

Beeconomy:
What Women and Bees Can Teach Us about Local Trade
and the Global Market

A review of a new book by Tammy Horn

by M.E.A. McNeil

“Why would you want to do that?” Eva Crane asked the young woman who arrived at her door in 2005 with an idea: to write a book about women and beekeeping. Fueled with optimism and adrenaline, Tammy Horn had braved a day of tenuous British travel connections to meet the venerated bee writer.

Crane, it turned out, was that rare kind of woman who paid no mind to gender limits, earning degrees in mathematics and quantum mechanics as well as a doctorate in nuclear physics in the 1930s. As little as she cared about the subject of women, she inspired Horn with her philosophy: “You must trust your mind and trust the bees that brought you to that place.”

And that is what Horn does. An African word sums it up for her: “*Fungwe* is . . .the desire that, if fulfilled, will shape one's entire destiny. *Fungwe*, for me, is defined by honey bees. Honey bees bring me closer to the pulsating life force driving our evolutionary fits and starts than I have ever been.”

Six years after her visit to Crane’s Woodside House, Horn has written a book about women and bees, but it became much more than even the expansive title suggests. *Beeconomy; What Women and Bees Can Teach Us about Local Trade and the Global Market* encompasses mythology, social history and a celebration of the roles of women beekeepers and researchers around the world.

Horn grew up in Appalachia, except for three formative years at the Pine Ridge Indian Reservation where her parents were teachers. Coming from lush mountains, the Badlands were an eponymous shock to the 10 year old girl; the landscape was alkaline and eroded, and, in 1973, the reservation was fomenting with anger. “To be a white child in that environment was a difficult experience; there was constant daily taunting and bullying.” She withdrew into reading, but the experience both toughened her and gave her compassion.

The year that she earned a Ph.D. from the University of Alabama, 1997, was the same year that her grandfather introduced her to his bees. Then, she said, “The real education began.”

Horn had a career as an English professor, and in 2005 The University of Kentucky Press published her painstakingly researched *Bees in America; How the Honey Bee Shaped a Nation*. In 2006, she was named the NIH Chair of Appalachian Studies at her alma mater, Berea College. Her research from that appointment has sparked an Eastern Kentucky project, The Coal Country Beeworks,¹ that uses native forage plants and honey bees at coal mine reclamation sites. She is now a senior researcher at the Environmental Research Institute in Richmond, Kentucky.

“In my writing I like to blend the two environments” of her childhood, she said – the soft Appalachian approach and “the call-a-spade-a-spade clarity we need to address social justice, the Badlands clarity.” And perhaps her early experience has inspired her involvement in turning strip-mined wasteland back into lush forage.

To do that, she maintains 70 hives herself. She learned queen rearing in Hawaii and has recently gotten volunteer help and equipment for the care of 40 mating nucs from Allen Meyers, a local queen producer. (“In my opinion,” she said in an interview, “Grafting is like doing needlepoint in hell.”) She knows well the beekeeper’s life: “I have just three months before I have to be back in the field.”

Whatever the genesis of her sense of social justice (The Great Depression was her area of expertise in American literature), she is influenced by the writings of Arthur Pigou, who pointed out uncensored social and environmental costs of industry and asked how they can be repaid. “How do I as a beekeeper take Pigou’s theories and put them into practice almost 100 years after he wrote them?” she said. “How do we redefine economic practices in a way that benefits all – so that women are more valued and supported – not just women but other components of our environment such as honey bees?”

Well, if you are Tammy Horn, you write a book. It was not an easy proposition; the material is historically and geographically diverse, requiring tens of interviews and assiduous research of dispersed sources; the bibliography contains over 300 references -- some as arcane as local African extension

publications. Technical or instructional material is set apart in sidebars -- such as a queen-rearing calendar, the history of words for honey and a recipe for African honey beer (if you happen to have a *muratin* tree).

The chapters are divided by continent until the 1960s, when the book is organized into government and university research, beekeepers, breeders, and educators.

Introducing *Beeconomy*, Horn writes: "If a woman or girl is smart and ambitious, she is often called a 'queen bee' without a basic understanding of that role in the hive. Calling a woman a queen bee is not always complementary. Even in the best of contexts, the label suggests that the woman is powerful, a potential threat, and self absorbed. By extension the term 'worker bee' often refers to women who are supposed to labor behind the scenes, underpaid and content to sacrifice for the good of the whole. The label tends to overlook specialization within the hive, and it is almost always becomes an expectation for women who were supposed to remain anonymous in their service."

