## The long read

# Sticky fingers: The rise of the bee thieves

## Bees have become a billion-dollar business.

## But who would try to steal them?

by Brett Murphy

theguardian

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The bees crawled up the thief's arms while he dragged their hive over a patch of grass and through a slit in the wire fence he had clipped minutes earlier. In the pitch dark, his face, which was not covered with a protective veil, hovered inches from the low hum of some 30,000 bees.

The thief squatted low and heaved the 30kg hive, about the size of a large office printer, up and on to the bed of his white GMC truck. He had been planning his crime for days. He knew bees – how to work them, how to move them, and most importantly, how to turn them into cash.

He ducked back through the fence to drag out a second box, "Johnson Apiaries" branded over the white paint. Then he went back for another. And another.

The Diablo Grande foothills edge the western side of California's vast Central Valley. During the day you can see rolling pastures and an endless quilt of farmland. But at night, it is so dark that you are lucky to see your hand in front of your face. The thief thought there was almost no chance that a motorist would pass by, let alone one who would notice him.

Jerry Phillips, a night manager for the area's water provider, spends his nights zooming between pump stations in the foothills. He knows every farmer and cowboy on the hill's eight-mile stretch, including a local beekeeper named Orin Johnson. Johnson, who had been hit by bee thieves before, liked to alert potential witnesses. "If you see anybody in there in the middle of the night," he had told Phillips, "it ain't me."

Sure enough, Phillips saw someone on his way down the parkway that night. He quickly phoned the nearby golf resort, which has its own roving security detail on the hill.

After the thief loaded the ninth hive, he sat behind the wheel, with the driver's-side door open. The truck was far from full, and there were almost 100 more boxes behind the fence for him to choose from. That meant a lot of money. The exact value of a hive is not standard – it depends what you do with them – but nine hives can bring in about $5,000 in just one year. And they are worth considerably more in the hands of a capable beekeeper who can maintain them season after season.

Suddenly, a wall of white light hit the thief from behind. He froze.

A security guard stood next to his patrol car's spotlight, keeping his distance. The guard, whose name was Dre Castano, inched forward, wary of being ambushed. He thought there was no way just one guy had got all of those big boxes into the truck on his own.

The thief climbed out of the car and turned into the light. He stood there alone, his eyes glazed over and sullen. Maybe a drunk driver, Castano thought. He asked for the man's ID.

Pedro Villafan, 5ft 2in tall, and 46 years old. He lived 20 minutes south, in Newman, another little town at the base of the foothills. He looked flushed, half-asleep. But he kept calm and answered Castano's questions. Yes, those were bees. No, they were not his. No, he did not work for Orin Johnson. Yes, he was stealing them.

Castano, surprised by Villafan's immediate confession, put him in ziptie handcuffs and walked him to the backseat of his patrol car. Less than 45 minutes later, at about 3.40am, Johnson pulled up to the scene, now lit red and blue. A sheriff's deputy had just arrived, as well. He asked Johnson to identify the bees and sign an affidavit committing to press charges.

The thief climbed out of the car and turned into the light. He stood there alone, his eyes glazed over and sullen

"The suspect wants to talk to you," the deputy said to Johnson, motioning to his cruiser. "Do you want to talk to him?"

Johnson walked over and poked his head through the window.

“I made a huge mistake,” Villafan started.

“Of course you did,” Johnson interrupted, trying his best to remain composed.

“I shouldn’t have done this,” the thief said. “All my bees died.”

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**These are strange times for the American beekeeper.** In California, the centre of the industry, members of this tight-knit community find themselves enjoying an economic boom while trying to cope with environmental turmoil. And now they’re dealing with a new kind of criminal: the bee rustler. Every year, at the height of pollination season in the spring, dozens of nighttime thieves – nobody knows exactly how many – break into bee yards all over California to steal hives.

Farmers depend on bees, but they do not keep their own – it is too costly, too time-consuming and too painful. So, they lease their pollinators from the commercial beekeeping industry, a fast-growing, national trade that underpins American agriculture.

About a third of the country’s beekeeping operations, known as “apiaries”, are in California, more than the next four states combined. It is a $1.8bn trade nationwide, driven by roughly 1,500 apiaries, which own 95% of the country’s bees. (About 60,000 hobbyists keep the other 5%.)

It was only recently that beekeeping became big business. For most of the 20th century, American beekeepers were primarily honey manufacturers. In order to manufacture good honey, they sought out open space where their bees could forage. Johnson’s father knocked on farmers’ doors all over Stanislaus County for decades, often with his son in tow, looking for land away from humans and other bees. His proposition: my bees pollinate your crops, your crops feed my bees. They squared the deal with a handshake and a case of honey.

