to study his craft. This manuscript, by the way, is now archived in the Special Collections

vault in the Mann Library of Cornell University. Finally, we have both owned one very special copy of *The Bee Hunter*. This is the copy that Dr. Edgell gave to Karl von Frisch around 1950, shortly after he had deciphered the honey bee's famous waggle dance. This is the communication behavior—a ritualized reenactment of a flight to a profitable food source—that a successful forager bee performs inside the hive to tell her nest mates where to find flowers brimming with super-sweet nectar or laden with fresh pollen. On the first page of this particular copy of his book, Dr. Edgell wrote the following inscription, "To Dr. Karl von Frisch, with the homage of an amateur to a great scientist. G. H. Edgell." In 1982, shortly before his death, Professor von Frisch passed this book on to his foremost student Professor Martin Lindauer, who in turn passed it on to me in 2002. Probably in 2022, I will pass it on to the Cornell University library to become part of the Special Collections in Mann Library. So, eventually this little globe-trotter will settle down, in utmost safety, alongside its lovely "larval stage," Edgell's marked-up manuscript.

Besides *The Bee Hunter* by Edgell, and the present work, there are various other books in which the activity of bee hunting is described. Some are works of fiction, such as *The Oak Openings*, by James Fenimore Cooper (1848), and *The Bee Hunter*, by Christopher Brant (1966). These storybooks contain highly simplified descriptions of how bee hunting is done, probably because they are second-hand or third-hand accounts of the process. As for the nonfiction books on the subject, many, including *Following the Bee Line* by Josephine Morse (1931) and *The Appalachian Chronicles* by Andrew J. Smith (2010), also suffer from being written by people who have never gone bee hunting. No one could find a bee tree by pursuing the methods they describe.

This leaves a literal handful of books on bee hunting that are written by authors who have actually hunted bees and found bee trees. These include *Birds and Bees* by John S. Burroughs

(1875), *Bee Hunting* by John R. Lockard (1908), *The Bee Hunter* by George H. Edgell (1949), and *Hunting Wild Bees* by Robert E. Donovan (1980). The present book claims membership in this special group, for it is based on nearly 40 years of bee-hunting experience in various locations in New York and New England, and in places farther afield such as the jungle-covered mountains of Thailand. Over the years, I have lined my way to more than 50 wild colonies of honey bees. Within this tiny constellation of books written by veteran bee hunters, the present work hopes to shine brightly by being not only a reliable "how-to" book but also a revealing "how-come" book. In other words, besides describing the methods of bee hunting, I will report in "biology boxes" at the ends of the chapters what biologists have learned about the remarkable behavioral skills of honey bees that the bee hunter observes when he induces them to lead him to their home. In short, I will present both the hows and the whys of the sport of bee hunting.

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