Bee mythology, which she follows from the Hittite through Egyptian, Greek, Roman and later European and Asian traditions, is almost universally feminine and connected with reproduction. The Egyptian maternity goddess Nut gave birth to Ra the sun god every morning, and it is from his tears that the bees come.

Horn traces the connection of bees to virginity, birth and motherhood to the goddess Artemis in the Hittite culture. "The concept of chastity, a societal convention regulating female behavior using honey bees as a model crossed the land bridge from Western Asia to Greece." Many Greek goddesses were related to fertility, bees and honey. The chaste priestesses called the Thriae spoke truth at Delphi when eating honey; without it, they spoke falsely. This theme of fecundity associated with bees persists through classical times through the Middle Ages to the modern age.

Early Christian Communion was associated with honeycomb. Convents devoted to celibacy and serious prayer to the Virgin Mary, using the hive as a model, sprang up in Europe; bees could be kept in a cloistered environment, and wax was valuable to the church. Coptic images depict the Virgin Mary surrounded by bees, again representing chastity and fertility. The churches' requirement for beeswax candles is traced to this correlation.

Saint Ambrose, the patron saint of bees, wrote, 'Let, then, your work be as it were a honeycomb, for virginity is fit to be compared to bees, so laborious is it, so modest, so continent. The bee feeds on dew, it knows no marriage couch, it makes honey.' Not so modest, a nunnery in Beyenburg, Prussia, is said to have defended itself by upsetting its beehives during the 30 years war in the mid-17th century. The Irish Saint Gobnait is said to have used bees as protection from violence as well; February 11 is still celebrated in her memory. In 1901, an Irish woman, Mrs Margaret Daly, was sued for deliberately opening her beehives to do serious bodily injury"; her motive is lost to history, but the book is replete with such intriguing detail.

Rituals involving bees and honey figure in the story. For the Polish people and others in the area, Austeja was the special goddess of brides, who drank honey mead at their wedding and other celebrations of their womanhood. A special form of human kinship called *biciulyste*, which could be translated "beeship" -- a relationship formed between families when swarming bees moved from one farm to another to establish a new home.

Horn describes honey rituals that have endured: An Indian home may offer a honey-herb liquor called *madhuparka* to a suitor or a woman in advanced pregnancy. In the Persian marriage ceremony, the bride and groom taste the honey-dipped fingers of the other. Both Hinduism and Buddhism have maternal and bridal rituals using honey. A Greek bride makes the sign of the cross with a honeyed finger before entering her new home. These are surviving remnants of the belief in a connection between bees and fecundity.

A social history of each continent provides templates for the book's narrative. In a few places in the world, such as communities in the Western Himalayas, women traditionally kept bees. The honey hunting Kurumba people in India "attach a maternal privilege to the rocks that provide shelter for *Apis dorsata*" -- the rock symbolizing the mother. More often, women's roles as beekeepers have been constrained by social norms. In introducing the chapter on Asia, Horn writes, "contemporary women beekeepers face theological, political, and economic challenges squarely at odds with the ancient agricultural feminine icons that once pervaded the regions." Hindu and Buddhist women traditionally refrained from beekeeping, considered a low case occupation.

Throughout, there is the occasional strong-minded Crane-like woman beekeeper, but for most it was a question of opportunity. In some places, the low status of beekeeping allowed women to take it up. In others, it was necessity trumping social convention, as it was for early American women who became

"deputy husbands" when they took over male roles on the frontier. Elsewhere, dooryard hives and gardens were often kept by wives.

Both American bee journals, *The American Bee Journal* and *Gleanings in Bee Culture* offered early encouragement to women, with A.I. Root hiring female workers in his equipment factory and press room. Horn writes, "In columns devoted to correspondence, both journals printed letters from women expressing anxiety, pride, sadness, and glee in the company they found in the pages. For many, writing was a way of finding their identities beyond their communities, and these women's letters record regret, happiness, loneliness, independence, and intelligence as more women became skilled beekeepers."

A Nebraska woman graced the cover of the *ABJ* in September, 1895 -- Mrs J.N. Heater who had presented a paper titled "Woman as a Beekeeper" at the state beekeepers' meeting. Emma Wilson, sister-in-law to the respected C.C. Miller, wrote a column called "Our Beekeeping Sisters".

