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American Honey Producers Association

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We still need your support

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Today's unanimous decision means that the ITC will continue to investigate the injury inflicted on the U.S. raw honey producers by low-priced imports, and the U.S. Department of Commerce (DOC) will investigate the extent to which imports from the five countries are being sold below fair value in the U.S. market.

We truly appreciate all of the donations that we have received to cover legal fees.

The good fight isn't over yet, and we still need your support.

To donate to the Antidumping Fund, please contact

Cassie Cox: cassie@ahpanet.com

281-900-9740

Or donate on our secure website: https://www.ahpanet.com/donations-1

U.S. News & WORLD REPORT

Four Beekeepers Detained in Protest at Chilean Capital, Police Stung

By Reuters

Jan. 3, 2022, at 5:14 p.m.

SANTIAGO (Reuters) - Four beekeepers were detained after protesting in front of Chile's presidential palace in Santiago on Monday, according to local officials, with seven police officers stung during the demonstrations.

Honey production has been hurt by a long-term drought in Chile that has withered the bees' food sources such as flowers and crops. While drought is not uncommon in Chile, the current megadrought has persisted since 2010 and climate change is at least partly to blame, scientists say.

The beekeepers want government reform to improve honey prices or to provide subsidies to honey producers. They have asked to meet with President Sebastian Pinera.

The beekeepers set around 60 beehives, which contained an estimated 10,000 bees, on the avenue in front of the palace.

One of the beekeepers, Jose Iturra, told local reporters that the drought in the Colina commune north of Santiago was killing the local bee population.
"Bees are dying," Iturra said. "There would be no life if the bees die. That's what we wanted to highlight with this demonstration."

A representative for the Ministry of Agriculture in the Santiago region said the agency was also concerned about the effect the drought was having on the bees. The government has been providing aid for months to 20 communities experiencing severe water shortages, Omar Guzman, the regional agricultural secretary, told reporters.

Read the rest of the article here: https://www.usnews.com/news/world/articles/2022-01-03/four-beekeepers-detained-in-protest-at-chilean-capital-police-stung

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PNAS Proceedings of the National Academy of Sciences of the United States of America

Carryover insecticide exposure reduces bee reproduction across years

View ORCID ProfileAdam G. Dolezal

PNAS January 4, 2022 119 (1) e2120128118; https://doi.org/10.1073/pnas.2120128118

Insect life plays an unrivalled role in ecosystem function, and many insects are critical to agricultural production. However, insects face continuing threats from anthropogenic stresses related to habitat loss, pesticides and pollution, and climate change (1). No insect group captures as much public and scientific attention as pollinators, especially bees, which provide important agricultural and ecological services. While a variety of stresses have been blamed for their declines (2), pesticides and other agrochemicals have received the most scrutiny; unsurprisingly, hundreds of studies have measured how bees respond to agricultural chemical exposure. While many insecticides, fungicides, herbicides, and inert adjuvants have been investigated, neonicotinoid insecticides have garnered the most attention (3). Despite restriction in some parts of the world (4), neonicotinoids are among the most widely used insecticides and are commonly applied in many agroecosystems despite evidence that they can harm bees and other pollinators (5). In PNAS, Stuligross and Williams (6) use the solitary bee, Osmia lignaria, an important “alternative managed pollinator” with significantly different biology than the more commonly studied European honey bee, to discover an aspect of sublethal chemical exposure. Focusing on a formulation of the neonicotinoid imidacloprid that is commonly applied in California, they parse apart how past and current insecticide exposure affects vital rates and population growth, finding that sublethal exposure can affect insects over time scales spanning months or years (Fig. 1). These results have important implications on how we consider insecticide risks for nontarget organisms and can inform efforts to conserve insect biodiversity and ensure pollinator sustainability.

O. lignaria, the blue orchard bee, is a solitary, stem-nesting bee that goes through a single life cycle in a year. It builds nests inside existing wood cavities, where female bees provision cells with a ball of pollen. When an egg hatches, a single larva feeds on the provisioned pollen ball, pupates inside the cell, and then overwinters as an adult. The following year, these adults arise to repeat the cycle. In their study, Stuligross and Williams (6) created a controlled habitat for O. lignaria inside of small mesh flight cages, where they planted wildflowers that provide high-quality nutrition for bees. They applied a common commercial imidacloprid soil treatment or a control (no agrochemical) treatment to their enclosures. Five weeks after this application, O. lignaria were introduced to the enclosure and allowed to found nests, forage on flowers, and provision their offspring (year 1). The larvae reared under these conditions developed into adults and overwintered. The next spring (year 2), female bees with these known pesticide exposure histories were introduced into the same two habitat enclosure treatments—one with and one without insecticide application. Thus, the authors were able to partition the result of developmental and/or maternal exposure to agrochemicals (year 1), adult exposure to agrochemicals (year 2), and the combination of the two (Fig. 1). Throughout both years, they measured several different facets of O. lignaria nesting success, including total offspring produced, the probability that the bees nested successfully, the sex ratio produced, and the nesting rate (the number of brood cells completed by each female per day).

