

Busy as a Buchmann

In Malaysia, honey-hunters climb 250-foot-tall Tualang trees to raid the hives of the giant honeybee. Those hunters inspired ecologist Stephen Buchmann to write his first-ever children's book, *The Bee Tree*, and he recently traveled to Malaysia in order to present a copy to the sultan of Kedah. "The sultan is quite an avid reader," says Buchmann. "All of the honey-hunters have to go to him and get his permission to climb the trees in his forest. And they bring back honey as a tribute to him."

The Bee Tree is just the latest of Buchmann's many projects, all part of The Bee Works, his Tucson-based research and conservation nonprofit. Running this one-man show is tough without a colony of worker bees to help out, but he still has time to show a reporter the native bee houses he keeps stashed in his front room. "This is kind of a Swedish bee house," he says, holding it by its peaked roof. "It's got little elderberry sticks with holes drilled in them." He picks up another that looks like a coffee can filled with cardboard tubes — the perfect home for mason bees.

Buchmann looks like a pointy-chinned, skinnier version of actor Alan Alda. His eyeglasses are thick as Coke bottles, owing to the fact that he was born three months premature.

"Supposedly, the eyes are the last thing to be formed," he says. "I'm very lucky to be here. I weighed three pounds."

Buchmann's lifelong fascination with bees has its roots in a painful experience. "I very vividly have the memory of doing what no beekeeper should do," he says. "I went out with a buddy on a drizzly, cold day, and I remember tearing into this old, derelict shed that had bees, and we wanted to get the honey. We got stung to pieces! I probably got 200-300 stings, and my ankles swelled up like

footballs."

Eventually, the swelling subsided, and Buchmann spent 21 years as a researcher at the U.S.

Department of Agriculture's Carl Hayden Honeybee Laboratory before founding The Bee Works six years ago. Since then, he's studied everything from the diversity of insects at Arizona's military bases to the future of Mayan beekeepers. In the last couple years, he's begun making high-resolution scans of bees and other insects — blowing them up to a size where you can make out the structure of a single grain of pollen. Which is really what it's all about: pollen.

Asked if we are facing a pollination crisis, Buchmann chooses his words carefully. "I wouldn't say that we're perched on the edge of a global or even a national pollination-slash-food crisis, but we certainly need to be careful." Already, there have been a few examples of crop shortfalls, he says, such as pumpkins and squash in the Northwest. California almonds have taken the biggest hit: For the first time in history, honeybee colonies have had to be shipped in from as far away as Australia. "For many, many years, almond growers had been paying beekeepers \$30 to \$40 a colony as a rental fee for the two-week February bloom. Last year, the average price was \$150 a colony."

But Buchmann is less interested in discussing environmental apocalypse than the minute marvels of the natural world. His favorite topic is "buzz pollination." Up to 10 percent of native plants depend on non-honeybee pollinators to remove pollen using high-frequency vibrations of their powerful thoracic muscles. "A lot of the medium- to larger-sized bees literally turn themselves into tuning forks," he says excitedly. "They produce a comical buzz like someone is giving you the Bronx cheer — the raspberry!"

BY BRENDAN BORRELL

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