So it went for decades. But little by little, high-value crops such as pistachios, walnuts and mandarin oranges began to take up larger swaths of land all over Central Valley. The beekeepers realised that there was money to be made in

pollination – growers needed bees and were willing to pay rental fees, as if investing in airborne fertiliser. Once crops bloom, bees scatter skyward in a mushroom-cloud formation before darting for nectar in the open buds; “grocery shopping”, as one beekeeper described it. As they fly around, each bee grabs pollen from one tree and sheds it at another, exponentially boosting the number of leaves, flowers and nuts.

Brent Woodworth tends to his bees. Photograph: Brett Murphy

From the 1980s on, commercial keepers supplemented their honey business by renting out their bees at $25 per hive for a single, month-long bloom. A large-scale beekeeping operation would have thousands of hives (in addition to producing honey in the autumn), bringing in money from crop pollination: cherries, watermelons and everything in between. Small outfits such as Johnson Apiaries did not have to worry much about uncertain honey sales any more. There was more than enough opportunity to make up their revenue in the spring.

Commercial beekeeping was honest, sustainable and relatively free of competition, but not exactly a business others raced to join.

Then, in the early 2000s, two things shook up the industry. First, the world discovered almonds. Thanks to global demand, particularly from Asia, the nut has taken over Central Valley, nearly doubling its hectarage to 370,000 since 2005. California produces more than 80% of the world's almond supply today. The boom brought with it an unprecedented demand for pollination. With bees, an almond tree produces 70% more nuts than without. "Bees," one almond grower told me, "are as important as water."

Second, the bees started to die. During the 2006 winter, beekeepers reported losing anything from 30% to 90% of their hives to disease, an unprecedented amount compared with previous decades, in which losses hovered around 10 or 15%. (The average death toll has since levelled to just under 30% each year.) Even Johnson, a second-generation keeper with "honey in the blood", finds boxes and boxes of dead colonies every winter, and has to scrape out the crusted nectar and tiny corpses.

What became known as "colony collapse disorder" – a lethal combination of disease, drought, land loss and pesticide use – brought the industry to its knees, forcing hundreds of keepers, unable to maintain their hives through the cold winter, out of business.

Even Johnson finds boxes of dead colonies every winter, and has to scrape out the crusted nectar and tiny corpses

But those who weathered the storm have benefited from simple economics: the national supply of bees fell, while demand for pollination has since quadrupled alongside almond growth. This year, almond farmers paid $180 to rent a single hive. And every half-hectare requires two hives.

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**The surge in bee rental prices** in the valley over the last decade has brought with it an unsettling rise in thefts. In 2015, poachers stole more than

1,700 hives – and those are just the thefts that were reported. Last year was the first time anyone had actually counted, but beekeepers and law enforcement both say that the crime is becoming increasingly common. For small beekeepers such as Johnson, a few dozen hives going missing just before spring can bring ruin. Worst of all, everyone knows that the heists are inside jobs.

New keepers enter the industry hoping to cash in on the pollination boom – and it is they who often end up becoming the chief suspects in bee robberies. They sign contracts in the autumn, lose their hives to disease in the winter, then steal to make back the difference in the spring. “People are trying to meet their obligations at our expense,” one recent victim told his local paper, after thieves made off with $100,000 worth of hives. “There’s no doubt in my mind it was another beekeeper.”

The seasoned, generational, conference-attending beekeepers trust one another. They drink beer and eat donuts together. They loan each other hives and equipment. They even share trade secrets, such as recipes for artificial pollen supplements. They were here long before the almond boom, and their sons – beekeeping is a predominantly male industry – will carry on their apiaries long after. But the Central Valley’s beekeeping fraternity believes that a growing number of opportunists are now entering the business.

For small beekeepers, a few dozen hives going missing can bring ruin. And everyone knows that the heists are inside jobs

“They get desperate,” said Dion Ashurst, who is the president of the state beekeepers association. “And they go out and do stupid stuff.” A fourth-generation beekeeper and repeat victim, Ashurst called them “fly-by-night” criminals who may understand the ins and outs of beekeeping, but are not of the community. Another keeper and recent victim called them the industry’s “misfits and ne’er-do-wells”.

Now thousands of hives are vanishing, taken with alarming precision and coordination at the very time their owners need them most. Every winter, more and more legitimate keepers, struggling to keep their bees alive, have

woken to find their yards emptied and their livelihoods in sudden and serious jeopardy.