Insecticide exposure in year 2 reduced total overall reproduction, reduced nesting probability, biased the sex ratio toward males, and reduced nesting rate no matter what the bees experienced in year 1 (6). Bees from the "worst case scenario," with insecticide exposure both years, performed significantly worse than bees that only experienced exposure as adults. Perhaps most importantly, bees exposed only in year 1 also showed significant declines in reproduction, even though their adult environment was free of pesticide contamination! Using these data, the authors then calculated population change for these bees. They predict that, under field conditions where nutritional stress and predators would be present, carryover effects would lead to declines in bee populations over time, even if the bees do not encounter pesticides as adults. Thus, without ever seeing a bee die from acute pesticide exposure, we still may see long-term declines in their populations.

So what does this all mean for protecting pollinators, and how do we use studies, like the work of Stuligross and Williams (6), to inform best management practices, policy decisions, and other actions? One route is to encourage better use of integrated pest management (IPM), that is, using chemical treatments for pest insects only when truly warranted by observing predetermined pest thresholds. For example, a recent study showed that using

IPM in both a wind-pollinated field crop (maize) and a pollinator-dependent specialty crop (watermelon) resulted in no maize yield losses and improvements in watermelon yield. Further, within just a single year of using IPM, wild bee visitation of watermelon increased (7). Thus, an IPM approach could result in reduced insecticide use and improved yields and result in a rapid response by pollinators. Could such an approach be used in other cropping systems? Certainly, each has its own challenges and attributes, but this work (7) suggests that the types of effects observed by Stuligross and Williams could be reduced with expanded IPM practices in areas where better bee stewardship is needed.

Another way to improve protection of beneficial insects is to continue documenting the varied effects that different chemicals and agricultural practices have on managed and wild insect life. Then, these data can inform policies and regulations that determine how agrochemicals are used. For example, because “the [pesticide] label is the law” (8), changes in application rate, timing, etc., on pesticide labeling could reduce impacts on pollinators relatively quickly (7). Further, as new chemistries or formulations come on the market, Stuligross and Williams’ (6) work underlines the importance of continuing to observe subtle effects and their causes. Their focal insecticide, imidacloprid, has been registered for use in the United States since 1994, but new products may soon replace it. For example, flupyradifurone is a relatively recently registered insecticide (9) that causes lower acute toxicity in honey bees than does imidacloprid or several other neonicotinoids (10) but has more-subtle effects on bees (9, 11, 12). Thus, the reality is that we simply do not yet know all the possible ramifications of chemistries just now coming to market, and the work by Stuligross and Williams shows that we still have a lot to learn, even with products that have been intensively studied for years.

Their work (6) also reminds us to carefully consider how we view agrochemical risk to bees. Honey bees are viewed by many regulatory agencies as a model for all bees…..

Read the full article here: https://www.pnas.org/content/119/1/e2120128118

This Old Bee House: Study Deems Hive Boxes Drafty, Inefficient

Entomology Today April 16, 2021

By Paige Embry

European honey bees (Apis mellifera) suffer from an astonishing array of problems—Varroa mites, hive beetles, foulbrood, chalkbrood, stonebrood, deformed wing virus, 20-plus other viruses, poor diet, predation, pesticide exposure—it's death by a thousand cuts. A new paper in the Journal of Economic Entomology adds another knife: the typical house beekeepers provide for honey bees. It's a wooden box based on a nineteenth century design that leaks and gains heat just like you'd expect it would. And occasionally someone comes along and takes away part of the insulation (honey). Honey bees just can't win.

Daniel Cook is a Ph.D. candidate at Queensland University of Technology in Australia and lead author on the study, published in March in the Journal of Economic Entomology, which examined the thermal dynamics of the traditional managed honey bee hive box. Cook says via email that the commonly used wooden hive boxes "are designed for the human first, with the bee a vague afterthought."

