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ENERGY & INDUSTRY

# The Silence of the Bees

*The perilous existence of a migratory beekeeper amid a great bee die-off*

Hannah Nordhaus | March 19, 2007 | From the print edition

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By the time John Miller realized just how many bees were dying, the almonds were in bloom and there was nothing to be done. It was February 2005, and the hives should have been singing with activity, plump brown honeybees working doggedly to carry pollen from blossom to blossom. Instead they were wandering in drunken circles at the base of the hive doors, wingless, desiccated, sluggish. Miller is accustomed to death on a large scale. Even when things are going well, a hive can lose 1,000 bees a day. In a matter of weeks, Miller lost almost half of his 13,000 hives – around 300 million bees.

When it happened, Miller was in California's Central Valley, where each February, when the almond trees burst into extravagant pink-and-white bloom, hundreds of beekeepers descend with billions of bees. More than 580,000 acres of almonds flower simultaneously there, and wild pollinators such as bumblebees, beetles, bats and wasps simply cannot transport enough pollen from tree to tree. Instead, almond growers depend on traveling beekeepers who, like retirees, winter in warm places such as California and Florida, and head north to the Dakotas in the summer, where fields of alfalfa and clover produce the most coveted honey.

This annual bee migration isn't just a curiosity; it's the glue that holds much of modern agriculture together. Without the bees' pollination services, California's almond trees – the state's top export crop – would produce 40 pounds of almonds per acre; with bees, they can generate 2,400 pounds. Honeybees provide the same service for more than 100 other crops, from lettuce to cranberries to oranges to canola, up and down the West Coast.

20 Miller likes to call the annual pilgrimage of the beekeepers the "native migrant tour," and he likes to call himself the tour's "padrone<sup>1</sup>". He is not the biggest beekeeper in the United States, nor is he the most politically connected – South Dakota's Richard Adee, with his 70,000 hives wins that distinction. But Miller does, like the gentle, dark Carniolan bees he tends, have impeccable breeding. His apian<sup>2</sup> pedigree dates back to 1894, when his great-grandfather, 25 a farmer named Nephi Ephraim Miller, traded a few bushels of oats for seven boxes of bees. Nephi found he had a talent for beekeeping, and in 1907, he traveled from Utah to California to learn more efficient ways to process his swelling supplies of beeswax. While there, he noticed that California bees gathered nectar long after those in Utah had huddled in for winter. It occurred to him that if he shipped his bees somewhere warm in the cold months, he might 30 halve his winter losses and double his honey production. This innovation paved the way for migratory beekeeping, which permitted the harvest of previously inconceivable amounts of honey. Nephi Miller was the first to enlist rail cars for long distance transport, and in only a few years he produced the first million-pound crop of honey, brought beekeeping into the industrial age and inspired generations of beekeepers to follow suit. He was, in short, the Henry Ford<sup>3</sup> of 35 the apiaries.

Today, some elements of a commercial beekeeper's life remain the same. John Miller's bees ply some of the same fields that hosted his great-grandfather's hives. He sells his honey on a handshake to the same processors his grandfather used and competes with the sons of the same men his father vied against. He spends 300 days a year with his bees and gets stung 40 almost every day, as many as 50 times on a bad day. Just the same, he counts bees among his most reliable companions. "I understand bees," he says, "I don't understand people very well."

Recently however, even the simple task of understanding has become more difficult. The 45 beekeeper's biggest enemy in recent years has been a miniature, blood-red arachnid called the varroa mite. A remarkably adaptive, ticklike creature, the mite burrows into the unborn brood and adults alike, feeding, as a tick does, on the bee's body fluids. It is, said Miller, a sinister predation that slowly saps the strength and vigor from a hive, either killing the brood outright or causing deformities that weaken adult bees and make them more susceptible to viruses. And this mite is – besides labor, pasture, honey prices, pollination prices, bacteria, fungi, unpleasant 50 neighbors and other invading insects – what beekeeper's think most about these days. "This is going to be the challenge of my career, there is no question about that. My grandfather never heard of it; my dad was barely aware of it; it occupies much of my problem-solving time. This varroa mite," said Miller, "swaggers like a colossus<sup>4</sup> across beekeeping in North America."

Adapted from an article in the magazine of *High Country News*<sup>5</sup> (March 19 2007)

<sup>1</sup> padrone: master  
<sup>2</sup> apian: relating to bees  
<sup>3</sup> Henry Ford: American industrialist who was the first to mass produce automobiles  
<sup>4</sup> colossus: giant  
<sup>5</sup> High Country News: print and online magazine that covers the important issues and stories that define the American West