One frustrated woman wrote to the *ABJ* about her experience at a bee conference: "I came to learn all that I could, and put up at the Hotel to converse with beekeepers, but I was expected to go up into the parlor, and men remained below where it would not have been considered proper for me to remain... I do not want any favors in the meeting on account of my sex. But there were ladies present who cared nothing about apiculture and they came with their husbands to see the city." On women she asks, "to let them have a chance."

Another found a gender advantage, writing that "the lady beekeeper... If she be moderately successful, she may be greatly surprised that her neighbors exaggerate her modest gains." The name of another, one Lizzie Cotton, showed up regularly in the "Humbug and Swindlers" column in *Gleanings of Bee Culture* for offering expired hive bargains and "hunting for greenhorns too penurious to take a reliable bee periodical."

A shift from a rural economy to more urban capitalism saw a decline in the value of the "good wife", an equal partner with her husband who would serve the community and barter with neighbors. Instead, women were expected to be at home, providing the primary care for children. It is noted that in the US woman could not own land until the passage of the Married Women's Property Rights act in 1848, but, in context, Brazilian women were considered property until the 20th century. Shaker women in the US were beekeepers and held equal status.

The World Wars created opportunities for women to fill in as beekeepers. Both the shortage of men and sugar as well as the need for wax in wartime industries provided a niche for women to provide products of the hive. The British Beekeeping Association, an all-male bastion until around the turn of the 20th century, had a succession of strong women members and leaders, including the motorcycle-riding A. B. Flowers and Annie Betts, who kept the magazine *Bee World* going single-handedly through World War II. Betts, writes Horn, "had no patience for biodynamic plans of beekeeping such as Rudolf Steiner's. She also politely but firmly rejected any notions of a "pure" race of German bees. [She wrote,] 'We can safely reject the Nazi ideas of 'race', which are obviously biologically unsound.'"

As director of the International Bee Research Association, "Eva Crane outshone everyone in terms of sheer magnitude of research," Horn writes. "*The World history of Beekeeping and Honey Hunting* (1999) is still the definitive text on global the migrations, technology and culture." Crane often hired mothers, saying, "Mothers are the best multitaskers."

Beeconomy introduces the reader to a diverse array of women beekeepers and their adventures and woes. We learn that "taking a whiz while working African honey bees is difficult." Liann McGregor, in the commercial honey business in South Africa for 40 years, says "Beekeeping in South Africa is still considered a *bayvoeur* or peasant's job."

Yet the women soldier on, and Horn describes a world of them: Kibwezi Women's Pride, a 30 year old African cooperative of 2000 members has a regular honey trade network. The Bee Girls of the Ontario Beekeepers Association is a technology team established in the early 1990s that works on disease control, education, queen breeding selection, and integrated pest management; beekeepers pay for mite and disease testing. The women, who appear not to take "girls" as pejorative, are funded by the bee association, grants and private donations with token cost for services. A member of a women's beekeeping cooperative near Mexicali, Mexico, Las Cachanillas, told Horn, "When we get up in the morning we say we're going to therapy because that is what beekeeping is like for us."

The enterprise of one unnamed woman bears repeating. A nomadic Boté woman who learned basic beekeeping from Arkansas apiary specialist Ed Levi, who was volunteering in Asia, promptly caught a swarm and sold it back to Levi.

The book shows that the first US affirmative action laws addressing equity in the work environment, expanded to include gender in 1965, made careers in federal bee labs and state universities more accessible for women interested in bees. A roster of modern women researchers from around the world includes short biographies of names familiar and new, many of whom trace the ups and downs of their mentoring. Among them is retired USDA researcher Anita Collins who had a professor refuse to serve on her doctoral committee because she was a woman, and found that her major professor, "[Walter] Rothenbuhler didn't have a discrimination gene whatsoever."

Female queen breeders, honey and wax producers, extension agents, inspectors, migratory beekeepers, researchers, a swarm specialist, educator, wax artist, even a circus performer who rode the ring on horseback with bees covering her arms like a muff -- they are all recognized. Major female figureheads that have supported beekeeping over the centuries – Catherine the Great of Russia, Elizabeth I of England, Queen Noor of Jordan, Maria Teresa of Austria who started a bee school, Michelle Obama who brought a hive to the White House – each has a place in this comprehensive book.

Are there others? There always are. My own extended list would include USDA researchers Martha Gilliam who pioneered the current work on probiotics; Judy Wu, who has contributed to the investigation of viruses, and Lanie Bourgeois, who has plotted the genetic diversity of US bees. Still, there is a vast cast of women, and they come most alive for me when Horn describes her visits and conversations. She has a good eye for landscape as a contributing character.