While studying industrial design as an undergraduate, Cook looked at how to build a better hive box. "I had a small bee yard peppered with sensors to determine how the bee hive itself behaves thermally," he says. "From there, the design of the hive screamed of thermal inefficiencies." Cook and colleagues' research on the thermal properties of typical hive boxes quantifies their leakiness and highlights the potential impacts on the bees and their keepers.

Honey bees are persnickety about the temperature of their home. It needs to be between 34.5 and 35.5 degrees Celsius (approximately 94-96 degreesFahrenheit) or it adversely impacts the brood (eggs, larvae, and pupae), so the bees work to maintain that ideal temperature in various ways, such as fanning with their wings to cool or shivering to warm.

In their study, the researchers calculated the heat loss of the boxes along with the thermal impact of certain beekeeping practices. All the experiments looked at the heat loss only from the boxes and their non-living components (honey, wax, etc.). “The reason I left bees out of this study was that there are far too many behaviours that occur in the hive for thermoregulation,” Cook says. “It is not an easily applicable constant!”

The authors compared the heat loss of a standard wooden box to a polystyrene model where the internal temperature was a honey bee-idyllic 35 C and the outside temp was 25 C. The polystyrene version’s heat loss was 23 percent of the amount lost by the wooden box. Cook notes that about half the heat loss is through the lid; therefore, “a well insulated lid could reduce stress in the hive and increase forager availability.”

Two beekeeping practices can also have a large impact on the hive’s temperature: honey extraction and cold storage of box parts (which prevents damage from various pests). A standard wooden hive consists of stackable boxes. The queen is sequestered in the bottom box where she lays her eggs. As the colony grows, boxes can be stacked on top of the base box. Only honey gets stored in the upper boxes (supers). It’s a convenient system for beekeepers who can pop off a super to extract the honey and replace it with an empty box, but that new box can lead to a lot of warming-related work for the bees. Not only is the insulating honey gone, but the authors calculate that adding supers with components that had been stored between 2 C and 5 C could require bees to expend 130,000 to 145,000 “bee minutes” to heat up the new box. That’s time that could be used for other activities, like pollinating plants and bringing home nectar to make honey.

Why do beekeepers keep using boxes that make bees expend energy in ways that aren’t useful to beekeepers? Cook offers several theories. Many beekeepers buy a beekeeping business that already has boxes, or get boxes secondhand. Plus, wooden boxes are long-lasting and cheap to fix. Changing to a new style of box could be costly. Also inhibiting uptake of better box design, Cook says, is the “yawning divide between the science and the practice of beekeeping.” Cook notes that about 9 percent of global agricultural production relies on pollination, and so, he says, “It really is time we started looking to optimise pollination systems and services from the ground up rather than using a 160-year-old honey-collection system."

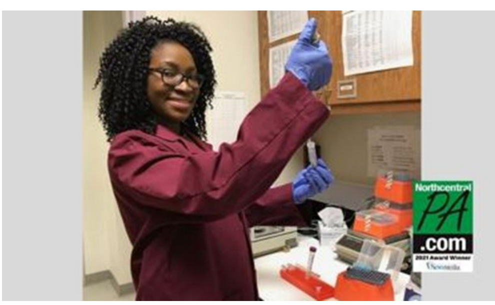
He adds, "I have put this forward to beekeepers and scientists and often hear the response 'If it ain't broke, don't fix it,' to which I always reply with my favourite Henry Ford quote: 'If I'd asked people what they wanted, they would have said faster horses.'"

https://entomologytoday.org/2021/04/16/honey-bee-hive-boxes-drafty-inefficient-temperature/

NorthcentralPA.com

Not your typical honey trap: Australian tomato flowers trick bees with fake pollen

NCPA Staff Jan 8, 2022



Lewisburg -- Nature has all kinds of tricks up its sleeve, and the Australian bush tomato has mastered the art of fooling bees. The plant has beautiful purple and yellow male and female flowers on unisex plants, and to produce fruit the flowers need to cross-pollinate.

Normally only male flowers produce pollen, but recent research from Bucknell University has found that both male and female bush tomatoes have pollen.
Though they lack nectar, which would typically attract bees, the female flowers pull off a botanical bluff by producing "fake" pollen. The female flower pollen lacks the nutritional value of male flower pollen, but still manages to grab the attention of bees.