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**That Villafan was even caught is remarkable.** Thieves in the Central Valley rarely end up in handcuffs, let alone face prosecution. Witnesses do not drive by often. At 42,000 square miles, the area is vast and isolated, yet still connected by freeway arteries – helpful to thieves looking to make a fast getaway. With the right equipment, know-how, and a buyer already lined up, stealing hives is easy. A truck full of bees boosted at midnight in Stanislaus can be unloaded in a Kern County orchard, 200 miles away, by the morning.

The state beekeepers association offers a reward for anyone who helps catch a thief. The security guard who accosted Villafan in January 2015 got $1,000, although the sum can be as high as $10,000. The association likes to address the issue in its monthly board meetings. Minutes from one session last year read: “An attempted hive theft in San Luis Obispo, but the thief dropped the hive and got stung a lot, leaving the hive where he dropped it. Law enforcement is after this thief!”

Detective Rowdy Jay Freeman – a backyard beekeeper himself – drives out to meetings, conferences, bars and bee yards to meet the keepers. Hunting down bee thieves is a frustrating job, given the dearth of evidence. Where dozens or even hundreds of humming boxes sit one day, there are “nothing but tyre tracks in mud” the next, said Freeman. “There are no witnesses out there in the country.” In three years investigating rural crime, Freeman had not caught a single bee thief.

But that changed this year when he got a tip two counties south. Jacob Spath, a young beekeeper short on his contracts after a tough winter, had backed a flatbed truck into a bee yard and made off with 60 hives. Two days later, Spath was negotiating prices with a broker, when a friend of the victim spotted the boxes, recognised the name, and called the police. Freeman arrested him that week.

Now the district attorney is looking to make an example of Spath by charging him with grand animal theft, a felony that carries a much higher possible sentence than ordinary grand theft. Spath pleaded guilty in April and could serve three years in prison – possibly more, depending on the judge’s valuation of the bees. The specific penal code only mentions large animals,

including horses, goats, cows, mules, sheep, hogs and boars. This will be the first time in the history of California that someone is charged with grand animal theft for stealing bees.

In 2015, rustlers stole more than 1,700 hives – and those are just the thefts that were reported. Photograph: Brett Murphy

Most thieves share Spath's modus operandi: steal a truckload of hives, drive them a few counties away, chisel the label off (or gut the frames completely and burn the box), then rent them out to almond farmers or brokers. Bee brokers typically help connect large, out-of-state keepers with farmers in the Valley. They tend tobuy wholesale, and ask few questions about the bees' origins.

Half the industry is built on handshakes with the farmers, one beekeeper told me, "millions of dollars every day without a single paper signed". Beekeepers try to look out for themselves and each other. A select few hire private security

guardsor install expensive GPS chips in every hive. Others hide cameras in their yards or make nightly rounds in their trucks. Most simply brand every single piece of equipment with their name, number and a unique registration code in the hope that a friend may recognise their name if boxes go missing.

But none of that does much good after they have been taken and gutted. And the law only goes so far. Beekeepers are often forced to do their own sleuthing. Last year, Joe Romance, of Kern County, went to move 128 hives out of one of his bee yards, only to find them missing. There was talk around town about a beekeeper holding meetings in a coffee shop, selling half-price hives to almond growers. Romance, posing as a farmer, went to the man's house and found something like an automobile chop shop inside a warehouse. Three men were cracking open hundreds of boxes, removing the frames inside and assembling new hives.

Another beekeeper, Brent Woodworth, rented a small Cessna aircraft and flew it three hours in search of his $30,000-worth of stolen hives, his eyes trained on the tiny square specks below, looking for his specific bright yellow lids. "It takes a thief's constitution," Woodworth told me last winter while we ate lunch in his truck and gazed out on his bee yard, which was home to about 3,700 roaring hives. "Some ballsy people, I'll tell you." He grabbed a bee off the radio and gave it a flick. "Stealing from somebody is just about as bad as it gets. I think it's just the worst thing you can do to a man."

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**Orin Johnson is 68, with an impressive belly** and a mess of white hair. In 1969, he came home from Vietnam with two Purple Hearts, a bum eye and a blown eardrum. He went to night school on the GI Bill, "participated in the free love, Woodstock era", married that pretty girl Patti from his apartment building, and went back to work at the telephone company Pacific Bell for almost two decades as a dial-up technician before taking over his father's hives.