Just one point, off the central topic of this review: Since two respected experts in African bees and their importation, Marla Spivak² and Dewey Caron,³ state that Warwick Kerr distributed a large number of African queens, the ubiquitous story of their spread stemming from an accidental release needs correction beyond just this book.

With perspective, Tammy Horn has well deserved her plaudits, including a lifetime achievement award from the Kentucky State Beekeepers for a career not yet at mid-span. She has started the daunting task of writing a new book on the global future of beekeeping. And she plans to write a young adult novel about her time as a child on the Pine Ridge Indian Reservation.

Horn will speak in January on “Planting for Pollinators” at the American Beekeeping Federation conference in Las Vegas. Details for this as well as appearances for the Eastern Kentucky Winter Bee School and other events can be found on <http://www.tammyhorn.com/>

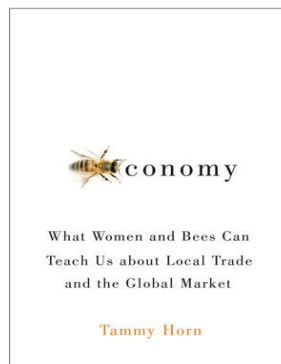
Horn has found her métier, and the deeper she delves into it the larger it becomes. She likes a quote from Tolkien to describe her quest: “Hope without guarantees.” But like the Delphic oracles that spoke falsely unless they had honey, she has tasted sweet truth, and she tells it like it is and how it got that way.

“I walk a compelling walk every day,” she said.

¹ Hayes, Jerry “Tammy Horn and Coal Country Beeworks”, *American Bee Journal*, June, 2011, 565 – 569.

² Spivak, Marla, David Fletcher, Michael Breed, *The African Honey Bee*, Westview Studies in Insect Biology, 1991.

³ Caron, Dewey M, *Africanized Honey Bees in the Americas*, 2002.



An excerpt from Tammy Horn's new book, Beeconomy, can be found on the American Bee Journal website.



The bee historian Eva Crane was an inspiration to Horn's work.



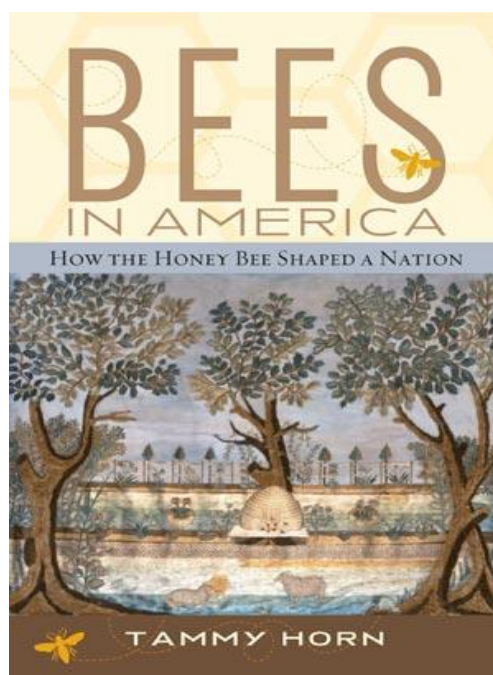
*Tammy Horn in the apiary. She keeps 70 colonies in an Appalachian land reclamation project.
Photo courtesy of Tammy Horn*



*Tammy Horn learned queen breeding in Hawaii. She met women in beekeeping who inspired her book, *Beeconomy; What Women and Bees Can Teach Us about Local Trade and the Global Market*. Horn, right, visits the hives of Alison Yahna on the Big Island, Hawai'i, in 2006.*



Horn is an educator; here she shows a queen off during an Arbor Day event, May 2011, Photo: Alice Jones



*Horn's first book, *Bees in America*, follows the history of beekeeping for honey, wax and pollination beginning with the first imports of German black bees.*



Tammy Horn, left, with Las Cachanillas, a cooperative of women beekeepers in Mexicali, Mexico ; Josephina Valadez, Rebecca Martinez Rodriguez, Felicitas Castaneda, and Tita. Photo courtesy Elizabeth Burpee and Tammy Horn



Future women beekeepers are trained here in a workshop for the Perry County Girl Scout troop in Eastern Kentucky in 2009. Teacher Tammy Horn is in the foreground, with leader Cathy Barnett on the left. Photo: Cathy Barnett