"That's the food source they're looking for," says Bucknell Professor Chris Martine, biology, the David Burpee Professor of Plant Genetics and Research, who coordinated the research through his lab. “So basically, the female plants are making flowers with male organs which produce ‘fake’ pollen as a way to still get bees to come visit."

Professor Martine continued: “The question we had is if they visit a male plant and get the ‘real’ pollen, and they visit a female plant and get the ‘fake’ stuff, are they still getting the same nutrition? And if they’re not, then they’re basically being fooled into visiting the female plant and not getting the same reward. It turns out that that’s actually true. They’re actually getting less nutrition from the female pollen, and that’s pretty interesting.”

Martine joined former Bucknell student Jackie Ndem-Galbert ’16, M ’18; former visiting biology professor Jessica Hall; and Martine’s previous postdoctoral fellow Angela McDonnell to find answers to that question. They authored a paper on their findings, which was published in October by the American Journal of Botany.

The researchers found higher levels of proteins and amino acids in the pollen of male flowers, producing a greater nutritive reward for bees foraging on male plants than for those on the female plants.

“I’ve long wondered about this question on whether the pollen is equivalent in terms of what it gives the bees, but I never had anybody that I could collaborate with to help me figure it out before,” Martine says. “Then Jessica Hall was hired as a visiting professor here with a background in proteins, and we ended up co-advising Jackie. They brought this expertise to a question I had for years but couldn’t answer. And with the help of Angela McDonnell, we formed this little Bucknell super team that helped figure it out.”

Hall is now on the biology faculty at Ohio Dominican University; Ndem-Galbert is pursuing her doctorate in health sciences and technology in Switzerland; and McDonnell is employed by the Negaunee Institute for Plant Conservation Science and Action at the Chicago Botanic Garden.

Martine points out that in these bush tomatoes where there are separate male and female plants, if bees don’t move between both flowers, the plants won’t populate.

“In this system, you have to go from a male plant with good pollen to a female plant that can receive pollen. If it doesn't go in that direction, you don't get seeds, and without them the species goes extinct," he says. "But why would a bee ever go visit those female plants if the pollen wasn't worth as much? This is the mystery we are left with at this point."

What they have learned is that the female pollen has less nutritional reward for the bee, and yet they somehow manage to lure bees in for pollination anyway. One working hypothesis is that because most of the pollen the adult female bees collect is given to their developing larvae, those moms will never know the difference — even if their babies might grow slightly differently depending on what they are provided.

All of the research was conducted using three Australian Solanum species cultivated in Bucknell's Rooke Science Building greenhouses. The researchers collected seeds from these species during six trips to Australia over the past 15 years.

Martine hopes to continue researching how the female flowers produce their "fake" pollen and whether this now-confirmed bit of nutritional trickery results in consequences for the bees that collect and consume it.

https://www.northcentralpa.com/education/not-your-typical-honey-trap-australian-tomato-flowers-trick-bees-with-fake-pollen/article_9ad06520-6e9e-11ec-976e-6be68030730c.html

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Food Chemicals Codex | FCC

Hello Honey Industry Partners!

We would appreciate your assistance spreading the word on our continuing research project. We are collecting samples of citrus blossom honey from locations in North America. There is a sample collection form included (download here: https://803a53c6-072b-4f8f-960bbf8520169c2b.usrfiles.com/ugd/803a53_0bd8b373e75d4d7f98e8bb7e67f97fbb.pdf). We are requesting 118 mL/4 oz samples. Senders are not responsible for costs related to testing. These samples will be collected by QSI America and the testing will be used to support a future identity standard for citrus blossom honey.

Timing is a bit urgent to obtain samples this season. The sooner you are able to share this opportunity with your constituents, the better this project will be. Thank you for your support!

The USP Honey Expert Panel On behalf of
Norberto Garcia, Chair and
Gina Clapper, Senior Scientific Liaison with FCC and US Pharmacopeia

Please contact Gina with any questions or comments (gina.clapper@usp.org)

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American Honey Producers Association

AHPA App

As AHPA continues to work on behalf of all beekeepers, one of our initiatives is advocating with the FDA in Washington D.C. to update honey labeling guidelines. As part of this effort, we need your help to collect pictures of honey labels from around the United States. Our goal is primarily to find honey that is mislabeled according to current FDA guidelines. Secondarily, we need examples of any labels which misrepresent country of origin or are purposefully confusing to consumers so that we can advocate for positive changes and updates.

Search the App Store or Google Play for "AHPA app". We need to collect as many pictures from honey on the store shelf as possible. Please take a few minutes to help collect this data.