He thrived for years after returning to the bee life, maintaining the old accounts and finding plenty of his own. With some 500 hives and no employees, his operation is relatively small, but profitable. He stuck it out through a national tracheal mite epidemic in the 1980s; through a flood of Chinese honey that crippled domestic sales in the 1990s; and, so far, through the bee plague of the 2000s. "It's a tough road to hoe," he told me once, "no doubt about it."

More than a year after he caught the thief stealing his bees in Diablo Grande at 4am, Johnson and I left the wood furnace in his warehouse – where tools line the walls, sawdust fills the air, and a keg of beer waits in a fridge draped in mardis gras beads and old photographs – and headed into the foothills for a routine “spot check”. When we got there, sunlight smacked the clearing where his hives stood in the grass, each airborne bee a dark freckle on the sky. We put on veils and walked through the boxes.


Johnson in the workshop where he makes and mends his hives. Photograph: Brett Murphy

Johnson gave each hive a gentle lift with his bare hands. His hands are baseball mitts, swollen and dirt-stained, skin cracked at the knuckles and nails. (On a busy day, he can get stung 50 or 60 times.) With each lift, he measured the weight of the honey inside: too light and the colony is weak and underpopulated, too heavy and the hive is overcrowded and the bees may end up abandoning it entirely. Johnson marked the light hives with a dry cowpat so he would know which to feed with sugar syrup later. Every now and then,

he paused for a moment and leaned his good ear towards a hive, squinting through the veil. A strong hive hums deep like an engine. The weak ones are faint, almost a hiss. Others, completely silent. The dead hives got two cowpats.

Every beekeeper in the country stares down at boxes and boxes of dead hives each year. Since 2006, the industry has scrambled to repopulate bees quickly enough to match the devastating yearly mortality rates – temporary solutions for a long-term problem. Johnson guesses that he usually loses about 30% of his hives – right around the industry average. Keepers spread out the survivors, splitting hives by artificially introducing new queen bees, as well as medicine and protein supplements. It's pretty much like "feeding them McDonald's," Johnson said.

Beekeepers tend to shrug at media reports about the mysteries of colony collapse. They know the causes of "declining bee health", as industry insiders refer to it, and what has created today's hostile environment for their colonies. "It's more difficult to keep bees alive and healthy today than it's ever been," said Gene Brandi, president of the American Honeybee Federation. One major problem is overgrazing. The pollination boom has invited droves out-of-state beekeepers that compete for the dwindling forage land.

Bees need good nutrition to stay healthy and to fend off disease, which is often introduced by humans. Farmers constantly experiment with new pesticide sprays that can choke baby bees before they hatch. "The hive is more of an organism, the individual bee more like a cell," said Katie Lee, a researcher at the Bee Informed Partnership. And every new airborne chemical can threaten those cells.

But the majority of scientists and keepers agree that the most pernicious threat to bees is the varroa destructor mite. It arrived in Florida in 1987 and spread fast. (Honeybees, an invasive species themselves, arrived in the late 17th century.) In aTED Talk from 2014, beekeeper John Miller called varroa a "dirty needle" that transmits deadly diseases like a mosquito. In the video, he flips a slide to show baby bees covered in ticks. "It's really hard to kill a bug on a bug," Miller says, pausing for effect. "But if we don't, we're going to lose our bees."

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**On 7 January, 2015,** four days after they met in Diablo Grande, Johnson and Villafan were together again in Stanislaus County court. Annette Rees, a

rising star in the district attorney's office who handles the county's most violent cases, happened to be in the courtroom as the magistrate read out the charges. A 487, the penal code for grand theft. Beehives. Rees raised an eyebrow.

She approached Johnson in the hallway after the hearing. He told her that this was fourth time his livelihood had been stolen out from under him. They caught the first guy in 2003. He had gutted Johnson's colonies, moved the bees to his own boxes, and then tossed Johnson's shattered hives into a riverbed – and he got off with only a misdemeanor. Rees did not want that to happen this time, so she asked to represent the beekeeper. "Plus," she told me, "it was a nice departure from the rapes and murders."

The preliminary examination was held on 27 March. Villafan's public defender tried to have the charges reduced to a misdemeanour. He argued that his client's remorse about the crime and his record of good behaviour should warrant some leniency. "I believe he was crying and stressed out about it," the lawyer told the judge, citing Villafan's flushed face under the security guard's spotlight. "And him not sleeping a few days, you know, shows me he was extremely nervous and was unsure that he wanted to do something like this."

Rees was not buying it. "This is an agricultural valley," she told the judge. "Almonds are a huge part of our agricultural history and industry, and bees are critical for pollination of the almond trees. These were pollinating bees."

"The beekeepers are already fighting the colony collapse disease," she continued. "And to have someone simply go in the middle of the night, cut a fence, and make off with someone's bee colonies is a very serious offence. We take it very seriously, especially, here in Stanislaus County."

On a working day, a beekeeper can be stung up to 60 times. Photograph: Brett Murphy

The judge maintained the felony charge of grand theft (stealing anything worth more than $950). On 12 May, Villafan signed a plea deal with the court: 120 days in prison, with restitution to Johnson, and community service afterwards.

After weeks of trying to reach him, Villafan called me on the phone one night, and agreed to meet in person. A few days later, I met with him at a Starbucks in the city of Turlock, California.

Villafan was waiting at the end of a long table, his hands around a cup. He smiled to greet me, but frowned when I took out my notebook. He asked why I cared about his story, his side of things. “It’s all in the police report,” he said.

I was interested in what had happened in the minutes and days leading up to that night in Diablo Grande, I told him – about anything I could not read in

the public record. “I’ll tell you one thing,” he finally said, “and that’s it.” I scooched forward in my chair.

“I was doing an investigation about why the colonies are dying.” He said his public defender never let him make the case in court, but scientific research was the motive. “I was short of bees because I was trying to buy bees, but nobody wanted to sell at that time. And the ones that I did have ran out.”

He told me he had lost his factory job and decided to start a career in pollination. But first he wanted to determine if colonies were, as the news said, dying out at an alarming rate. “I finished my research,” Villafan continued. “All the stuff that they say about bees dying and the stuff like that, that’s not true. They’re not dying because of whatever. If no one knows why they’re dying, then they’re lying. That’s like the mafia. You know beekeepers, maybe they want to keep the prices high.”

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**On a warm afternoon in late July 2015,** a few months after Villafan had been sentenced, Johnson made the rounds through a couple of bee yards in Diablo Grande, where he had come across one too many dead hives. He called up a friend and fellow beekeeper, Bob Renested, who breeds queen bees and sells them for about $20 each. Queen breeders are more common further north, but Johnson needed roughly a dozen that day. With enough care and the right maintenance, a beekeeper can take a single queen and build a full, 30,000-member hive over the course of a season. The keeper slowly introduces frames of unhatched baby bees and adults, who will mate with the queen to produce the colony.

Renested told Johnson to come on by, and that there was beer in the fridge. About 30 minutes later, they sat in the shade beneath Renested’s carport. Johnson had a beer can in his hand and a wooden crate by his feet, about the size of a lunch box, where 12 bees wiggled inside individual shelves. A crate of queens looks like a model building, each bee inside a flat of its own, no larger than a thumb.

Renested told Johnson that he was selling just two more queens today, and then he was done breeding for the season. A man had pre-ordered just two bees.

Then Renested's phone rang. He told the buyer to come around back and headed off to his warehouse to grab the queens, leaving Johnson by himself.

A short man with square features walked around the corner. Johnson stood up and out of the shade to greet him. He cocked his head to the side and squinted hard at the buyer, who quickly darted his eyes to the dirt. Silence for a moment.

"What's your name?" Johnson asked, incredulous. He doesn't always trust his bad eye, after all.

"Pedro."

"Pedro what?" Still not convinced.

"Pedro Villafan."

Johnson's voice climbed a couple octaves and he let out a burst of breath. "You know me, don't you Pedro?"

Villafan nodded. Johnson waited another awkward beat for him to answer the obvious question.

"Well?" Johnson finally yelled. "Why aren't you in jail?"

Villafan had agreed to serve his time that August. (In the end, he was released on parole after 48 days. "It's literally a slap on the wrist," Annette Rees said later. "All that time and effort, it's kind of disheartening.")

Renested returned from the warehouse and handed Villafan two tiny shelves, a single long, dark bee in each; no yellow stripes on them. Villafan paid the man while Johnson looked on. There stood the thief who, for Johnson, represented so much trouble and heartache – and not just for himself, but for every beekeeper who has come across an empty patch of grass where his hives once buzzed.

Yet Johnson was not angry, or even worried. He just saw another outsider trying to break into the industry, maybe not a ne'er-do-well, but by no means part of the card-carrying club.

“I hope those are for *your bees*,” Johnson said.

“Yes,” came the reply. “They are.” With that, Villafan turned and walked away, disappearing into the valley.

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